Determinants of the Home Food Environment

by

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ABSTRACT

Determining the factors associated with the availability of healthy and

unhealthy foods in the household may help in understanding the varying

complexities that contribute to obesity among children and help design

interventions to impact children's food consumption behaviors. This study

examined factors that are associated with the availability of healthy and unhealthy

foods in children's home food environments (HFE). Data was collected from a

random-digit-dial telephone survey of 1708 households, with at least one child

between 3-18 years of age, located in five low-income New Jersey cities. HFE

was assessed based on responses to a set of six items that measured availability of

specific healthy and unhealthy foods in the respondent's home. These items

contributed to construction of three HFE scales used as dependent variables in

these analyses: healthy HFE, unhealthy HFE, and a ratio of healthy to unhealthy

foods in the HFE. Independent variables included household socio-demographics,

parental perceptions of their own weight and diet health, frequency of family

meals, proximity to food outlets, and perception of access to healthy foods in the

neighborhood food environment. Significant differences were observed in the

HFE by race and ethnicity, with Non-Hispanic black children having fewer

healthy foods and Non-Hispanic white children having more unhealthy food items

available at home. Parents who reported being overweight or obese had a

healthier HFE and those perceiving their own eating as healthy had more healthy

and less unhealthy foods in the household. Food-secure households had more

unhealthy compared to healthy foods at home. Households located farther from a

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supermarket had a greater number of unhealthy food items and a lower healthy/unhealthy food availability ratio. Parental perception of better access to fruits and vegetables and low-fat foods was associated with availability of a greater number of healthy food items at home. Overall, the HFE varied by parental and demographic characteristics, parental perceptions about the food environment and the actual features of the built neighborhood food environment.

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Chapter 1

INTRODUCTION

In the United States, the prevalence of obesity among children and adolescents has increased significantly in the last 30 years (Centers for Disease Control and Prevention [CDC], 2010). According to National Health and Nutrition Examination Survey (NHANES) data, nearly 17% of all children and adolescents in the U.S. between the ages of 2 and 19 years old are obese (Ogden, Lamb, Carroll, & Flegal, 2010). While all racial, ethnic, and socio-economic groups are affected, children and adolescents from lower-income households as well as those belonging to racial and ethnic minorities bear a much higher burden (Ogden, Carroll, Curtin, Lamb, & Flegal, 2010; Ogden, Lamb, Carroll, & Flegal, 2010). NHANES data from 2007-2008 reveal that, in spite of the disproportionately high prevalence of obesity among groups from disadvantaged backgrounds, most obese children and adolescents live in moderate- to high-income households (CDC, 2010). As obesity in childhood often lingers into adulthood wherein it is a risk factor for numerous disease states, policies and interventions should focus on preventing childhood obesity (Ogden, Lamb, Carroll, & Flegal, 2010; Singh, Mulder, Twisk, van Mechelen, & Chinapaw, 2008).

Majority of the U.S. population does not meet the federal dietary recommendations (Krebs-Smith, Guenther, Subar, Kirkpatrick, Dodd, 2010). Between 80-92% of children 8 years and younger do not meet the recommended intake of vegetables and between 32-63% do not meet them for fruits. Among

older children and adolescents, the proportions not meeting the recommendations for vegetables (94-99%) and fruits (78-87%) are even worse. Almost all children and adolescents consume more empty calories (calories from solid fats and added sugar) that exceed the discretionary calorie allowance. Increased intake of fruits and vegetables among children has a two-fold effect by both improving diet quality through vitamins and minerals and by decreasing the opportunity for intake of higher calorie, yet lower nutrient-dense, foods (Epstein et al., 2001). Energy-dense diets with a lower consumption of fruits and vegetables and a high consumption of nutrient-poor, energy-dense foods have both been shown to be significant predictors of obesity (Vanasse, Demers, Hemiari, & Courteau, 2006; Wadden, Brownell, & Foster, 2002).

Children's dietary patterns can be impacted by a variety of factors. Literature has repeatedly shown that a child's consumption of both nutrient-dense, healthy foods as well as energy-dense, unhealthy foods is influenced by the home food environment (Cullen et al., 2003; Gable & Lutz, 2000; Haerens et al., 2008; Jago, Baranowski, Baranowski, Cullen, & Thompson, 2007; Kratt, Reynolds, & Shewchuk, 2000; Vereecken, Haerens, De Bourdeaudhuij, & Maes, 2010).

This study aims to identify the variables which are associated with the home food environment including demographic characteristics of the household such as race/ethnicity, income, education level, and level of food security; the neighborhood food environment surrounding the home; parental perceptions of their own weight status and diet quality; and the household's meal practices. Interventions to decrease childhood obesity and impact child consumption may

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begin with intervening on the level of the home food environment (Koui & Jago, 2008; Neumark-Sztainer, Wall, Perry, & Story, 2003). By knowing the variables affecting the food environment at home, assessment and intervention may address those variables in an effort to adjust the environment at home to one of a healthier atmosphere.

Aims and Objectives

The present study aims to build upon the available literature by assessing various correlates to children's home food environments. Using data from a sample of over 1700 ethnically diverse children from low-income New Jersey cities, this study will assess household demographics, family meal frequency, and parental perceptions of their own health status and eating practices as well as determine the impact the community food environment has on the availability of healthy and unhealthy foods in the home food environment.

The present study will address the following research questions. Specific hypotheses are stated for each research question.

1. *Does the Home Food Environment (HFE) vary by demographic characteristics of the household (e.g. Federal Poverty Level [FPL]), race/ethnicity, education level of the parent, and food security)?*

    Hypothesis 1: Households above 200% FPL will have a healthier HFE compared to those households below 200% FPL.

    Hypothesis 2: Non-Hispanic (NH) and Hispanic households will have a less healthy HFE compared to NH White households.

Hypothesis 3: Parental level of education will be positively associated with a healthy HFE and negatively associated with an unhealthy HFE.

Hypothesis 4: Food-insecure households will have a less healthy HFE compared to food-secure households.

2. *Does HFE vary by parent's perception of own weight?*

Hypothesis: Parents perceiving themselves as overweight or obese will have a less healthy HFE compared to parents perceiving themselves as normal weight.

3. *Does HFE vary by parent's perception of their own diet quality?*

Hypothesis: Parents perceiving themselves as unhealthy eaters are expected to have a less healthy HFE compared to those that perceive themselves as healthy eaters.

4. *How does the neighborhood food environment affect the HFE?*

Hypothesis 1: Households that are located closer to a supermarket grocery store will have a healthier HFE compared to households located farther from a supermarket grocery store.

Hypothesis 2: Households that are located closer to a convenience store will have a less healthy HFE compared to households located farther from a convenience store.

5. *How do parent's perceptions of the neighborhood food environment affect the HFE?*

Hypothesis: The parent's perception of access to both fruits and vegetables and low-fat foods will be positively associated with a healthier HFE.

6. *Do households that eat frequent family dinner meals at home have a different HFE from those that do not eat family dinner meals at home frequently?*

Hypothesis: Frequency of family dinner meals at home will be positively associated with a healthier HFE compared to those who eat dinner meals together less often as a family.

Chapter 2

REVIEW OF LITERATURE

Home Food Environment (HFE)

Food Availability and Accessibility

Impact of the HFE on consumption of nutrient-dense, healthy foods

Food availability at home has continually been shown to be a moderating variable for a child's food intake as children eat what is available and accessible to them (Cullen et al., 2003; Jago et al., 2007; Gable & Lutz, 2000; Haerens et al., 2008; Kratt et al., 2000; Vereecken et al., 2010). A study by Downs et al., (2009) reported that in a predominantly overweight and obese sample of over 200 children in grades 4 through 6, less than 2% reported consuming the recommended five or more fruits and vegetables a day. Low consumption of fruits and vegetables was associated with the lack of availability as one-third of those subjects reported that nutrient-dense foods such as fruits and vegetables were not available in their homes.

The association between children's food intake and availability of foods at home was also supported by a study published by Koui & Jago (2008). The fruit and vegetable intake of primary school-aged children in Greece was found to be significantly associated with the availability of fruits and vegetables in their homes. This was particularly true for children who reported low consumption of fruits and vegetables. Subjects who reported high consumption of these foods were evenly split among those living in a low and high availability household.

A study of over 4700 adolescents from middle and high schools in Minnesota, U.S. was conducted to determine factors predicting adolescent intake of fruits and vegetables (Neumark-Sztainer et al., 2003). The study reported that the availability of fruits and vegetables in the home was the strongest single predictor of consumption. The study also addressed the influence that taste preference of these foods had on intake and found that, even when subjects reported low taste preference, the availability of fruits and vegetables in the home was the largest predictor of intake. The study's results suggest that, among adolescents, continued exposure and availability to healthy foods, such as fruits and vegetables, may increase intake, even among those who claim to have little preference for these foods.

The results from these and other studies show that the best way to increase consumption of healthy foods like fruits and vegetables is for these foods to be provided in the home. Fortunately, home availability and accessibility may be a variable that is more easily modified than other predictors of intake such as socio-environmental factors, personal factors, and taste preference (Neumark-Sztainer et al., 2003). Longitudinal studies have shown that foods available in the home during childhood and adolescence impact the child's intake of healthy and unhealthy foods later on in life (Larson et al., 2008; Vereecken et al., 2010). While differences among the genders regarding specific foods are revealed in some studies, most studies agree that foods (unhealthy or healthy) which are available in the home can impact consumption (of healthy or unhealthy foods),

independent of gender (Haerens et al., 2008; Hanson, Neumark-Sztainer, Eisenberg, Story, & Wall, 2005; Larson et al., 2008).

Impact of the HFE on consumption of energy-dense, unhealthy foods

Enhancing the relationship between consumption and the home food environment, several studies have shown an association between intake and the home availability of energy-dense, nutrient-poor foods. The availability of unhealthy foods in the home food environment has been shown to be inversely related to intake of fruits and vegetables among children participating in a longitudinal study by Vereecken et al. (2010). Interestingly, 95% of the subjects in this study reported a high availability of fruit in their homes. The problem, according to this study, lies in what other foods were available at home: The availability of unhealthy foods was positively associated with intake of these foods and, equally important, it was also associated with a lower intake of fruits and vegetables. Home availability of unhealthy foods has shown to be predictive of a low consumption of healthy foods as well as high consumption of unhealthy foods, promoting obesity (Campbell et al., 2007; Gable & Lutz, 2000).

Demographic differences influence the relationship between the HFE and food consumption

Many studies on the home environment and food consumption fail to use a demographically diverse sample resulting in a one-dimensional view of the variables which moderate the home food environment. A study devoted to determining how the HFE is affected by race/ethnicity and income found that among low-income households, compared to Blacks, Hispanics were twice as

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likely to have a higher availability of fresh fruit and three times more likely to have fresh vegetables in their home. However, as obesity among their Hispanic sample was over 40% and nearly 36% for Blacks, the high availability of unhealthy foods shown across both race/ethnicities may corroborate with findings that the presence of unhealthy foods is associated with both high consumption of those foods as well as decreased consumption of healthy foods (Campbell et al., 2007; Gable & Lutz, 2000; Skala et al., 2012).

The availability of fruits and vegetables varying by demographic was shown in an Alabama study with nearly 1,200 parents and children (Kratt et al., 2000). The study reported that the availability of fruits and vegetables was a moderating variable for fruit and vegetable consumption, measured by 24-hour recall, among both the parents and children. The availability of fruits and vegetables was measured by parental response to a questionnaire regarding the presence of specific, commonly eaten foods inside the home in the one week prior to the parent's response. The study not only revealed that availability affected intake but also that availability varied by demographic as Blacks had the lowest fruit and vegetable availability at home. Parent-reported income also confirmed that, as expected, food availability rose with increasing income. In addition, income was seen to vary by ethnicity as Black's reported an average annual income of $20,000-30,000 less than White's. While more studies are needed to support these findings, this information may indicate that, while interventions to increase the availability of fruits and vegetables in Black homes may increase

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their intake, interventions should address the allocation of income, or use of federal programs, to purchase healthy foods.

Few studies have extensively analyzed demographics such as race/ethnicity, food security, parent education level, and socioeconomic status. The present study will help determine if the home food environment, which affects children's consumption, varies by these factors. If significant differences are found to exist, the results will be useful in tailoring interventions to meet the needs of specific individuals and groups. A one-intervention-fits-all may not be sufficient if differences are found among the relationship between home food availability and specific demographic groups.

Parental variables influence the relationship between the HFE and food consumption

Parents have the opportunity to influence their child's behavior toward, and consumption of, specific foods not only through the food environment provided at home but also through modeling specific eating behaviors and attitudes (Arcan et al., 2007). The present study will determine if associations exist between parental variables (e.g. perception of their own weight and perception of their own diet quality) and the home food environment. These variables may affect the child in two ways: parents may influence the environment based on their own eating preferences and behavior and may, consciously or not, shape the food environment of their home based on perceptions of their own diet health and weight, thus impacting the food available to the child; second, parents may display consumptive behaviors which are

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correlated with their self-perceptions (Neumark-Sztainer et al., 2000). The intake of the parent may then be mirrored in the child's consumption.

The present study's focus is on the former relationship: the effects of parental perceptions of their weight status and eating behaviors on the home food environment. As the home food environment has been shown to affect consumption among both children and adults, the relationship between parental variables and the home food environment may be significant in understanding underlying factors that are associated with child consumption and, potentially, obesity (Gable & Lutz, 2000).

Parental BMI has been shown to be associated with child weight as the risk of a child's obesity increases with at least one overweight parent (Whitaker, Pepe, Wright, Seidel, & Dietz, 1998). This parental influence on child weight may be associated with the home food environment and this study aims to identify if the parent's perception of their own weight is directly associated with a healthy/unhealthy home food environment. While no studies were found which address the relationship between parental perceptions of their weight status and healthy eating on the home food environment, the following studies illustrate the relationship between parental factors and child consumption which may be mediated through the home food environment.

In families with high fruit and vegetable availability, an Alabama study found that the attitudes and behavior of the parents played a role in the child's consumption of fruit and vegetables (Kratt et al., 2000). The study also found that motivating factors for consumption of fruits and vegetables in both parents and

children were stronger in the homes with a healthier home food environment (i.e. more fruit and vegetable availability). Among these high availability families, a direct, positive relationship was seen between parental fruit and vegetable consumption and child fruit and vegetable intake indicating that the child mirrors parent consumption at least in households with a healthy food environment.

A Finnish study by Vereecken et al. (2010) found that a child's fruit and vegetable intake was significantly positively associated with the mother's fruit and vegetable intake while Campbell, Crawford, & Ball (2006) report parent consumption to be a predictor of only vegetable intake among children. A study of adolescent intake in Minnesota revealed that parental intake affected adolescent intake by specific food groups (Hanson et al., 2005). Dairy intake of the adolescent was seen to increase with parental consumption and parental intake of fruits and vegetables and their daughter's intake of these foods were positively correlated. Consumption of energy-dense foods and beverages among mothers has also been shown to be a predictor of their child's consumption of these items (Campbell et al., 2007). The relationship between parent and child consumption may be attributed to modeled eating as the child mirrors the parents behavior or the parent may influence the home food environment as the main food provider of the household (Campbell et al., 2007).

Arcan et al. (2007) conducted a longitudinal study of parent and child intake and home food availability. The study was composed of two groups of subjects: a younger group of boys and girls with a mean age of 12.6 years and their parents, and an older group of boys and girls with a mean age of 15.8 years

and their parents. For all 509 subjects and their parents, baseline measures were taken which included food intake and household food availability. Follow-up measures were conducted for all subjects five years following the baseline. Results from this study indicate that the parental intake of fruits, vegetables, and dairy foods were found to be associated with the consumption of these foods among the younger group, but no association was found between parental intake and intake of the older group. Among the younger group, at least 0.5 additional serving of fruit, vegetables, or dairy was consumed when their parents consumed four or more servings (versus parents consuming less than one serving). Among both age groups, the parental intake of dairy was shown to predict the dairy intake of females five years later. Serving vegetables at dinner in the home was associated with a higher consumption among all age groups. Because this analysis was adjusted for dietary intake at baseline, as well as socio-demographic information, this information suggests that both the home food environment as well as parental influence have an impact on the intake of children that continues into adolescence and young adulthood.

One purpose of a study published in 1985 was to determine if differences in food availability at home existed between obese and non-obese families (Terry & Beck, 1985). The obese family subjects consisted of five two-parent families and three single-parent families in which every parent was obese and had at least one child between 8 and 12 years weighing at least 20% over their ideal weight. The non-obese family subjects consisted of six two-parent families and two single-parent families in which every parent was normal weight and had at least

one child between 8 and 12 years weighing no more than 5% over their ideal weight.

On two separate occasions, at least a week apart, the kitchens of both obese and non-obese families was assessed and caloric totals taken of the freezer foods, refrigerator foods, and cupboard foods as well as foods openly visible in the house (Terry & Beck, 1985). The study revealed that a relationship existed between foods available in the home and obesity. At the first observation, obese households were calculated to have a higher calorie total in available foods than non-obese households. As expected, at the second home observation the total calories of the available foods decreased in obese family homes. This reactivity to observation demonstrated by decreasing the amount of high caloric foods was expected, especially among obese families. While the study's sample size was very small, it was observed that obese families stored foods containing higher calories than non-obese families indicating a relationship between weight and the home food environment.

Parents have the opportunity to create a healthy food environment at home and encourage certain behaviors which may impact their child's weight status. Studies have consistently shown that parents influence their child's behavior, food intake, and activity level by modeling certain behaviors which are observed and reflected not only in their child's consumptive behaviors, but also in the home food environment they are providing to their child. When assessing interventions among children, these should be taken into consideration (Arcan et al., 2007; Campbell et al., 2006; Kratt et al., 2000; Vereecken et al., 2010). As in the case of

consumption data, assessments of the home food environment should safeguard against normative responses. Especially among households with obese parents, the storage of calorically-high foods may be considered socially undesirable in light of their weight status. Obese households may therefore be more likely to change their food environment at home to reflect a more desirable behavior, resulting in an inaccurate assessment of the home food environment (Terry & Beck, 1985).

Family Meals

Frequency of meals shared at home amongst family may influence the home food environment as well as children's consumption and has been shown to be related to a number of factors. Gable & Lutz (2000) have shown a relationship between family meals and food availability as parents reporting more frequent family meals also report a higher availability of fruits and vegetables in the home. Family meals may provide an opportunity for the child to witness parent behavior and food intake. Gillman et al. (2000) found that in 9 to 14 year old children family meals were associated with the child's consumption of nutrient-dense foods. Families who ate dinner together often were likely to consume more fruits and vegetables and the children were less likely to consume fried foods and soda. Eating family dinners often improves the likelihood of a child observing their parent(s) eating fewer high-fat foods and more nutrient-dense foods of fruits and vegetables (Gillman et al., 2000).

A study on the relation of family meals to the home food environment found that frequency of family meals was associated with many positive food

behaviors among adolescents including consumption of the recommended five fruits and vegetables per day, having fruit available in the home, and eating breakfast (Utter, Scragg, Schaaf, & Mhurchu, 2008). While the study found these positive food behaviors to increase with increasing number of family meals, there was no association between family meals and BMI as predicted when demographic factors were considered. In this study, no relationship was shown between family meals and consumption of energy-dense, high-fat/high-sugar foods which contradicts similar studies on the subject. One theory for the contrasting results would be that while this study reported a mean participant age of 14 years, other studies contain a younger age group of participants. Slightly older children have more independence from their parents and go on social outings with peers, which may involve consumption of high-fat/high-sugar foods. According to this study, at least among older children, while family meals may encourage consumption of breakfast and nutrient-dense fruits and vegetables, it may not encourage the avoidance of less nutritious foods.

Many studies have demonstrated that younger children are influenced by their parents as a result of observing their parent's consumptive behaviors and are likely to replicate those observations in their own consumption (Campbell et al., 2006; Cutler, Flood, Hannan, & Neumark-Sztainer, 2011; Gillman et al., 2000; Grimm, Harnack, & Story, 2004; Kratt et al., 2000; Vereecken et al., 2010). The present study will add to this area of research by determining if frequency of family meals at home is associated with a healthy or unhealthy home food environment.

Perceptions of fruit and vegetable cost influencing the HFE

The perceived cost of foods by parents may be a limiting factor in the purchase of foods and a variable affecting child consumption. In one study, children whose parents perceived fruits and vegetables to be of high cost had a higher caloric intake than parents who did not. This perception may cause an increased number of less expensive, higher calorie foods to be available in the home as opposed to fruits and vegetables, thus increasing the child's daily caloric intake and decreasing their fruit and vegetable consumption (Campbell et al., 2006).

A study on consumption among young adults and food prices found that high fruit and vegetable consumption was inversely associated with fruit and vegetable prices in grocery stores. They found that families of low- and middle-income and mothers with lower education were most sensitive to fruit and vegetable price. While the price of food was shown to affect consumption in this study, the perception of price by the provider of food in the household is expected to show similar results (Powell, Zhao, & Wang, 2009).

One study found that while differences in household income were not statistically different in fruit and/or vegetable intake, associations did exist in weekly grocery spending and fruit and vegetable consumption (Mushi-Brunt, Haire-Joshu, & Elliott, 2007). Households which spent the most on groceries had children who consumed more servings of nutrient-dense foods opposed to households spending the least amount weekly on groceries. This study also concluded that the cost of fruits and vegetables was associated with intake. Fruit

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and combined fruit and vegetable servings were lower for both children and parents when the parent reported that they believed the purchase of fruits and vegetables would be more costly than the purchase of other snack foods. The study reported that cost was a barrier to fruit and combined fruit and vegetable intake of parents, but not children, in households where parents reported that cost was "always or almost always" a barrier to the purchase of fruits and vegetables.

While the United States Department of Agriculture concluded that purchasing fruits and vegetables for snacks is a cost-efficient alternative to other snack foods, other studies have indicated that the perception of cost among parents is continually a barrier to purchasing fruits and vegetable and is associated with a lower intake of these foods among children as well as parents (Campbell et al., 2006; Mushi-Brunt et al., 2007; Reed, Frazao, & Itskowitz, 2004).

No known research has been published to determine if a relationship exists between perceived cost of foods in the community and the home food environment. This study aims to determine if the parent's perception of food cost in the community food environment is associated with a healthy/unhealthy home food environment.

Community Food Environment

While young, children have more opportunity for parental influence due to the increased dependence on their parents and are reliant upon them to provide and prepare foods. As children get older and become increasingly independent through driving privileges and more responsibility, they are less apt to be influenced by their parents and more motivated through peer influence. A study

on the eating behaviors of adolescents found that 60% of their meals eaten occur inside of the household (Story, Neumark-Sztainer, & French, 2002). Of the remaining one-third meals eaten outside of the home, 50% occur at school, 28% from food at a convenience or grocery store, and 7% at a fast-food restaurant.

A number of recent studies have explored the role of the community food environment on food consumption patterns. Zenk et al. (2009) found that the presence of a grocery store in the participant's neighborhood was associated with a higher daily intake of fruits and vegetables. Differences among ethnic populations were seen as the Hispanic participant's fruit and vegetable intake was more likely to be affected by the presence of specific stores which differ in the types and variety of foods they carry. As compared to Black's, Hispanic's consumed nearly two fewer daily fruit and vegetable servings when a convenience store was present in the neighborhood. These results indicate that the surrounding food environment impacts dietary intake and the size of that relationship may vary based on ethnicity.

The proximity of the home to a supermarket relative to a convenience store was associated with lower body mass index (BMI) according to a study exploring the factors related to women's BMI (Raja et al., 2010). The opportunity for food purchase may affect BMI by an increase or decrease in caloric intake depending on the establishment. The study revealed that a woman's BMI was likely to be higher if she lived within a five minute walk of a restaurant and that a lower BMI was likely among women who live close to a supermarket or grocery store as compared to a convenience store. Overall, the number of restaurants

surrounding the home was associated with a higher BMI in women, even when the neighborhood promoted physical activity opportunities.

A study among male adolescents found that fruit and vegetable consumption was inversely related to the distance of the participant's home to a small store (Jago et al., 2007). The study also found an interesting mediator between distance to the nearest small food store and vegetable consumption in preference for fruit and vegetables. This mediator was postulated to be from the assumption that adolescents who have less access to small food stores, which carry more processed foods and less fresh fruits and vegetables, are more likely to consume fruits and vegetables either at home or other locations and develop a preference for these foods. As distance to a fast-food restaurant increased, so did consumption of higher-fat foods, fruit, and fruit juice. While the association of between high-fat foods and distance to a fast-food location is reasonable, the association which exists between fruit, fruit juice, and distance is not entirely clear. The authors propose that this may be due to discrepancy in reporting as the participants may report fruit pies or fruit-flavored drinks as fruit and fruit juice intake or this association may be due to the fruit and juice sold in these stores.

In contrast to other research which has shown an association between fruit and vegetable consumption and access to supermarkets, Jago et al. (2007) found no such relationship. This may be due to differences in study design, particularly the participant's age and gender as the present study focused on adolescent males, or the location of the study, which was in Texas.

Few studies have been conducted to assess the impact of the community food environment on the home food environment. Ding et al. published a study in 2011 which found no association between the food environment surrounding the home and the home food environment. Although using a validated measure, the food environment of the surrounding community was estimated using subjective, respondent-perceived measures to determine proximity to specific food outlets. The present study aims to add further to the research in this area and aid in determining if, and how, the home food environment is impacted by retail food stores surrounding the home.

Chapter 3

METHODOLOGY

Household Survey

This study uses secondary data collected by Rutgers University Center for State Health Policy for their New Jersey Childhood Obesity Study (NJ Childhood Obesity Study, 2012) using a random-digit-dial sample of 1708 households with landline telephones living in five low-income cities in New Jersey: Camden, New Brunswick, Newark, Trenton, and Vineland. The target sample for the survey consisted of around 400 households each for the cities of Newark, Trenton, and Camden and approximately 300 households each for New Brunswick and Vineland cities. The sample was broadly representative of each city according to its most recent government approximation for population. Supplemental methods (targeted sampling and address-based sampling) of identifying eligible households were used to improve response rate in New Brunswick.

The telephone interviews were conducted in English or Spanish, occurred between June 2009 and March 2010, and took an average of 36 minutes to complete. The response rate for the survey was 49%. Households were considered eligible if there was at least one child living in the home between 3 and 18 years old. From amongst all such children within each household a randomly selected "index child" was designated to which most of the questions in the survey would refer. This child was randomly selected by a computer program based on the following criteria. Children of the designated respondent were given priority for selection as the "index child," then all other familial relationships. In those

households with only one child between the ages of 3 and 18, that child was, by default, the aforementioned "index child." and one of the age-eligible children, preferentially the respondent's own child, was selected as an index child. The respondent for the survey was the adult who made most of the decisions about food shopping for the household and in a vast majority of cases (94%), the survey respondent was the parent or guardian of the index child and will henceforth be referred to as parent. Verbal consent was obtained from every household included in the survey and participants received a $10.00 check by mail upon completion of the telephone interview. The original study was approved by the Rutgers University Institutional Review Board (**Appendix B**) and the present study, using the secondary data, was approved by the Arizona State University Institutional Review Board (**Appendix C**).

Items from the survey included in the analyses reported here were built on questions used in previous research studies. Specific survey questions provided data on household demographic and socio-economic status, parents report on availability of healthy and unhealthy items in the house (Baranowski, 2000), parental perception of their own health status (California Health Interview Survey, 2011), parental perception of neighborhood food environment (REACH 2010 St. Louis Healthy Heart Neighborhood Survey, 2010), level of household insecurity (USDA, 2008), and number of meals eaten at home by the family. In addition to the survey data, geospatial location of each household in the survey was obtained from the residential addresses provided by the survey respondents.

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Objective Neighborhood Food Environment Assessment

Using commercial and publicly available data sources, objective geocoded data was collected on the location of food and physical activity outlets in each of the study cities as well as in a one-mile buffer around the city boundary. Only contiguous areas not separated by barriers such as large bodies of water, highways or train tracks were included in the buffer. Geocoding was carried out by Abt SRBI Inc.

Food Outlets

Food outlet data were obtained from two commercial data vendors: InfoUSA and Trade Dimensions. The data were purchased for fall of 2008 just before the launch of the household survey. Both data sources provide information on location of businesses along with characteristics such as annual sales volume and number of employees. The InfoUSA data were purchased for selected North American Industry Classification System (NAICS) codes representing supermarkets and grocery stores, convenience stores, specialty food stores, full service restaurants, limited service restaurants, and snack bars (NAICS codes: 445110, 445120, 445230, 445292, 722110, 722211, 722213). The InfoUSA data were supplemented with the food retail outlet data obtained for the same geographical areas from Trade Dimensions which primarily included supermarkets and a small number of convenience stores for each city. Data cleaning involved removing duplicates and checking illogical addresses. Commercial databases such as InfoUSA and Trade Dimension are developed for non-research purposes and studies have pointed to limitations of the classification

system used within these to categorize food outlets (Liese et al., 2010). Based on criteria used in the available literature, a comprehensive classification system was developed by a research team to categorize food outlets into supermarkets, small grocery stores, convenience stores, limited service restaurants, and full service restaurants (Ohri-Vachaspati, Martinez, Yedidia, & Petlick, 2011). This methodology allowed classification of outlets based on types of food they were likely to offer. The final categories used in the analysis were supermarkets, small grocery stores, convenience stores, and limited service restaurants. A database was thus created which included the food retail outlet classification as well as their geo-spatial location.

Dependent Variables

Home Food Environment

The home food environment scales were created from the respondent's answers to questions regarding the availability of specific foods in the household in the previous week. These questions were derived from items used in the GEMS Food Availability survey by Baranowski (2000). The author validated an instrument for assessing the home food environment for fruits, vegetables, and juices where they found the significant agreement between parent reports and objective assessment of in-home availability for most items studied (Cohen's Kappa significant at $P<.05$ for 28 out of 33 items) (Marsh, Cullen, & Baranowski, 2003). The survey for the present study included a list of 4 sets of healthy items and 2 sets of unhealthy items shown in **Table 1**. For healthy items, the parent's response of yes = 1 and no (or do not know) = 0 was summed over all healthy

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items to get a Healthy Home Food Environment Scale (HHFE). The range of

scores for the HHFE scale was 0-4. For unhealthy items, the parent's response of

yes = 1 and no (or do not know) = 0 was summed over all unhealthy items to get

an Unhealthy Home Food Environment Scale (UHFE). The range of scores for

the UHFE scale was 0-2. Next, Ratio of Healthy to Unhealthy Home Food

Environment Scale (RHFE), a ratio of HHFE to UHFE, was computed to account

for households that had more or less of both the healthy and unhealthy food items.

The range of scores for the RHFE scale was 0.33-5. To avoid division by zero,

RHFE was computed using the following formula: RHFE=(HHFE+1)/(UHFE+1).

TABLE 1. Coding for Home Food Environment Scales

Survey Question: "In the last week, did you have…"	Coded	Score for response of "No" or "Do not know"	Score for response of "Yes"
Fresh, frozen, or canned vegetables available in your home?	Healthy	0	1
1%/skim milk available in your home?	Healthy	0	1
Whole grain bread/pasta available in your home?	Healthy	0	1
Fresh, canned, or dried fruit on the counter or somewhere easy for your child to get to?	Healthy	0	1
Cookies, cakes, or candy available in your home?	Unhealthy	0	1
Chips, Nachos, or Doritos available in your home?	Unhealthy	0	1

Independent Variables

Demographic Characteristics

Federal Poverty Level

The respondent was asked their household's annual income from all

sources, prior to taxes, for the year 2008. This information, in conjunction with

the household size, was used to determine a household's poverty status as a percentage of the 2008 Federal Poverty Level (FPL).

Race/Ethnicity

The respondent was asked whether they were of Spanish, Hispanic, or Latino origin or descent. This information was used to determine the respondent's ethnicity (Hispanic or Non-Hispanic [NH]). The respondent was then asked what race they were and responses were categorized as 'Black/African American', 'White', 'Hispanic', 'American Indian/Native American/Alaskan or Eskimo', 'Asian/Pacific Islander', or 'Other'. In analysis, responses of 'American Indian/Native American/Alaskan or Eskimo', and 'Asian/Pacific Islander' and 'Other' were combined to form the category of *Other* due to the small number of respondents in these categories. The race and ethnicity responses was used to then define the final race/ethnicity variable used in the analysis in which respondents were grouped into the following categories: *Non-Hispanic White, Non-Hispanic Black, Hispanic,* and *Non-Hispanic Other*.

Mother's Level of Education

The respondent was asked what the highest grade or level of school that they have completed. In cases where the respondent was not the mother of the index child and the mother of the index child lived in the household, her level of education was used to compute this variable. In the remaining cases where the respondent was not the mother of the index child and the mother of the index child did not live in the household, the respondent's education level was used to impute this variable. Responses were combined for analysis to form the following

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categories: *Completed High School or Less than High School, Completed Some College, Completed College.*

Food Security

To assess the level of food security of the household, the respondent was asked to describe the food eaten by their family as being either a) enough food to eat, b) sometimes not enough to eat, or c) often not enough to eat. Responses of 'enough food to eat' were categorized as *Food-Secure* and those responding with 'sometimes not enough to eat' or 'often not enough to eat' were categorized as *Food-Insecure*.

Frequency of Family Dinner Meals at Home

The respondent was asked how many days a week the whole family usually sits down to eat for a dinner meal. Responses ranging from 0-7 were combined for analysis to form *2 or Fewer Days of the Week* and *3 or More Days of the Week.*

Respondent Characteristics

Parent Perception of Own Weight

The respondent was asked the question, "Compared to what you would like to be, would you say you are very underweight, slightly underweight, about the right weight, slightly overweight, or very overweight?" For analysis, responses of 'Very Underweight', 'Slightly Underweight', and 'About the Right Weight' were grouped together to form the category *Normal Weight*. Responses of 'Slightly Overweight' and 'Very Overweight' were combined to form the category *Overweight/Obese*.

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Parent Perception of Own Eating as Healthy

The respondent was asked whether they agreed with the statement, "I eat healthy" on a 4-point rating scale with possible answers of 'Strongly Agree', 'Somewhat Agree', 'Somewhat Disagree', or 'Strongly Disagree'. Answers of 'Strongly Agree' or 'Somewhat Agree' were combined to form the category *Yes,* they perceive they eat healthy. Responses of 'Strongly Disagree' or 'Somewhat Disagree' were combined to form the category *No,* they do not perceive they eat healthy.

Neighborhood Food Environment

Distance to Nearest Retail Food Outlet

Using the geospatial location of the respondent's household and the location of different types of food outlets (supermarkets and convenience stores) in the city and in a one-mile buffer around the city, the smallest roadway network distance to each type of food outlet was calculated.

Access to Fruits and Vegetables (Range 0-4)

Respondents were asked four questions relating to their access to fresh fruits and vegetables (FV) in the store at which they most frequently shop. Respondents were asked their perception of the availability of FV at the store on a 4-point rating scale with possible answers of 'Very Available', 'Somewhat Available', 'Somewhat Unavailable', and 'Very Unavailable'. Their perception on the selection of good quality FV at the store was determined based on answers to a 4-point rating scale with possible answers of 'Very Large Selection', 'Somewhat Large Selection', 'Somewhat Limited Selection', or 'Very Limited

Selection'. The respondent's perception on the expense of FV at the store was based on answers to a 4-point rating scale with possible answers of 'Very Expensive', 'Somewhat Expensive', 'Somewhat Inexpensive', and 'Very Inexpensive'. The respondent's perception to how often the cost of FV keeps them from purchasing these items at the store was based a 5-point rating scale with possible answers of 'Always', 'Often', 'Sometimes', 'Rarely', or 'Never'. Answers to these four questions were combined and used to identify the respondent's access to FV on a scale from 0-4: 0 being no/very little access to 4 being very high/easy access to FV.

Access to Low-Fat Foods (Range 0-4)

Respondents were asked four questions relating to their access to low-fat foods (LFF) (e.g. low-fat milk, lean cuts of meat) in the store at which they most frequently shop. Respondents were asked their perception of the availability of LFF at the store on a 4-point rating scale with possible answers of 'Very Available', 'Somewhat Available', 'Somewhat Unavailable', and 'Very Unavailable'. Their perception on the selection of good quality LFF at the store was determined based on answers to a 4-point rating scale with possible answers of 'Very Large Selection', 'Somewhat Large Selection', 'Somewhat Limited Selection', or 'Very Limited Selection'. The respondent's perception on the expense of LFF at the store was based on answers to a 4-point rating scale with possible answers of 'Very Expensive', 'Somewhat Expensive', 'Somewhat Inexpensive', and 'Very Inexpensive'. The respondent's perception to how often the cost of LFF keeps them from purchasing these items at the store was based a

5-point rating scale with possible answers of 'Always', 'Often', 'Sometimes', 'Rarely', or 'Never'. Answers to these four questions were combined and used to identify the respondent's access to LFF on a scale from 0-4: 0 being no/very little access to 4 being very high/easy access to LFF.

Analysis

Statistical analyses were conducted using SPSS 17.0 for Windows (SPSS, Inc., Chicago, IL). Data were analyzed to examine frequency distribution of dependent and independent variables used in the analyses. Three scales were created as described above and were used as dependent variables in the analysis. Based on the frequency distributions and constructs measured, categorical independent variables were further grouped into fewer categories as described above. Bivariate analyses were run to compute mean home food environment scores for each dependent variable with the independent demographic and parent perception variables. Three sets of multivariate linear regression analyses were run (one for each dependent variable) to test for significance of associations between each dependent and independent variable. All analyses were weighted. Sampling weights adjusted for non-telephone households, number of multiple phone lines in the household, and number of age-eligible children in the household. In addition, probability weights were developed for the survey so estimates from these data would be representative of the population of 3-18 year olds in each of the sampled cities and, when combined, each city contributed to the overall estimate in proportion to its population. The level of significance reported in the results are based on the *P-values* associated with coefficients for

each of the independent variables when run as a multivariate linear regression controlling for all other independent variables shown in **Table 2**. Differences between groups were considered significant at $P \leq .05$.

Chapter 4

RESULTS

Frequencies

Sample Characteristics

Descriptive statistics for the 1708 households that participated in the

survey from which data for the current study was drawn are shown in **Table 2**. In

94% of the cases, the respondent for this household survey was the parent of a

randomly selected child (index child) between the ages of 3-18 years and are

referred to as parents in this study. The majority of children were NH Black

(42%) or Hispanic (42.2%). Over two-thirds (66.7%) of households were below

200% of the FPL, however only 18.4% of respondents identified their households

as being food-insecure. Over half (53.1%) of parents received an education at a

level no greater than high school, 25.8% had some college education, and 17.3%

of the sample had more than a 4-year college degree. Of the sampled households,

the majority stated that they ate a family dinner meal at home at least 3 days of

the week (78.5%).

Parent Perception of Own Weight and Eating Characteristics

Most parents believed that they ate a healthy diet (82.7%), however only

36.3% considered their weight to be normal and most (63.7%) believed they were

overweight or obese.

Neighborhood Food Environment Characteristics

In a range of 0-4, parents perceived they had access (in terms of quality,

expense, and availability) to fruits and vegetables with a mean score of 3.61

(SD=0.61) and access (in terms of quality, expense, and availability) to low-fat foods with a mean of 3.54 (SD=0.59). Households in the sample lived closer to a convenience store (0.36 miles; SD=0.52) than a supermarket (1 mile; SD=0.68).

Bivariate Analysis and Multivariate Linear Regression Analysis

Home Food Environment Scale Scores

  Tables 3 and **4** summarize the results from analyses comparing the home food environment scores with demographic, parent-level, and neighborhood food environment variables. Results from each type of comparison are described below and graphically shown in **Figures 1-7**.

Social Demographics

  Figure 1 shows the home food environment scores by the race and ethnicity of the index child. Households with a NH Black index child had significantly different HHFE and UHFE mean scores compared households with a NH White child with 3.0 vs. 3.24 (*P*=.003) and 1.27 vs. 1.54 (*P* =.039), respectively. Hispanics also differed significantly from NH Whites in mean UHFE score with 1.23 vs. 1.54 (*P*=0.47). RHFE mean score for NH Blacks was 2.11 and Hispanics was 2.25, however neither was significantly different from NH Whites (1.89). Mean scores for RHFE were significantly different from NH Whites among those of Other race/ethnicity at 2.39 *(P*=.027). The relationship between all HFE measures and Federal Poverty Level (FPL) are shown in **Figure 2**. Households below 200% of the FPL had HHFE, UHFE, and RHFE average scores of 3.09, 1.26, and 2.17 respectively. The corresponding scores for the household with annual income above 200% of the FPL were 3.22, 1.36, and 2.10.

No significant differences in income were seen among any of the household food environment measures.

Parents with an education level no greater than high school had HHFE, UHFE, and RHFE average scores of 3.10, 1.27, and 2.17, respectively (**Figure 3**). Mean scores of HHFE, UHFE, and RHFE for participants with some college education were 3.16, 1.26, and 2.19. Participants with anything higher than a college degree level of education had HHFE, UHFE, and RHFE average scores of 3.22, 1.35, and 2.05. The differences between education levels were not significant for any of the three HFE measures.

Food-secure households had HHFE, UHFE, and RHFE average scores of 3.16, 1.32, and 2.12, respectively (**Figure 4**). The corresponding scores for food-insecure households were 3.01, 1.14, and 2.27. Food-insecure households had significantly lower scores for UHFE (*P*=.000) and higher scores for RHFE (*P*=0.003). No differences were observed in the HHFE by the level of household food security.

Participant Perception

Figure 5 shows the association between parental perception of their own weight status and the HFE scores. Parents who perceived their own weight to be normal had respective mean scores for HHFE, UHFE, and RHFE of 3.07, 1.34, and 2.04. Those perceiving themselves to be overweight or obese had corresponding scores of 3.15, 1.25, and 2.22. The differences between perceived weight was significant among all three HFE measures with parents perceiving

themselves to be overweight or obese having higher HHFE (P=0.28) and RHFE (P=.000) scores and lower UHFE scores (P=.000).

Parents who perceived their own eating to be healthy had respective mean scores for HHFE, UHFE, and RHFE of 3.19, 1.24, and 2.24. Those who perceived their eating to be unhealthy had corresponding scores of 2.82, 1.44, and 1.79, respectively. Differences between eating health perception were significant with P=.000 for all three HFE measures, with parents perceiving their eating to be healthier having higher scores for HHFE and RHFE and lower scores for UHFE (**Figure 6**).

Households eating two or fewer family dinner meals at home had HHFE, UHFE, and RHFE scores of 3.02, 1.28, and 2.11, respectively. Households eating three or more family dinner meals at home had corresponding scores of 3.14, 1.28, and 2.17. No significant differences were seen among number of family dinner meals and any of the three HFE measures (**Figure 7**).

Neighborhood Food Environment

Table 4 summarizes the results of multivariate linear regression assessing the associations between neighborhood food environments and HFE scores. Objectively measured distance to a supermarket was positively associated with a higher UHFE score (P=.044), indicating that the greater the distance to the nearest supermarket, the higher the UHFE. Distance to the nearest supermarket was also negatively associated with the RHFE score (P=.023) indicating that the greater the distance to the nearest supermarket, the lower the ratio of healthy to unhealthy HFE scores.

As shown in **Table 4**, parent's perception of access (in terms of quality, expense, and availability) to FV in their neighborhood was positively associated with HHFE (*P*=.043). Parental perception of access to LFF in their neighborhood was significantly associated with HHFE (*P*=.029). The coefficients measuring associations between access to FV and LFF and other measures of HFE were in the expected directions but did not reach statistical significance.

TABLE 2. Description of the sample

	Unweighted N = 1708 %[1] or Mean (SD)
Demographic Characteristics	
Federal Poverty Level (FPL) of 2008	
≤200% FPL	66.7%
>200% FPL	33.3%
Race	
NH White	12.2%
NH Black	42.0%
Hispanic	42.2%
Other	3.6%
Highest Education Level	
High School or less	53.1%
Some College	25.8%
>College	17.3%
Food Security of Household	
Food-Secure	81.6%
Food-Insecurity	18.4%
Meals at Home	
2 or fewer days of week	21.4%
3 or more days of week	78.5%
Parent Perception of Own Weight and Eating	
Parent Perception of Own Weight	
Normal	36.3%
Overweight/Obese	63.7%
Parent Perceives Own Eating as Healthy	
No	17.3%
Yes	82.7%
Neighborhood Food Environment	
Distance to Nearest Supermarket (in miles)	1.00 (0.68)
Distance to Nearest Convenience Store (in miles)	0.36 (0.52)
Perception of Access to FV (range 0-4)	3.61 (0.61)
Perception of Access to LFF (range 0-4)	3.54 (0.59)
Home Food Environment	
Healthy Home Food Environment (range 0-4)	3.15 (0.82)
Unhealthy Home Food Environment (range 0-2)	1.33 (0.75)
Ratio of Healthy/Unhealthy Home Food Environment (range 0.33-5)	2.09 (1.1)

[1]Some percentages may not equal 100 due to rounding error

TABLE 3. Association of demographic characteristics and parental perceptions to the Home Food Environment[1]

Explanatory Variables	Healthy Home Food Environment Mean (SD)	Unhealthy Home Food Environment Mean (SD)	Ratio of Healthy/ Unhealthy Home Food Environment Mean (SD)
Demographic Characteristics			
Poverty Level			
≤200% FPL	3.09 (0.83)	1.26 (0.79)	2.17 (1.19)
>200% FPL	3.22 (0.76)	1.36 (0.76)	2.10 (1.10)
Race			
NH White	3.24 (0.83)	1.54 (0.67)	1.89 (0.94)
NH Black	3.00 (0.81)*	1.27 (0.79)*	2.11 (1.15)
Hispanic	3.20 (0.80)	1.23 (0.79)*	2.25 (1.21)
Other	3.39 (0.72)	1.23 (0.76)	2.39 (1.35)*
Highest Education Level			
High School or less	3.10 (0.83)	1.27 (0.79)	2.17 (1.12)
Some College	3.16 (0.74)	1.26 (0.80)	2.19 (1.15)
>College	3.22 (0.80)	1.35 (0.71)	2.05 (0.98)
Food Security of Household			
Food-Secure	3.16 (0.78)	1.32 (1.15)	2.12 (1.15)
Food-Insecurity	3.01 (0.89)	1.14 (0.81)*	2.27 (1.24)*
Meals at Home			
2 or fewer days of week	3.02 (0.84)	1.28 (0.80)	2.11 (1.16)
3 or more days of week	3.14 (0.80)	1.28 (0.77)	2.17 (1.17)
Parent Perception of Own Weight and Eating			
Parent Perception of Own Weight			
Normal	3.07 (0.80)	1.34 (0.76)	2.04 (1.09)
Overweight/Obese	3.15 (0.82)*	1.25 (0.79)*	2.22 (1.21)*
Parent Perceives Own Eating as Healthy			
Yes	3.19 (0.78)	1.24 (0.79)	2.24 (1.20)
No	2.82 (0.88)*	1.44 (0.70)*	1.79 (0.92)*

[1]Sample weighted for complex survey design. Significance of difference between groups tested in multiple linear regression analysis controlling for variables shown in **Table 2**.
*P< .05

TABLE 4. Association of the neighborhood food environment and the Home Food Environment[1]

Explanatory Variables	Healthy Home Food Environment		Unhealthy Home Food Environment		Ratio of Healthy/Unhealthy Home Food Environment	
	B	SE	B	SE	B	SE
Distance to nearest supermarket (in miles)	0.031	0.044	0.088*	0.044	-0.147*	0.065
Distance to nearest convenience store (in miles)	-0.037	0.070	0.047	0.070	-0.043	0.103
Access to Fruits and Vegetables	0.071*	0.035	-0.010	0.035	0.038	0.052
Access to Low-Fat Foods	0.079*	0.036	-0.015	0.036	0.071	0.054

[1]Results from a multivariate linear regression analysis controlling for variables shown in **Table 2**. Sample weighted for complex survey design.
*$P<.05$

FIGURE 1. Relationship between the HFE and race/ethnicity[1]

[1]Sample weighted for complex survey design. Significance of difference from NH (Non-Hispanic) Whites (reference group) tested in multiple linear regression analysis controlling for variables shown in **Table 2**.
*$P< .05$

FIGURE 2. Relationship between the HFE and Federal Poverty Level[1]
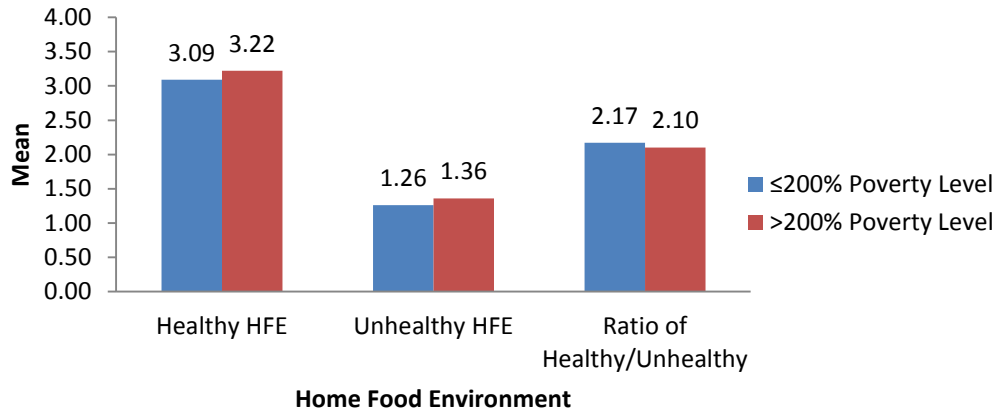
[1]Sample weighted for complex survey design. Significance of difference between groups tested in multiple linear regression analysis controlling for variables shown in **Table 2**.
*P< .05

FIGURE 3. Relationship between the HFE and education level[1]
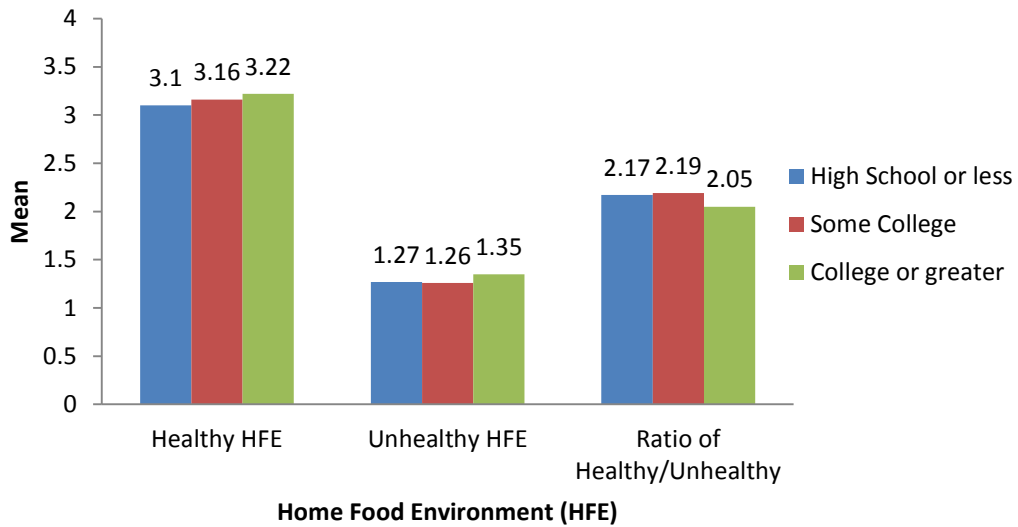
Sample weighted for complex survey design. Significance of difference from High School or less (reference group) tested in multiple linear regression analysis controlling for variables shown in **Table 2**.
*P< .05

FIGURE 4. Relationship between the HFE and household food security[1]
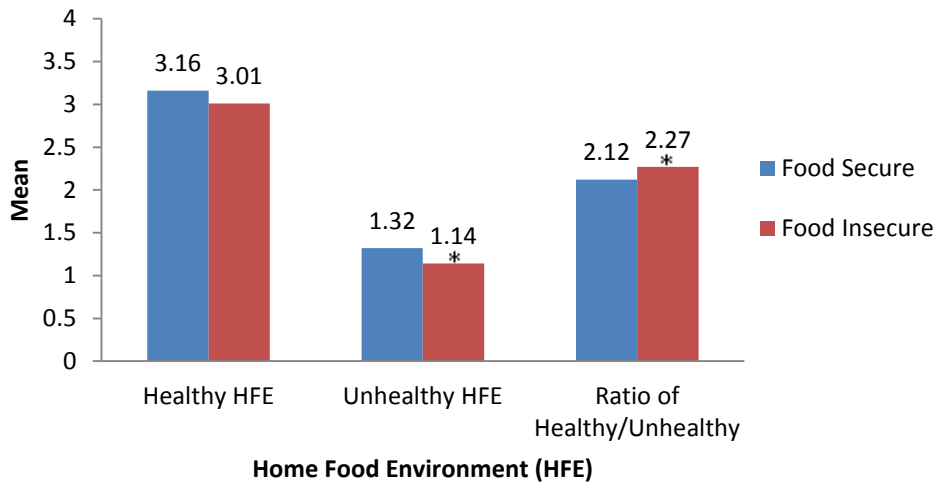
[1]Sample weighted for complex survey design. Significance of difference between groups tested in multiple linear regression analysis controlling for variables shown in **Table 2**.
*$P < .05$

FIGURE 5. Relationship between the HFE and parent perception of weight[1]
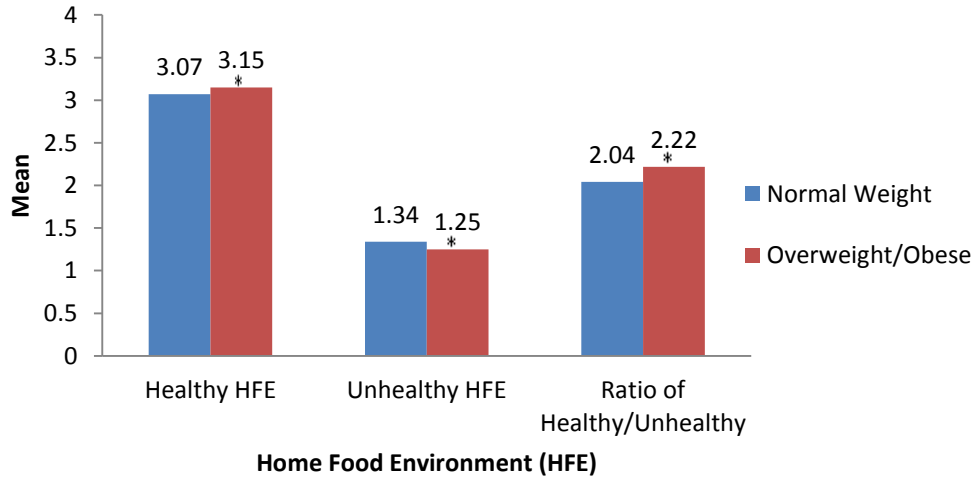
[1]Sample weighted for complex survey design. Significance of difference between groups tested in multiple linear regression analysis controlling for variables shown in **Table 2**.
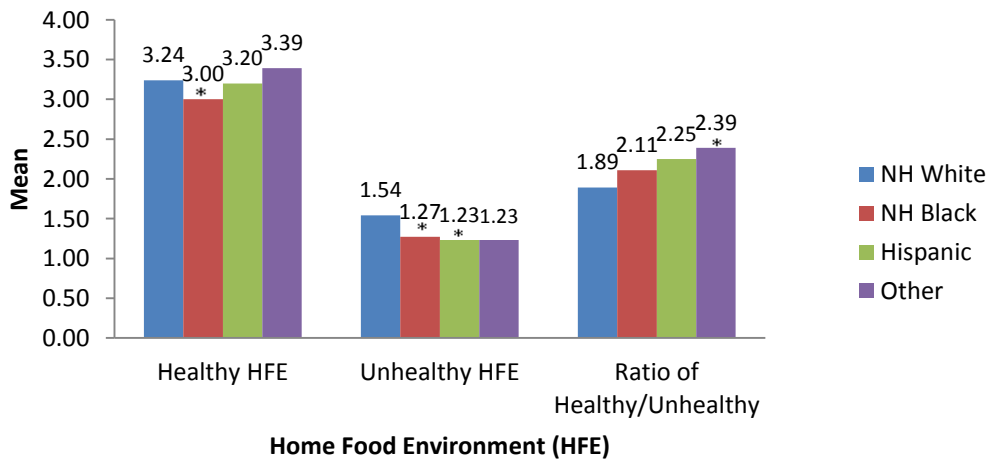*$P < .05$

FIGURE 6. Relationship between the HFE and parent perception of eating[1]
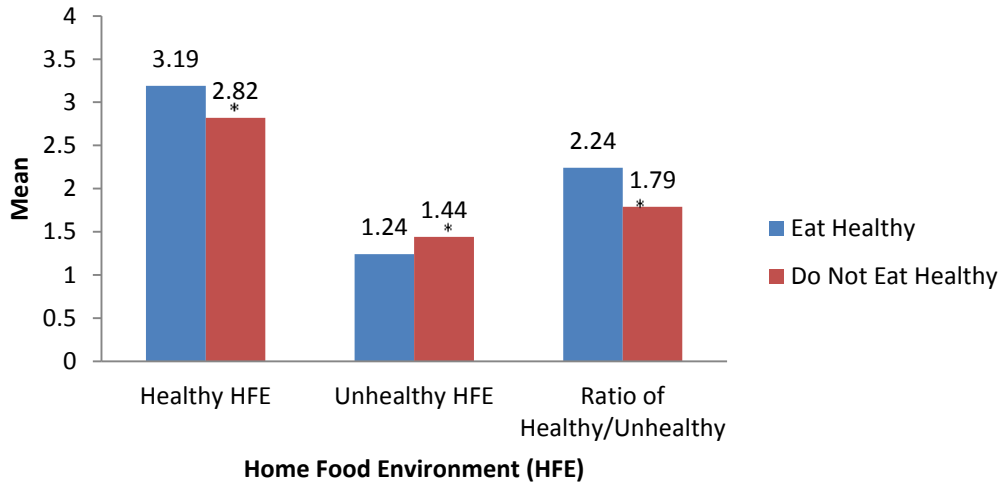
[1]Sample weighted for complex survey design. Significance of difference between groups tested in multiple linear regression analysis controlling for variables shown in **Table 2**.
*P< .05

FIGURE 7. Relationship between the HFE and number of family dinner meals eaten at home[1]
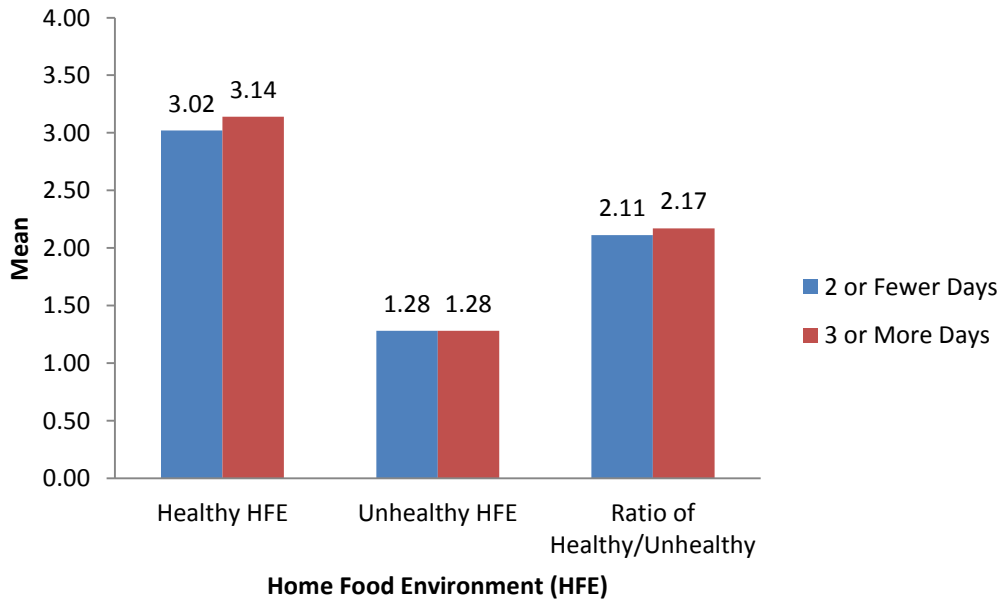
[1]Sample weighted for complex survey design. Significance of difference between groups tested in multiple linear regression analysis controlling for variables shown in **Table 2**.
*P< .05

Chapter 5

DISCUSSION AND CONCLUSION

Previous studies have shown that significant predictors of obesity are low consumption of fruits and vegetables and high consumption of energy-dense foods (Vanasse et al., 2006; Wadden et al., 2002). Numerous studies corroborate the findings that a child's consumption (of both healthy and unhealthy foods) is influenced by the foods that are kept within their home (Cullen et al., 2003; Gable & Lutz, 2000; Haerens et al., 2008; Jago et al., 2007; Kratt et al., 2000; Vereecken et al., 2010). Less understood are the factors that contribute to whether healthy or unhealthy foods are accessible and available within the household and whether their presence, absence, or the ratio of healthy to unhealthy foods is affected by these factors.

This study aimed to identify whether demographic characteristics, parental perceptions, and neighborhood food environment characteristics were associated with the home food environment measured in three different ways: the availability of healthy foods in the home, the availability of unhealthy foods in the home, and the ratio of healthy foods to unhealthy foods available in the home. Assessment of the data revealed that demographic factors of race/ethnicity, parental perceptions of weight, diet, and access to FV and LFF were significantly associated with a healthy HFE. Both the ratio of healthy to unhealthy foods kept within the home and an unhealthy HFE were found to be significantly associated with race/ethnicity, level of food security of the household, distance to the nearest supermarket, and parental perceptions regarding their weight and diet health.

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While it has been shown that low-income families spend less on FV and that the household income is positively correlated with the availability of FV in the home, the present study did not find an association between the HFE and income level of the household (Blisard, Stewart, Jolliffe & others, 2004; Ding et al., 2011; Kratt et al., 2000; Rasmussen, Krolner, & Klepp et al., 2006). This may be due to differences in the socio-demographic characteristics between study samples. For example, in a study by Ding et al. (2011), the sample comprised 78% NH Whites and the median income range was between $60,000-$69,999; the present study primarily consisted of NH Black (42.0%) and Hispanic (42.2%) participants and, of the 1708 respondents, 66.6% were at or below 200% of the FPL.

Previous studies have shown that the race/ethnicity demographic is a predictor of FV availability. Skala and colleagues published results in 2012 showing that Hispanics are significantly more likely to have fresh FV accessible and available in their homes than Blacks. Similarly, Blacks were also shown to have the lowest FV availability at home in research by Kratt et al. (2000). In the present study, controlling for all other independent variables, NH Black children had a significantly lower healthy HFE than NH White children (P=.003). Both NH Black (P=.039) and Hispanic children (P=.047) had significantly lower unhealthy HFE compared to NH White children indicating that NH White children had more unhealthy foods available to them.

Children of other races (not NH White, NH Black, or Hispanic) had a significantly higher healthy/unhealthy HFE (P=.027) compared to NH White

children. These results may reflect the variance in food preferences among different ethnic groups as the HHFE and UHFE Scales, which were used to create the RHFE Scale, relied on the respondent's answer to the availability of specific healthy and unhealthy foods within the household.

In addition to having increased FV available in their homes, Hispanics have been shown to eat a dinner meal as a family one additional day per week, compared to Blacks (Skala et al., 2012). Studies have shown that more frequent family meals are associated with a healthy HFE, specifically an increased availability of FV (Gable & Lutz, 2000; Utter et al., 2008). Previous study results vary in determining association between consumption of unhealthy foods in the home and family meal frequency (Gillman et al., 2000; Utter et al., 2008). While the present study did not see significant associations across either group for any of the three HFE variables, the average scores for households that ate together more often were slightly higher for HHFE and RHFE while the UHFE score was identical for both groups.

While this study found no significance in HFE across any parent education levels, the average scores tended to be slightly higher for healthy foods with higher levels of parental education.

Very little research has been conducted on the food environments of households experiencing food insecurity. Most studies focus on the environments in which these populations reside and their access to foods through the use of assistance programs (Garasky, Mortan, & Greder, 2004). This study is likely the first in determining the association between the HFE and food security.

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Households classified as food-insecure had significantly less unhealthy foods available at home (P=.000) compared to those classified as food-secure. Food-insecure households also had a significantly higher ratio of healthy to unhealthy food availability in their homes. These findings may result from a) those with food insecurity having less food in general, which is reflected in the availability of the specific foods in the home and/or b) participants' utilization of food assistance programs or food pantries, which provide a greater fraction of nutritious foods resulting in an increased presence of healthy foods compared to unhealthy foods in the home. The use of supplemental programs such as SNAP (Supplemental Nutrition Assistance Program; formerly known as "Food Stamps") or WIC (Special Supplemental Nutrition Program for Woman, Infants, and Children) was ascertained during data collection but was not analyzed in this study.

This study found that parents perceiving themselves to be overweight or obese had significantly more healthy foods available at home (P=0.28), fewer unhealthy foods (P=.000), and a higher ratio of healthy/unhealthy foods (P=.000), compared to those perceiving themselves as normal weight. While these findings seem counterintuitive, these results may reveal a social desirability bias as parents may be more likely to report they are of normal weight when they are overweight or obese. It may also be that parents who consider themselves to be overweight or obese may be more likely to misreport the availability of healthy and unhealthy items in their home. This type of bias was noted in a study of the foods stored in households of both normal and obese families which found that, at the initial visit by researchers, obese families stored more higher calorie foods than those of

normal weight, and at the second visit to the home obese families were shown to have fewer high calorie foods (Terry & Beck, 1985).

Data from this study was obtained through self-reported survey response measures, which is in contrast to results found in a study using objective measures to determine participant weight, and found significant differences among foods stored in the home between overweight and normal subjects (Gorin, Phelan, Raynor, & Wing, 2011). Asking parents to determine their own weight status is highly subjective and may not accurately reflect their actual weight. This was noted in a recent study using NHANES data with over 10,000 respondents, which found that one-fourth of participants misperceived their weight status as less than their actual weight (Duncan, Wolin, Scharoun-Lee, Ding, Warner, & Bennett, 2011). Whether overweight/obese parents had more healthy or less unhealthy foods available in their home may not decrease their consumption of either food. This was reflected in a study which determined that, for some individuals, having more FV in the home was associated with a higher total energy intake among overweight adults which suggested that "for some individuals, exposure to more food options, even healthy options, may promote greater food intake" (Gorin, Phelan, Raynor, & Wing, 2011).

While the results of weight perception and the HFE Scales were contrary to normative thought, parent perception of their own diet was strongly associated with the foods available in the home. Households where parents perceived themselves as healthy eaters were likely to have a healthier HFE as determined by significantly higher scores on the HHFE and the RHFE scales and a lower score

on the UHFE scale (all results significant at $P<.05$). This study may be the first in determining the relationship among HFE and parental perception of their diet. This relationship should be corroborated in other settings as the implication of the results may assist in further research when determining the healthfulness of the HFE.

Using objective measures to determine the distance from a respondent's home to the nearest supermarket and the nearest convenience store, this study found a significant positive association between distance to the nearest supermarket and presence of unhealthy foods in the home ($P=.044$). This indicates that the further a household was from a supermarket, the more unhealthy foods it would likely have available. The distance to the nearest supermarket was also negatively associated with the ratio of healthy/unhealthy foods available at home ($P=.023$) indicating that the farther a household was from a supermarket, the less likely it was to have healthy foods available compared to unhealthy foods. In a recent study, Ding et al. (2011) found no significant association between the food environments that surrounded the respondent's household and the HFE, however their methods to determine distance to retail food outlets involved respondent perception, which may be highly subjective.

Previous research has shown that FV cost impacts the intake of these foods (Campbell et al., 2006; Mushi-Brunt et al., 2007). This study combined parents' perception of cost, quality, and availability of both FV and LFF into an "access" score and found that those with better perceived access to both FV and LFF were found to have significantly more healthy foods in the home. While

having better access to FV and LFF was found to be significantly positively associated with a healthy HFE, the ratio of healthy foods to unhealthy foods was not significant. This suggests that, while access to healthy foods increases the availability of such foods in the home, it does not have an effect on the presence of foods that are unhealthy. The availability of unhealthy foods in the home is simultaneously predictive of both high consumption of these foods as well as low consumption of healthy ones; such consumption patterns are likely to be obesogenic (Campbell et al., 2007; Gable & Lutz, 2000).

There are several limitations to this study. First, while the questionnaire used to determine food availability in the respondent's home has been previously used and validated (Marsh, Cullen, & Baranowski, 2003), the present study used a modified version where a limited number of items were selected for inclusion in the survey. This was done to reduce respondent burden and to only include items that have been associated with increased consumption of calories. Another limitation of the instrument is that it did not capture in-home availability of sugar-sweetened beverages. These shortcomings may have impacted obtaining a complete picture of the HFE, specifically among various ethnic backgrounds due to cultural variations in commonly consumed foods.

Also, self-reported assessment of weight status and diet quality may have been over- and/or under-reported due to the possibility of social desirability. However, the reason for asking these questions was to examine how a respondent's perception on these issues may impact the HFE.

Lastly, this cross-sectional study reports on the observations of this study's population of respondents and can therefore only describe an association between the explanatory variables on the dependent variables of the home food environment among a similar population. Further research in this area using longitudinal study design may corroborate this study's findings to determine causality to the home food environment among socio-demographic, parent perception, and the neighborhood food environment's characteristics.

This study contributes to the literature by identifying demographic and geospatial correlates of the home food environment. One of the major strengths of the study is the large, socio-economically and racially diverse sample. Secondly, given the richness of the data, assessment could be made of the home food environment to demographic characteristics of the household, parental perception of their diet and health status, and with objectively measured geo-spatial variables.

Finally, for measuring the HFE, three distinct scales were used to capture the availability of healthy foods, unhealthy foods, and the ratio between healthy and unhealthy foods. The ratio scale of healthy to unhealthy foods has been used previously and is "a novel measure that may provide more complete quantification of the HFE by [capturing] the competing choices of food options [available], [as well as] adjust for a tendency to over-report or under-report on every item" (Ding et al., 2011).

Conclusion

The findings presented in this study indicate that home food environments vary by demographic characteristics of the household with NH Black children living in homes that have fewer healthy food items available and NH White children living in homes that have a greater number of unhealthy foods available. Food-insecure households tend to have fewer healthy and unhealthy food items available at home; however, they are likely to have relatively fewer unhealthy items compared to healthy items. Parental perceptions about their own weight status and eating habits are associated with the HFE. Parents who perceived themselves to be of normal weight reported having fewer healthy and more unhealthy foods available at home compared to those who considered themselves to be overweight or obese. Parents who perceive their diet to be healthy reported having a healthier home food environment. In terms of the effects of the neighborhood food environment, both perceptions about the environment and actual features of the built environment matter. Parents who perceive better access to FV and LFF have a larger number of healthy foods available at home. Furthermore, households that live farther from a supermarket reported having a less healthy home food environment.

Further research is needed to assess the impact of interventions that change neighborhood food environments on the HFE and to investigate how these changes affect households with different demographic characteristics.

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APPENDIX A

CHILDHOOD OBESITY QUESTIONNAIRE

Introductory script

Hello, this is _____ and I am calling for Rutgers University. We are conducting a survey of New Jersey families in order to understand and improve the health of their children. I need to speak with an adult, 18 years or older, who lives here and makes most decisions about food shopping for this household.

IF ROOMMATES /NO FAMILY MEMBERS, SAY: In that case I can continue with you if you are 18 years of age or older.

IF NO ONE 18 YEARS OF AGE OR OLDER EVER: Is this a dormitory, a medical institution or hospital, some other type of institution, a place of business, or is this your home?

IF HOME: What is the age of the oldest person living in this home? (AS LONG AS THE OLDEST HOUSEHOLD MEMBER IS AT LEAST 18 YEARS OF AGE, WE CAN INTERVIEW THEM.)

IF DORMITORY, INSTITUTION, ETC. RECORD APPROPRIATELY AND END CONVERSATION.

(INT: IF NO ONE IN HH IS 18 YEARS OF AGE OR OLDER ENTER DISPO AS "NO ONE IN HH IS 18 YEARS OF AGE OR OLDER")

IF NEW RESPONDENT COMES TO PHONE SAY:

Hello, this is _____ and I am calling from Rutgers University. We are conducting a survey of New Jersey families in order to understand and improve the health of their children. I need to speak with an adult, 18 years or older, who lives here and makes most decisions about food shopping for this household.

(IF EXPRESSES CONCERN ABOUT CONFIDENTIALITY READ:)
You as an individual will not be linked to any reports using the data. Only information for groups of people will be reported.

(IF ASKED LENGTH OF INTERVIEW READ:) The first part of the conversation will last only a few minutes. If the computer selects you to continue with a longer interview I'll explain at that time.

(IF RESPONDENT HAS OTHER QUESTIONS ABOUT THE SURVEY…WHETHER THEY AGREE TO CONTINUE OR NOT…READ:) If you have additional questions, you can contact someone at our firm by either calling a toll-free number during normal business hours, or e-mailing us anytime of the day. Would you like the toll free number and/or the e-mail address? Do you have something to write this down? The number is 1-800-772-9287. Ask to speak to Mr. Munjack. The e-mail address is:

njhealth@srbi.com. Would you like me to repeat that/either of them? [IF RESPONDENT WANTS TO MAKE THIS CALL BEFORE CONTINUING…ARRANGE CALLBACK DATE AND TIME.**]** If you still have questions about this survey, please contact Susan Brownlee at the Center for State Health Policy at Rutgers University, 55 Commercial Avenue, New Brunswick, NJ, 08901-1340, or by telephone at 732-932-4666. If you have any questions about your rights as a research subject, you may contact the IRB Administrator at Rutgers University at:

> Rutgers University, the State University of New Jersey
> Institutional Review Board for the Protection of Human Subjects
> Office of Research and Sponsored Programs
> 3 Rutgers Plaza
> New Brunswick, NJ 08901-8559
> Tel: 732-932-0150, ext. 2104
> Email: humansubjects@orsp.rutgers.edu

INTRO2.   *(IF SC1a=1 OR SC1baa=1:)* Hello, this is _____ and I am calling for Rutgers University. We are conducting a survey of New Jersey families in order to understand and improve the health of their children.

(SHOW FOR ALL:) The survey is confidential and its findings will help shape policies and programs that impact children's health in New Jersey. You have been randomly selected to participate in this study.

We are not selling anything or asking for donations. This study is sponsored by the Robert Wood Johnson Foundation, a non-profit organization. Our goal is to understand and improve the health of New Jersey children. Your participation in the study is voluntary and confidential.

If you are eligible to participate in the full interview we will send you a check for $10.00 as a token of our appreciation for your time and cooperation.

<div align="center">1 = CONTINUE</div>

SC1.   First let me just verify that you are 18 years of age or older?
(NASF,SINTRO_1)

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF SC1=1, GO TO SC1ba. ELSE GO TO SC1a.)

SC1a. I need to speak to an adult 18 years of age or older, who lives in this household and makes most decisions about food shopping for this household.

1 = Qualified respondent came to phone
2 = Qualified respondent not available
3 = Qualified respondent Refused

(IF SC1a=1, GO BACK TO INTRO2. IF SC1a=2, schedule CB.
IF SC1a=3, dispo as Refusal.)

SC1ba. And I just want to verify that you make most decisions about food shopping for this household.

(IF THEY ARE AS KNOWLEGEABLE AS ANYONE ELSE OR EQUALLY AS KNOWLEDGEABLE RECORD AS "YES")

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF SC1ba=1, GO TO SC2a. ELSE GO TO SC1baa.)

SC1baa.   I need to speak to an adult 18 years of age or older, who lives in this household and makes most decisions about food shopping for this household.

1 = Qualified respondent came to phone
2 = Qualified respondent not available
3 = Qualified respondent Refused

(IF SC1baa=1, GO BACK TO INTRO2. IF SC1baa=2, schedule CB. IF SC1baa=3, dispo as Refusal.)

SC2a. In what city do you currently live? (DO NOT READ LIST)

            1 = Camden
            2 = Newark
            3 = New Brunswick
            4 = Trenton
            5 = Vineland
            6 = Other (Do NOT Specify)
            9 = (VOL) Refused

(Programmer: If SC2a=6, TERMINATE ("S/O SC2a – Not in 1 of 5 cities). If SC2a=7, dispo as Refusal. Else go to SC2a1.)

SC2a1. Do you live within the city limits of *(insert from SC2a)*, or do you live outside the city limits?

> 1 = Inside the city limits
> 2 = Outside the city limits
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

(Programmer: If SC2a1=2 TERMINATE ("S/O SC2a1 – Not in 1 of 5 cities). If SC2a1=3 or 4, dispo as Refusal. Else go to SC2c.)

(IF (V4=2 or 3), read: "I must have entered some of your previous answers incorrectly. I need to re-ask about the number of family members living in your household.")

Display: Please tell me how many people are currently living in your household that are in the following age groups.

SC2ca. How many people in your household are currently…Under 3 years of age?

(RANGE = 0 to 10; 10=10 or more; 11=DK; 12=REF)

_____

(IF SC2ca=1 through 10, ASK SC2ca1. ELSE GO TO SC2cb.)

　　　SC2ca1. *(IF SC2ca=1, read:)* Is this child related to you by blood, through marriage or living as married? (INTERVIEWER: If "Yes," enter "1." If "No," enter "0.")*(IF SC2ca=2 through 10, read:)* How many of them are related to you by blood, through marriage or living as married?

(RANGE = 0 to 10; 10=10 or more; 11=DK; 12=REF)

_____

(Programmer: Answer to SC2ca1 can NOT exceed answer to SC2ca.)

SC2cb. How many people in your household are currently…3 to 18 years of age? Please INCLUDE yourself if you happen to be 18 years of age.

(RANGE = 0 to 10; 10=10 or more; 11=DK; 12=REF)

_____

(Programmer: If ((SC2cb=0 or 11 or 12), TERMINATE ("S/O SC2cb - No 3 to 18 children in HH"). ELSE GO TO SC2b1.)

SC2cb1.　　*(IF SC2cb=1, read:)* Is this child related to you by blood, through marriage or living as married? (INTERVIEWER: If "Yes," enter "1." If "No," enter "0.")　　*(IF SC2cb=2 through 10, read:)* How many of them are related to you by blood, through marriage or living as married? Please COUNT YOURSELF, if applicable.

(RANGE = 0 to 10; 10=10 or more; 11=DK; 12=REF)

_____

(Programmer: Answer to SC2cb1 can NOT exceed answer to SC2cb.)

SC2cc. How many people in your household are currently…OVER the age of 18? Be sure to INCLUDE yourself, if applicable.

(RANGE = 0 to 10; 10=10 or more; 11=DK; 12=REF)

_____

(IF SC2cc=1 through 10, ASK SC2cc1. ELSE GO TO INSTRUCTS BEFORE SC2d1.)
SC2cc1.　　*(IF SC2cc=1, read:)* Is this person related to you by blood, through marriage or living as married? (INTERVIEWER: If "Yes," enter "1." If "No," enter "0.")　　*(IF SC2cc=2 through 10, read:)* How many of them are related to you by blood, through marriage or living as married?

Please COUNT YOURSELF, if applicable.

(RANGE = 0 to 10; 10=10 or more; 11=DK; 12=REF)

_____

(Programmer: Answer to SC2cc1 can NOT exceed answer to SC2cc.)

(IF (SC2cb1=1) AND (SC2cc=0 or SC2cc1=0), TERMINATE ("S/O SC2c – No Adults/Only 1 Child").

(IF (SC2ca1=11 or 12) OR (SC2cb1=11 or 12) OR (SC2cc1=11 or 12), dispo as Refusal.)

(IF SC2cb1=0, ASK SC2d1. ELSE GO TO SC4b.)

SC2d1.Being that you are NOT related to *(the 3 to 18 year old child / any of the 3 to 18 year old children)*, I am unable to conduct the interview with you. Instead, I will need to speak with the adult in your household who IS related to *(that child / those children)* and makes most decisions about food shopping for the *child / children)*. Is that person available?

> 1 = Came to Phone/Brought to Phone
> 2 = Not Available
> 3 = Refused to Come to Phone / Refused to Bring to Phone

(IF SC2d1=1, ask SC2e. IF SC2d1=2, Schedule CB. IF SC2d1=3, dispo as Refusal.)

SC2e. Hello, this is _____ and I am calling for Rutgers University. We are conducting a survey of New Jersey families in order to understand and improve the health of their children. I have already spoken with one of the other adults in your household and they indicated that you are related to *(if sum from SC2cb > 1, insert: "*at least 1 of the 3 to 18 year old children" / *if sum from SC2cb =1, insert:* "the 3 to 18 year old child"*)* in this household. Is that correct?

> 1 = Yes
> 2 = No
> 9 = (VOL) Refused

(IF (SC2e=1), go back to SC2ca. IF SC2e=2, go back to SC2d1. If SC2e=9, dispo as Refusal.)

SC4b. Let me verify that there is a total of *(INSERT SUM FROM SC2ca/SC2cb/SC2cc)* people, INCLUDING YOURSELF, in your household. Is that correct?

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF SC4b=1, GO TO SC5. IF SC4b=2, go back and re-ask SC2ca through SC2cc. ELSE dispo
      as Refusal.)

(Programmer: Create the following variables:
➢   *"TOTHH" = Sum of SC2ca/SC2cb/SC2cc.*
➢   *"TOTFAM" = Sum of SC2ca1/SC2cb1/SC2cc1.*
➢   *"TOTNFAM" = "TOTHH" minus "TOTFAM"*

➢   *"NONFAMAD" = "SC2cc" minus "SC2cc1"*
➢   *"NONFAMCH" = "SC2cb" minus "SC2cb1"*

To complete this section, I just need to have YOUR first name or initials.

SC5.   First you…what is YOUR first name or initials?

            ____ Record Verbatim

SC5a.   (INTERVIEWER: RECORD GENDER BY OBSERVATION)

            1 = Male
            2 = Female

SC5b.   What is your age?

      (RANGE = 18 to 99; 98 = DK; 99 = REF)

        (IF SC5b=98 or 99, ASK SC5b1. ELSE GO TO INSTRUCTS BEFORE SC6.)

SC5b1.   Can you please tell me if your age is…(READ LIST)?

      (ONLY SHOW CODES 5 through 11)

            1 = 3 to 4,
            2 = 5 to 9,
            3 = 10 to 13,
            4 = 14 to 16,
            5 = 17 to 18,
            6 = 19 to 30,
            7 = 31 to 49,
            8 = 50 to 61,or
            9 = 62 or older?
            10 = (VOL) Don't Know
            11 = (VOL) Refused

(IF SC5b=18 or SC5b1=5, THEN THE # OF TIMES TO ASK THE SC6/SC7/SC7a/SC7a1 LOOP WILL BE EQUAL TO THE TOTAL FROM SC2cb1.

IF SC5b<>18 AND SC5b1<>5, THEN THE # OF TIMES TO ASK THE SC6/SC7/SC7a/SC7a1 LOOP WILL BE EQUAL TO THE TOTAL FROM SC2cb1 PLUS 1.)

(AUTOPUNCH THE ANSWER FROM SC5 INTO ITERATION #1 OF SC6 (i.e. – the RESP).
AUTOPUNCH THE ANSWER FROM SC5a INTO ITERATION #1 OF SC7 (i.e. – the RESP).
AUTOPUNCH THE ANSWER FROM SC5b INTO ITERATION #1 OF SC7a (i.e. – the RESP).
AUTOPUNCH THE ANSWER FROM SC5b1 (if applicable) INTO ITERATION #1 of SC7a1 (i.e. – the RESP).)

SC6.   *[READ FOR REMAINING ITERATIONS]*
And what is the first name or initials of the oldest child age 3 to 18 that is related to you? And the next oldest child age 3 to 18 that is related to you?

(ASK SC6 UNTIL WE HAVE CAPTURED THE SUM FROM (SC2cb1) or (SC2cb1 PLUS Resp)…whichever is applicable.

(Read if necessary: The goal of this survey is to understand and improve children's health. All information is confidential.)

(ASK SC7 to SC7a1 CONSECUTIVELY FOR RESPONDENT AND EACH PERSON FROM SC6.)

SC7.   *(Is name or initials)* a male or female?

        1 = male
        2 = female

SC7a.   What is *(name or initials)*'s age?

        (RANGE for RESP = 18 to 99; 98 = DK; 99 = REF)
        (RANGE for Children = 3 to 18; 98 = DK; 99 = REF)

                (ASK IF SC7a IS DK OR REF… OTHERS TO FR1.)

SC7a1.   Can you please tell me if *(name or initials)* age is (READ LIST)

(ONLY SHOW CODES 1 through 5, and 10 and 11)

                        1 = 3 to 4,
                        2 = 5 to 9,
                        3 = 10 to 13,
                        4 = 14 to 16,
                        5 = 17 to 18,
                        6 = 19 to 30,
                        7 = 31 to 49,

8 = 50 to 61,or
9 = 62 or older?
10 = (VOL) Don't Know
11 = (VOL) Refused

SECTION FR1 (HOUSEHOLD/FAMILY ROSTER)

(ASK FR1a FOR EACH CHILD MENTIONED AT SC6 SERIES. IF NO OTHERS GO TO   BOX A.)

FR1a. What relation is *(name/initials)* to you?

(NOTE: YOU ARE ALWAYS RECORDING WHAT RELATIONSHIP THE CHILD HAS TO THE
        RESPONDENT.)

[IF CHILD MENTIONED: "Is that your natural or legally adopted child, your stepchild, your foster child, or a child for whom you are the legal guardian?"]

1 = my spouse/husband/wife
2 = my unmarried partner/boyfriend/girlfriend/domestic partner
3 = my natural or legally adopted child/son/daughter
4 = my stepdaughter/son
5 = my foster child
6 = my grandchild/grandson/granddaughter
7 = my child for whom I am the legal guardian
8 = partner's natural or legally adopted child/son/daughter
9 = partner's stepdaughter/son
10 = partner's foster child
11 = partner's grandchild/grandson/granddaughter
12 = partner's child for whom I am the legal guardian
13 = my brother/sister/sibling
14 = my sister/brother-in-law
15 = my daughter/son-in-law
16 = my niece/nephew
17 = my cousin
18 = my great grandchild
19 = my other relative, specify: _____
20 = other, specify: _____

(NOW GO BACK AND ASK FR1 FOR THE NEXT PERSON. IF NO OTHERS GO TO BOX A.)

V4.   The answers that I recorded previously indicate that there is/are *(insert # from SC2cb1)* children in your household between the ages of 3 to 18 years old

who are related to you. However, based upon your subsequent answers, it appears that none of these 3 to 18 year old children in your household are related to you. So, I need to know which of the following most accurately describes your household situation? (READ LIST)

1 = There are NO 3 to 18 year old children living in this household AT ALL,
2 = YOU are over the age of 18 AND there is at least one 3 to 18 year old child living in this household who is RELATED to YOU,
3 = YOU are currently 18, but there is also at least one other 3 to 18 year old child living in this household who is RELATED to YOU, or
4 = YOU are currently 18 years old, and there are NO other 3 to 18 year olds living in this household who are RELATED to YOU?
9 = (VOL) Refused

(IF V4=1 or 4, TERMINATE ("S/O V4 – NO 3 to 18 IN HH"). IF V4=2 or 3, GO BACK TO SC2c. IF V4=3, dispo as Refusal.)

(IF "NONFAMAD" > 0 <u>AND</u> "NONFAMCH" > 0, ask SC9a. ELSE GO TO SC8a.)

SC9a. Do any of the other UNRELATED ADULTS currently living there use the same land line phone as you?

> 1 = Yes
> 2 = No
> 8 = (VOL) Don't Know3
> 9 = (VOL) Refused

(IF SC9a=1, ASK SC9b. ELSE GO TO SC8a.)

SC9b. Do they have any children ages 3-18 who are RELATED TO THEM, but are NOT related TO YOU living in this household? (INTERVIEWER: If "Yes," probe with, "How many?" If "No," record as "0.")

(RANGE=0 to 14; 14=14 or more; 15=DK; 6=REF):
> _____ Record #
(IF SC9b=0 or 15 or 16, go to SC8a. Else go to SC9c.)

SC9c. What is the name of the adult who makes the food shopping decisions for *(this 3-18 year old child / those 3-18 year old children)*?

> 1 = Gave Response
> 9 = (VOL) Refused

SC8a. Do you have more than one landline telephone number in your household?

[IF "NO" ENTER "1"…IF YES ASK: How many different landline telephone numbers do you or anyone else in the household have at this residence at which you NORMALLY receive incoming phone calls? Do NOT include modem or fax lines, beepers, pagers or cell phones.]

(RANGE=1 to 12; 10=10 or more; 11=DK; 12=REF)

_____ Record #

SC8b.   At any time during the past twelve months has your household been without any telephone service (working telephone number) for a week or longer?

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF SC9=1, GO BOX C. IF SC9=2, SCHEDULE CB. IF SC9=3, DISPO AS REFUSAL.)

(INSERT TIME STAMP)

(AA12 through AA16 IS ASKED ONLY OF EACH CHILD FROM THE "3-18 Family Roster." ALWAYS START WITH THE INDEX CHILD.)

(IF (SC7=2 for Resp) AND (FR1a=3), AUTOPUNCH "1" TO AA12 AND GO TO INSTRUCTS BEFORE
        AA14. ELSE ASK AA12.)

AA12.   Does *(CHILD)*'s mother live in the household? (NSAF D7A)

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF (SC7=1 for Resp) AND (FR1a=3), AUTOPUNCH "1" TO AA14 AND GO TO INSTRUCTS BEFORE AA16. ELSE ASK AA14.)

AA14.   Does *(CHILD)*'s father live in the household? (NSAF D7C)

1 = Yes
2 = No

69

8 = (VOL) Don't Know
9 = (VOL) Refused

(IF AA12=2 and AA14=2, ASK AA15. ELSE GO TO INSTRUCTS BEFORE AA16.)

AA15. Does *(CHILD)*'s legal guardian live in the household?

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF MORE THAN ONE CHILD AGES 3-18 IN HOUSEHOLD, ASK AA16. Else go back to AA12 and ask for next child. If no others, go to Section A.)

AA16.   Do all the remaining children AGES 3 to 18 THAT ARE RELATED TO YOU in the household have the same *(parents/legal guardians)*?

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

(If AA16=1, go Section A. Else go back to AA10 and ask for next child. If no others, go to Section A.)

SECTION A - HEALTH STATUS

(ASK A1, A2 & A3 CONSECUTIVELY…FIRST FOR RESPONDENT, THEN FOR INDEX CHILD.)

*(Read only if "Entire 3-18 Roster" contains MORE THAN 1 individual: "*Most of the remaining questions are for you and *(INDEX CHILD)*." This child was selected randomly from the children in your household.*)*

The first questions are about health.

A1. Would you say *(your/INDEX CHILD'S)* health is (READ LIST): (CTSpg78, e401; NSAFpgF-1, F1)

1 = Excellent,
2 = Very good,
3 = Good,
4 = Fair, or

5 = Poor?
8 = (VOL) Don't Know
9 = (VOL) Refused

A2.   Would you say *(your/INDEX CHILD'S)* DENTAL health is (READ LIST):

1 = Excellent,
2 = Very good,
3 = Good,
4 = Fair, or
5 = Poor?
8 = (VOL) Don't Know
9 = (VOL) Refused

A3. Would you say *(your/INDEX CHILD's)* MENTAL health is (READ LIST):

1 = Excellent,
2 = Very good,
3 = Good,
4 = Fair, or
5 = Poor?
8 = (VOL) Don't Know
9 = (VOL) Refused

(NOW GO BACK AND RE-ASK A1-A3 SERIES FOR INDEX CHILD. IF RESP and INDEX CHILD ALREADY ASKED A1-A3, continue to A4.)

A4.   Has a doctor or other health professional ever said that you had asthma? (modified BRFSSpg9, 3.1)

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

A5.   What about *(INDEX CHILD)*? (modified BRFSSpg9, 3.1)

 (IF NEEDED: "Has a doctor or other health professional ever said that *(INDEX CHILD)* had asthma?)

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

A6.   Has a doctor or other health professional ever said that you had diabetes? (modified BRFSSpg10, 4.1)

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

A7.   What about *(INDEX CHILD)*? (modified BRFSSpg10, 4.1)

(IF NEEDED: "Has a doctor or other health professional ever said that *(INDEX CHILD)* had diabetes?)

1 = Yes
2 = No
8 = (VOL) Don't Know
          9 = (VOL) Refused

 (ASK A8 IF ANY FEMALES AGE 14-49 IN "Family Roster." ELSE GO TO INSTRUCTS BEFORE A9.)

A8. *(If Resp. female & 14 to 49, insert:* "Are you or*")* I/is anyone in your family pregnant?

          1 = Yes
          2 = No
          8 = (VOL) Don't Know
          9 = (VOL) Refused

(IF A8=1, ASK A8b. ELSE GO TO INSTRUCTS BEFORE A9.)

A8b.   Who? Anyone else?

INSERT ALL FEMALE, 14 to 49 YEAR OLDS FROM FAMILY ROSTER
Add the following codes: "19 = Other Related HH member"
"20 = Other non-related HH member"

(IF INDEX CHILD UNDER 5 YEARS OF AGE ASK A9…ELSE GO TO A10.)

A9.   Is *(INDEX CHILD)* limited in any way in activities, including play activities, because of an impairment or a physical or mental health problem?

          1 = Yes
          2 = No

8 = (VOL) Don't Know
9 = (VOL) Refused

A10.   Are you limited in any way in your ability to care for yourself, to work at a job, do housework, school work, or go to school because of an impairment or a physical or mental health problem?

       1 = Yes
       2 = No
       8 = (VOL) Don't Know
       9 = (VOL) Refused

(ASK A11 IF INDEX CHILD AGE 5-18…ELSE GO TO SECTION B.)

A11. What about *(INDEX CHILD)*?

*(IF NEEDED: "*Is *(INDEX CHILD)* limited in any way in his/her ability to care for him/herself, do housework,   do school work, or go to school because of an impairment or a physical or mental health problem?)*

       1 = Yes
       2 = No
       8 = (VOL) Don't Know
       9 = (VOL) Refused

(INSERT TIME STAMP)

SECTION B: HEIGHT/WEIGHT – All children *AGED 3-18)*

(B1-B12a ARE ASKED ONLY OF CHILDREN FROM THE "3-18 Family Roster." FIRST START WITH THE INDEX CHILD, THEN GO BACK AND ASK B1-B12a FOR REMAINING CHILDREN FROM THE "3-18 Family Roster," IF ANY. B6-B12a ARE TO BE ASKED ONLY OF THE INDEX CHILD.)

B1.   How tall is *(INDEX CHILD/CHILD NAME)* now without shoes?

      (ONLY IF NEEDED SAY: "Your best guess is fine")

1 = Answer in feet/inches
(INTERVIEWER: RECORD WHOLE NUMBER ONLY)
2 = Answer in meters/centimeters
(INTERVIEWER: RECORD 2 DECIMAL PLACES IF NEEDED)
8 = (VOL) Don't know
9 = (VOL) Refused

(IF B1=8 or 9, SKIP TO B3. ELSE CONTINUE.)

B2.   When was the last time *(INDEX CHILD/CHILD NAME)*'s height was measured? (IF NECESSARY: Your best estimate is fine.)

    1 = 1 month or less ago
    2 = 2 months ago
    3 = 3 months ago
    4 = 4-6 months ago
    5 = over 6 months to 1 year ago
    6 = More than a year ago
    8 = (VOL) Don't Know
    9 = (VOL) Refused

B3.   How much does *(INDEX CHILD/CHILD NAME)* weigh now without shoes?
        (ONLY IF NEEDED SAY: "Your best guess is fine")

1 = Answer in pounds (INTERVIEWER: RECORD 1 DECIMAL PLACE IF NEEDED)
2 = Answer in kilograms (INTERVIEWER: RECORD 1 DECIMAL PLACE IF NEEDED)
8 = (VOL) Don't know
9 = (VOL) Refused
(IF B3=8 or 9, SKIP TO B5. ELSE CONTINUE.)

B4.   When was the last time *(INDEX CHILD/CHILD NAME)*'s weight was measured?   (IF NECESSARY: Your best estimate is fine.)
                1 = 1 month or less ago
                2 = 2 months ago
                3 = 3 months ago
                4 = 4-6 months ago
                5 = over 6 months to 1 year ago
                6 = More than a year ago
                8 = (VOL) Don't Know
                9 = (VOL) Refused
B5. What is the year and month of birth of *(INDEX CHILD/CHILD NAME)*?

                1 = Gave Response
                9 = (VOL) Refused

  (IF B5=1, ASK B5a and B5b. ELSE GO TO INSTRUCTS BEFORE B6.)
    B5a.   (INTERVIEWER: ENTER YEAR OF BIRTH) (RANGE = 1990 to 2006)

_____ Enter Year

B5b. (INTERVIEWER: SELECT MONTH OF BIRTH)

1 = January	7 = July
2 = February	8 = August
3 = March	9 = September
4 = April	10 = October
5 = May	11 = November
6 = June	12 = December

(IF INDEX CHILD, CONTINUE TO B6.IF <u>NOT</u> INDEX CHILD, DISPLAY THE FOLLOWING: "Now I need to get the heights and weights of your other children" ***…THEN GO BACK TO B1 FOR REMAINING CHILDREN BEGINNING WITH THE OLDEST CHILD WHO IS <u>NOT</u> INDEX CHILD. IF NO MORE CHILDREN, GO TO INSTRUCTS BEFORE B13.)***

B6. Compared to what you would like *(him/her)* to be, would you say *(INDEX CHILD)* is very underweight, slightly underweight, about the right weight, slightly overweight, or very overweight?   (Modified from CHIS adolescent survey)

    1 = Very underweight
    2 = Slightly underweight
    3 = About the right weight
    4 = Slightly overweight
    5 = Very overweight
    8 = (VOL) Don't Know
    9 = (VOL) Refused

(IF B6=1 or 2 or 3, GO TO B11. ELSE ASK B7.)

B7. Are you trying to have *(INDEX CHILD)* lose weight?

    1 = Yes
    2 = No
    8 = (VOL) Don't Know
    9 = (VOL) Refused

(IF CHILD > 10 Yrs, ASK B8. ELSE GO TO INSTRUCTS BEFORE B9.)

B8. Is *(INDEX CHILD)* doing anything to lose weight?

    1 = Yes

75

2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

(If B7 = Yes or B8 = Yes Go to B9 else go to B11.)

B9.   Is *(INDEX CHILD)* eating differently to lose weight?

(IF NEEDED: For example, is *(INDEX CHILD)* eating less fat, less calories, or eating more fruits and vegetables, etc.?)

1 = Yes
2 = No
8 = (VOL) Don't know / Not sure
9 = (VOL) Refused

B10.   Is *(INDEX CHILD)* using any form of physical activity to lose weight?

(IF NEEDED: For example is *(INDEX CHILD)* playing more actively, running, biking, etc.?

1 = Yes
2 = No
8 = (VOL) Don't know / Not sure
9 = (VOL) Refused

B11.   In the past 12 months, has a doctor, nurse or other health professional given you advice about *(INDEX CHILD)*'s weight? (IF YES: "Did they suggest *(INDEX CHILD)* lose weight, gain weight, or maintain current weight?")

1 = Yes, lose weight
2 = Yes, gain weight
3 = Yes, maintain current weight
4 = No, no advice given about weight
8 = (VOL) Don't Know/Not sure
9 = (VOL) Refused

(IF B11=1 or 2 or 3, ASK B12. ELSE GO BACK TO B1 FOR REMAINING CHILDREN BEGINNING WITH THE OLDEST CHILD WHO IS <u>NOT</u> THE INDEX CHILD; IF NO MORE CHILDREN, GO TO INSTRUCTS BEFORE B13.)

B12.   Did they help you develop a plan to follow the advice about *(INDEX CHILD) (if B11=1, read: "losing" / if B11=2, read: "gaining" / if B11=3, read: "maintaining")* weight?

1 = Yes
2 = No
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

(IF B12=1, ASK B12a. ELSE GO TO INSTRUCTS BEFORE B13.)

B12a. Did the doctor, nurse or other health professional follow up with you at subsequent visits to see how *(INDEX CHILD)* was doing with the plan to *(if B11=1, read: "lose" / if B11=2, read: "gain" / if B11=3, read: "maintain")* weight?

1 = Yes
2 = No
8 = Don't know / Not sure
9 = Refused

(GO BACK TO B1 FOR REMAINING CHILDREN BEGINNING WITH THE OLDEST CHILD WHO IS NOT THE INDEX CHILD; IF NO MORE CHILDREN, GO TO INSTRUCTS BEFORE B13.)

HEIGHT/WEIGHT – RESPONDENT

(ASK FOR RESPONDENT ONLY)

B13.   How tall are you without shoes?

(IF NEEDED SAY: "Your best guess is fine")

1 = Answer in feet/inches (INTERVIEWER: RECORD WHOLE NUMBER ONLY)
2 = Answer in meters/centimeters
(INTERVIEWER: RECORD 2 DECIMAL PLACES IF NEEDED)
8 = (VOL) Don't know
9 = (VOL) Refused

B14.   How much do you weigh now without shoes?

(IF NEEDED SAY: "Your best guess is fine")

1 = Answer in pounds (INTERVIEWER: RECORD 1 DECIMAL PLACE IF NEEDED)

2 = Answer in kilograms (INTERVIEWER: RECORD 1 DECIMAL PLACE IF NEEDED)
8 = (VOL) Don't know
9 = (VOL) Refused

B15.   Compared to what you would like to be, would you say you are very underweight, slightly underweight, about the right weight, slightly overweight, or very overweight?

> 1 = Very underweight
> 2 = Slightly underweight
> 3 = About the right weight
> 4 = Slightly overweight
> 5 = Very overweight
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

(IF B15=1 or 2 or 3, go to B19. ELSE ASK B16.)

B16.   Are you doing anything to lose weight?

> 1 = Yes
> 2 = No
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

(IF B16=2, GO TO B19. ELSE ASK B17.)

B17.   Are you trying to eat differently to lose weight?

(IF NEEDED: For example, are you eating less fat, less calories, or eating more fruits and vegetables, etc.)

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

B18.   Are you using any form of physical activity to lose weight?

(IF NEEDED: For example, are you walking, running, going to the gym etc.?)

1 = Yes
2 = No
8 = (VOL) Don't Know

9 = (VOL) Refused

B19.   In the past 12 months, has a doctor, nurse or other health professional given you advice about your weight? *(IF RESP IS FEMALE (SC7=2) AND LESS THAN 50 YEARS OF AGE ((SC7a<50) ORSC7a1=5, 6, OR 7) AND NOT CURRENTLY PREGNANT (A8=2 or A8b<>1), READ:* "Exclude any advice given if you were pregnant in the past year.")

(IF YES: "Did they suggest you lose weight, gain weight, or maintain current weight?")

> 1 = Yes, lose weight
> 2 = Yes, gain weight
> 3 = Yes, maintain current weight
> 4 = No, no advice given about weight
> 8 = (VOL) Don't Know/Not sure
> 9 = (VOL) Refused

 (IF B19=1 or 2 or 3, ASK B20. ELSE GO TO SECTION C.)

B20.   Did they help you develop a plan to follow the advice about *(if B19=1, read: "losing" / if B19=2, read: "gaining" / if B19=3, read: "maintaining")* weight?

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF B20=2, GO TO SECTION C. ELSE ASK B21.)

B21.   Did the doctor, nurse or other health professional follow up with you at subsequent visits to see how you were doing with the plan to *(if B19=1, read: "lose" / if B19=2, read: "gain" / if B19=3, read: "maintain")* weight?

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

(INSERT TIME STAMP)

SECTION C: Food Environment Questions – Respondent only

R E A D   S L O W L Y: Okay, in the next section, please think of your neighborhood as the area within a 20 minute walk, a 5 minute drive, or about 1 mile in all directions around your home.

C1.   How long have you lived in this neighborhood?

        1 = Less than a year
        2 = 1 to less than 2 Years
        3 = 2 to less than 5 years
        4 = 5 to less than 10 years
        5 = 10 years or more
        8 = (VOL) Don't know / Not sure
        9 = (VOL) Refused

C2.   Who does most of the food shopping for your family?

        1 = respondent
        2 = someone else
        3 = respondent and someone else
        8 = (VOL) Don't know / Not sure
        9 = (VOL) Refused

C3.   *(If C2=1 or 3, read: "Do you" / If C2=2 or 8 or 9, read: "Does your family shopper")* usually do most of the food shopping in YOUR neighborhood?

    1 = Yes
    2 = No
    8 = (VOL) Don't Know
    9 = (VOL) Refused

(IF C3=2, ASK C4. ELSE GO TO INSTRUCTS BEFORE C5.)

C4.   What would you say is the main reason that *(you do/your family shopper does)* not shop for most of your food in your neighborhood? (READ LIST)

        1 = No food stores in the neighborhood
        2 = Not convenient
        3= Higher cost
        4= Poor Quality
        5 = Lack of variety
        6 = Lack of healthy choices
        7 = (VOL) OTHER (Specify): _____
        8 = (VOL) Don't know / Not sure
        9 = (VOL) Refused

(If C3=2 or 8 or 9, **say:** In the next set of questions, I will ask you about the store where *(you do/your family shopper does)* MOST of your food shopping.

C5.   Is this store a…(READ LIST)?

(Note: If Resp. says they shop at 2 or more stores equally, ask about the one that is easiest to get to.)
(Note: Target, K-Mart, Costco, Price Club and BJ's are considered "Superstores")

1 = Supermarket (like Shop Rite, Pathmark),
2 = Superstore like Wal-Mart or Sam's Club,
3 = Small grocery store,
4 = Ethnic store or bodega,
5 = Corner store or convenience stores like 7-11,
6 = or some other type of store (Specify): _____
8 = (VOL) Don't know / Not sure
9 = (VOL) Refused

C6.   What would you say is the main reason that *(you shop/your family shopper shops)* for most of your food at this *(INSERT C5 RESPONSE / if C5=DK/REF, insert "store")*? Is it…(READ LIST)?

1 = Convenience,
2 = Better prices,
3 = Better quality, or
4 = A larger selection?
5 = (VOL) Other (SPECIFY): _____
8 = (VOL) Don't Know
9 = (VOL) Refused

C7.   How easy is it for *(you/your food shopper)* to get to this store? Would you say it is very easy, somewhat easy, somewhat difficult, or very difficult?

1 = Very easy
2 = Somewhat easy
3 = Somewhat difficult
4 = Very difficult
8 = Don't know
9 = Refused

C8.   How available are fresh fruits and vegetables at this store? Would you say very available, somewhat available, somewhat unavailable, or very unavailable?

1 = Very Available
2 = Somewhat Available

3 = Somewhat Unavailable
4 = Very Unavailable
5 = (VOL) Store does NOT sell fresh fruits and vegetables
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

(IF C8=5, SKIP TO C12. ELSE CONTINUE.)

C9.   Is there a large selection of good quality fresh fruits and vegetables at this store? Would you say a very large selection, somewhat large selection, somewhat limited selection, or very limited selection?

1 = Very large selection
2 = Somewhat large selection
3 = Somewhat limited selection
4 = Very limited selection
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

C10.   How expensive are fresh fruits and vegetables at this store? Would you say very expensive, somewhat expensive, somewhat inexpensive, or very inexpensive?

1 = Very Expensive
2 = Somewhat Expensive
3 = Somewhat Inexpensive
4 = Very Inexpensive
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

(IF C10=1 or 2, ASK C11. ELSE GO TO C12.)

C11.   How often does the cost of fresh fruits and vegetables at this store keep *(you/your food shopper)* from buying them? (READ LIST)

1 = Always,
2 = Often,
3 = Sometimes,
4 = Rarely, or
5 = Never?
8 = (VOL) Don't Know
9 = (VOL) Refused

C12. How available are low-fat foods such as low fat milk and lean cuts of meat at this store? Would you say very available, somewhat available, somewhat unavailable, or very unavailable?

    1 = Very Available
    2 = Somewhat Available
    3 = Somewhat Unavailable
    4 = Very Unavailable
    8 = (VOL) Don't know / Not sure
    9 = (VOL) Refused

C13. Is there a large selection of good quality low-fat foods at this store? Would you say a very large selection, somewhat large selection, somewhat limited selection, or very limited selection?

    1 = Very large selection
    2 = Somewhat large selection
    3 = Somewhat limited selection
    4 = Very limited selection
    8 = (VOL) Don't Know / Not sure
    9 = (VOL) Refused

C14. How expensive are low-fat foods at this store? Would you say very expensive, somewhat expensive, somewhat inexpensive, or very inexpensive?

    1 = Very Expensive
    2 = Somewhat Expensive
    3 = Somewhat Inexpensive
    4 = Very Inexpensive
    8 = (VOL) Don't Know / Not sure
    9 = (VOL) Refused

(IF C14=1 or 2, ASK C15 ELSE GO TO C16.)

C15. How often does the cost of low-fat foods at this store keep *(you/your food shopper)* from buying Them? *(READ LIST)*

    1 = Always
    2 = Often
    3 = Sometimes
    4 = Rarely
    5 = Never
    8 = (VOL) Don't know
    9 = (VOL) Refused

C16.   How *(do you/does your family shopper)* usually travel to this *(INSERT C5 RESPONSE / if C5=DK/REF, insert "store")*? *(DO NOT READ LIST)*

        1 = Drive a car
        2 = Get a ride
        3 = Take the bus
        4 = Take the train
        5 = Take a taxi
        6 = Walk
        7 = Bike
        8 = (VOL) Don't know
        9 = (VOL) Refused

C17.   How long does it usually take *(you/your food shopper)* to get there when *(you/they) (INSERT C16 RESPONSE / if C16=DK/REF, insert "go to this store")*?
(RANGE = 1 to 120; 1=Less than 1 minute; 120= 120 minutes or more; 121=DK; 122=REF)

_____ minutes

(IF C16<>1 and C16<>2, ASK C18. ELSE GO TO C20.)

C18.   Is there ever a car available for your family's food shopping?

        1 = Yes
        2 = No
        8 = (VOL) Don't know
        9 = (VOL) Refused

(IF C18=1, ASK C19. ELSE GO TO C20.)

C19.   Is it usually or only sometimes available?

1 = Usually
2 = Sometimes
8 = (VOL) Don't know
9 = (VOL) Refused

(IF C8=5, SKIP TO INSTRUCTS BEFORE C21. ELSE ASK C20.)

C20.   In the past month, did *(you/your family shopper)* usually buy most of your fruits and vegetables at the same store where *(you/they)* do most of your shopping?

(IF NEEDED, STATE THAT WE MEAN ALL KINDS of fruits and Vegetables - - fresh, canned, frozen)

> 1 = Yes, same store
> 2 = Somewhere Else
> 3 = (VOL) Buy 50/50 from same store and Somewhere Else
> 4 = (VOL) Don't buy fruits and vegetables
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

(IF (C8=5) or (C20=2 or 3), ASK C21. ELSE GO TO C24.)

C21.　*(If C20=2 or 3, read:* Other than your usual food shopping store, what kind of place is that?*)*
　　　(IF C8=5, read: In the past month, where did you usually buy fruits and vegetables, or did you not buy any?*)*

(IF NEEDED, SAY:)　Would you say at a supermarket, a superstore like Wal-Mart of Sam's Club, small grocery store, market, bodega, ethnic store (like an Asian market); or a convenience store such as a gas station, a corner store; or a farmer's market or fruit and vegetable store?
(Note: Target, K-Mart, Costco, Price Club and BJ's are considered "Superstores")

1 = Supermarket (like Shop Rite, Pathmark),
2 = Superstore like Wal-Mart or Sam's Club,
3 = Small grocery store,
4 = Ethnic store or bodega,
5 = Corner store or convenience stores like 7-11,
6 = Farmer's market or fruit and vegetable store/produce store
7 = or some other type of store (Specify): _____
8 – (VOL) Did NOT buy fruits and vegetables
9 = (VOL) Don't know / Not sure
10 = (VOL) Refused

C22.　How often *(do you/does your family shopper)* shop at this store for fruits and vegetables?

> 1 = Gave times per week　　(RANGE 1-7)
> 2 = Gave times per month　RANGE 1-31)
> 3 = Gave times per year　　(RANGE 1-365)
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

C23.　What is the main reason *(you shop/your family shopper shops)* at this store? Is it…(READ LIST)?

1 = Convenience,
2 = Better prices,
3 = Better quality, or
4 = A larger selection?
17 = (VOL) Other (SPECIFY) _____
18 = (VOL) Don't Know
19 = (VOL) Refused

C24.   Still thinking about your neighborhood, that is the area within a 20 minute
walk, a 5 minute drive, or about 1 mile in all directions around your home, are
there any fast-food restaurants, delis, pizza, burger, taco or chicken places where
you pay before you eat in your neighborhood?

   1 = Yes
   2 = No
   8 = (VOL) Don't know
   9 = (VOL) Refused

C26.   Are there any full-service restaurants in your neighborhood?

(ONLY IF NEEDED: "Examples include a diner, Denny's, or Friendly's")

   1 = Yes
   2 = No
   8 = (VOL) Don't know
   9 = (VOL) Refused

I will now ask you a few questions about food items available in your home.
Please answer yes or no for each of the questions. In the last week, did you
have…

(RANDOMIZE ORDER OF C28a-C28e; ALWAYS ASK C28f LAST)

C28a. Fresh, frozen, or canned vegetables available in your home?

        1 = Yes
        2 = No
        8 = (VOL) Don't know
        9 = (VOL) Refused
C28b. 1% or skim milk available in your home?

        1 = Yes
        2 = No

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8 = (VOL) Don't know
9 = (VOL) Refused

C28c. Whole grain bread or whole grain pasta available in your home?

(IF NEEDED: "Include any whole grain, whole wheat, rye, etc. bread or pasta.")

1 = Yes
2 = No
8 = (VOL) Don't know
9 = (VOL) Refused

C28d. Cookies, cakes, or candy that were available in your home?

1 = Yes
2 = No
8 = (VOL) Don't know
9 = (VOL) Refused

C28e. Chips or Nachos or Doritos available in your home?

1 = Yes
2 = No
8 = (VOL) Don't know
9 = (VOL) Refused

C28f. Fresh, canned or dried fruit on the kitchen counter or somewhere easy for your child to get to?

(IF NEEDED, PROBE WITH: "In your home?)

1 = Yes
2 = No
8 = (VOL) Don't know
9 = (VOL) Refused

Please tell me if you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with each of the following statements.

C29a. In general, I eat healthy. Do you Agree or Disagree? Strongly or Somewhat?

1 = Strongly agree
2 = Somewhat agree
3 = Somewhat disagree
4 = Strongly disagree

8 = (VOL) Don't know
9 = (VOL) Refused

C29b. In general, *(INDEX CHILD)* eats healthy. Do you Agree or Disagree?
Strongly or Somewhat?

1 = Strongly agree
2 = Somewhat agree
3 = Somewhat disagree
4 = Strongly disagree
8 = (VOL) Don't know
9 = (VOL) Refused

C30.   Which one of the following statements best describes the food eaten by
your family? Do you have…(READ LIST)?

1 = Enough food to eat,
2 = Sometimes NOT enough to eat, or
3 = Often NOT enough to eat?
8 = (VOL) Don't Know
9 = (VOL) Refused

(INSERT TIME STAMP)

SECTION D: PHYSICAL ENVIRONMENT FOR ACTIVITY – *Respondent only unless otherwise noted*

For the next few agree/disagree statements, as before, please think of your
neighborhood as the area within a 20 minute walk, a 5 minute drive, or about 1
mile in all directions around your home.

(RANDOMIZE ORDER OF D1a-D1f…do NOT rotate D1g or D1h)

D1a.   My neighborhood offers many opportunities to be physically active. Do
you Agree or Disagree? Strongly or Somewhat?

1 = Strongly agree
2 = Somewhat agree
3 = Somewhat disagree
4 = Strongly disagree
8 = (VOL) Don't know
9 = (VOL) Refused

D1b.   My neighborhood is a close-knit or unified neighborhood. Do you Agree
or Disagree? Strongly or Somewhat?

1 = Strongly agree
                    2 = Somewhat agree
                    3 = Somewhat disagree
                    4 = Strongly disagree
                    8 = (VOL) Don't know
                    9 = (VOL) Refused

D1c.   People around here are willing to help their neighbors. Do you Agree or
Disagree? Strongly or Somewhat?

                    1 = Strongly agree
                    2 = Somewhat agree
                    3 = Somewhat disagree
                    4 = Strongly disagree
                    8 = (VOL) Don't know
                    9 = (VOL) Refused

D1d.   People in this neighborhood generally don't get along with each other. Do
you Agree or Disagree? Strongly or Somewhat?

                    1 = Strongly agree
                    2 = Somewhat agree
                    3 = Somewhat disagree
                    4 = Strongly disagree
                    8 = (VOL) Don't know
                    9 = (VOL) Refused

D1e.   I trust people in this neighborhood. Do you Agree or Disagree? Strongly
or Somewhat?

                    1 = Strongly agree
                    2 = Somewhat agree
                    3 = Somewhat disagree
                    4 = Strongly disagree
                    8 = (VOL) Don't know
                    9 = (VOL) Refused

D1f.   People in this neighborhood do not share the same values. Do you Agree
or Disagree? Strongly or Somewhat?

                    1 = Strongly agree
                    2 = Somewhat agree
                    3 = Somewhat disagree
                    4 = Strongly disagree

8 = (VOL) Don't know
9 = (VOL) Refused

D1g.   On the whole, I get enough exercise or physical activity. Do you Agree or Disagree? Strongly or Somewhat?

1 = Strongly agree
2 = Somewhat agree
3 = Somewhat disagree
4 = Strongly disagree
8 = (VOL) Don't know
9 = (VOL) Refused

D1h.   On the whole, *(INDEX CHILD)* gets enough exercise or physical activity. Do you Agree or Disagree? Strongly or Somewhat?

1 = Strongly agree
2 = Somewhat agree
3 = Somewhat disagree
4 = Strongly disagree
8 = (VOL) Don't know
9 = (VOL) Refused

D3.   Thinking about TRAFFIC, how safe is it to walk, run, bike, or play in your neighborhood? Would you say very safe, somewhat safe, somewhat unsafe, or very unsafe?

1 = Very Safe
2 = Somewhat Safe
3 = Somewhat Unsafe
4 = Very Unsafe
8 = (VOL) Don't Know / Not sure
9 = (VOL) ▢Refused

D2.   Thinking about CRIMINAL ACTIVITY, how safe is it to walk, run, bike, or play in your neighborhood? Would you say very safe, somewhat safe, somewhat unsafe, or very unsafe?

(NOTE: If ask whether we mean "at night" or "during the day," probe…"We simply mean in general or overall.")
1 = Very Safe
2 = Somewhat Safe
3 = Somewhat Unsafe
4 = Very Unsafe

8 = (VOL) Don't Know / Not sure
9 = (VOL) ☐Refused

D4.   How pleasant is it to walk, run, bike, or play in your neighborhood? For example, are there trees and proper lighting, no graffiti, or abandoned buildings? Would you say very pleasant, somewhat pleasant, somewhat unpleasant, or very unpleasant?

1 = Very Pleasant
2 = Somewhat Pleasant
3 = Somewhat Unpleasant
4 = Very Unpleasant
8 = (VOL) Don't Know / Not sure
9 = (VOL) ☐Refused

D5.   For walking after dark, are there working street lights on most streets in your neighborhood?

        1 = Yes
        2 = No
        8 = (VOL) Don't Know / Not sure
        9 = (VOL) Refused

D6.   Are there sidewalks in most areas of your neighborhood?

        1 = Yes
        2 = No
        8 = (VOL) Don't Know / Not sure
        9 = (VOL) Refused

(IF D6=2, GO TO D10. ELSE ASK D7.)

D7.   Are the sidewalks generally in good, fair, or poor condition?

        1 = Good
        2 = Fair
        3 = Poor
        8 = (VOL) Don't Know / Not sure
        9 = (VOL) Refused

D8.   How often does *(INDEX CHILD)* use sidewalks in your neighborhood to walk, run, bike, or play? Often, sometimes, rarely, or never?

1 = Often
2 = Sometimes
3 = Rarely
4 = Never
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

D9.   How often do you use sidewalks in your neighborhood to walk, run, or bike? Often, sometimes, rarely, or never?

1 = Often
2 = Sometimes
3 = Rarely
4 = Never
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

D10. Are there parks in your neighborhood where children can walk, run, bike, or play?

        1 = Yes
        2 = No
        8 = (VOL) Don't Know / Not sure
        9 = (VOL) Refused

(IF D10=2, GO TO D15. ELSE ASK D11.)

D11.   Thinking about CRIMINAL ACTIVITY, how safe are these parks?
Would you say very safe, somewhat safe, somewhat unsafe, or very unsafe?

1 = Very Safe
2 = Somewhat Safe
3 = Somewhat Unsafe
4 = Very Unsafe
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

D12.   How pleasant are the parks in your neighborhood? For example, are there trees, proper lighting, no graffiti or trash. Would you say very pleasant, somewhat pleasant, somewhat unpleasant, or very unpleasant?

1 = Very Pleasant
2 = Somewhat Pleasant
3 = Somewhat Unpleasant
4 = Very Unpleasant

8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

D13.   How often does *(INDEX CHILD)* use parks in your neighborhood to walk, run, bike, or play? Often, sometimes, rarely, or never?

1 = Often
2 = Sometimes
3 = Rarely
4 = Never
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

D14.   How often do you use parks in your neighborhood to walk, run, or bike? Often, sometimes, rarely, or never?

1 = Often
2 = Sometimes
3 = Rarely
4 = Never
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

D15.   Are there indoor or outdoor exercise facilities such as walking or running tracks, basketball or tennis courts, swimming pool, or school gym in the parks or elsewhere in your neighborhood?

(IF NEEDED: Include public or private facilities)

        1 = Yes
        2 = No
        8 = (VOL) Don't Know / Not sure
        9 = (VOL) Refused

(IF D15=2, GO TO D22. ELSE ASK D16.)

D16.   How convenient are the hours during which these exercise facilities are available for use? Would you say very convenient, somewhat convenient, somewhat inconvenient, or very inconvenient?

(NOTE: If asked "convenient for ME, or for the KIDS, say, "Just in general.")
1 = Very Convenient
2 = Somewhat Convenient
3 = Somewhat Inconvenient
4 = Very Inconvenient

8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

D17.   Thinking about CRIMINAL ACTIVITY, how safe are these facilities?
Would you say very safe, somewhat safe, somewhat unsafe, or very unsafe?

1 = Very Safe
2 = Somewhat Safe
3 = Somewhat Unsafe
4 = Very Unsafe
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

D18.   In what kind of condition are these facilities (clean, well-maintained,
proper lighting, etc)? Would you say very good condition, somewhat good
condition, somewhat poor condition, or very poor condition?

1 = Very Good Condition
2 = Somewhat Good Condition
3 = Somewhat Poor Condition
4 = Very Poor Condition.
8 = (VOL) Don't Know / Not sure
        9 = (VOL) Refused

D19a. Do these facilities charge a fee?

                1 = Yes
                2 = No
                8 = (VOL) Don't Know
                9 = (VOL) Refused

(IF D19a=1, ASK D19. ELSE GO TO D20.)

D19.   How affordable are these exercise facilities? Would you say very
affordable, somewhat affordable, somewhat unaffordable, very unaffordable?

                1 = Very affordable
                2 = Somewhat affordable
                3 = Somewhat unaffordable
                4 = Very unaffordable
                8 = (VOL) Don't Know / Not sure
                9 = (VOL) Refused

D20.   Other than during regular school hours, how often does *(INDEX CHILD)* use these indoor or outdoor exercise facilities in your neighborhood? Often, sometimes, rarely, or never?

1 = Often
2 = Sometimes
3 = Rarely
4 = Never
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

D21.   How often do you use these indoor or outdoor exercise facilities in your neighborhood? Often, sometimes, rarely, or never?

1 = Often
2 = Sometimes
3 = Rarely
4 = Never
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

D22.   How often does *(INDEX CHILD)* walk to stores, libraries, or recreational facilities in your neighborhood? Often, sometimes, rarely, or never, or are there no such places to walk in the neighborhood? (IF NEEDED: "This can be either alone or with someone else.")

1 = Often
2 = Sometimes
3 = Rarely
4 = Never
5 = No such places in the neighborhood
8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

(IF D22=5, GO TO SECTION E. ELSE ASK D23.)

D23.   How often do you walk to stores, libraries, or recreational facilities in your neighborhood? Often, sometimes, rarely, or never, or are there no such places to walk in the neighborhood?

1 = Often
2 = Sometimes
3 = Rarely
4 = Never
5 = No such places in the neighborhood

8 = (VOL) Don't Know / Not sure
9 = (VOL) Refused

(INSERT TIME STAMP)

SECTION E: BEHAVIOR – CHILD - FOOD

E1. What grade in school is *(INDEX CHILD)?*

     1 = 1st Grade
     2 = 2nd Grade
     3 = 3rd Grade
     4 = 4th Grade
     5 = 5th Grade
     6 = 6th Grade
     7 = 7th Grade
     8 = 8th Grade
     9 = 9th Grade
     10 = 10th Grade
     11 = 11th Grade
     12 = 12th Grade
     13 = Pre-school
     14 = Kindergarten
     15 = Graduated HS/Entering College or Tech/Trade/Nursing School
     16 = (VOL) Not in school
     17 = (VOL) Home Schooled
     18 = Other, (SPECIFY)
19 = (VOL) Don't Know
20 = (VOL) Refused

(IF E1=15 or 16 or 17 or 19 or 20, GO TO E4. ELSE GO TO INSTRUCTS BEFORE E1a.)

(IF SC2a=1 (CAMDEN), ASK E1a. ELSE GO TO INSTRUCTS BEFORE E1b.)

E1a.   What is the name of the school that *(INDEX CHILD)* currently attends?

(IF CHILD HAS CLASSES AT MULTIPLE LOCATIONS, PROBE: "At which one does *(INDEX CHILD)* have MOST of his/her classes?")

(ENTER APPROPRIATE CODE FROM BLUE "TACK UP" SHEET)

     1 = BONSALL
     2 = BRIMM MEDICAL ARTS HIGH SCHOOL

3 = CAMDEN ACADEMY CHARTER HIGH SCHOOL

4 = CAMDEN CAP

5 = CAMDEN FORWARD SCHOOL

6 = CAMDEN HIGH SCHOOL

7 = CAMDEN HOUSE

8 = CAMDEN SIP

9 = CAMDEN VIRTUA KIDS IN TRANSISTION

10 = CAMDEN'S PROMISE CS

11 = CATTO DEMONSTRATION SCHOOL

12 = COOPERS POYNT

13 = CRAMER

14 = CREATIVE & PRFRMG ARTS HIGH SCHOOL

15 = D.U.E. SEASON CS

16 = DAVIS ELEMENTARY

17 = DUDLEY

18 = EARLY CHILDHOOD DEVEL CENTER

19 = EAST CAMDEN MIDDLE SCHOOL

20 = ENVIRONMENT COMMUNITY CS

21 = FOREST HILL

22 = FREEDOM ACADEMY CS

23 = HATCH MIDDLE SCHOOL

24 = HOLY NAME SCHOOL

25 = JRC ALTERNATIVE SCHOOL

26 = LANNING SQUARE

27 = LEAP ACADEMY UNIVERSITY CS

28 = THE LEARNING TREE

29 = MCGRAW

30 = MET EAST HIGH SCHOOL

31 = MORGAN VILLAGE MIDDLE SCHOOL

32 = MT OLIVET SEVENTH-DAY ADV SCHOOL

33 = OLD CATTO ELEMENTARY

34 = PARKSIDE

35 = POWELL

36 = PYNE POYNT FAMILY SCHOOL

37 = R C MOLINA ELEM SCHOOL

38 = RILETTA CREAM ELEM SCHOOL

39 = RIVERFRONT STATE PRISON

40 = SACRED HEART GRADE SCHOOL

41 = THE SAN MIGUEL SCHOOL

42 = SHARP

43 = SO CAMDEN ALTERNATIVE SCHOOL
44 = ST ANTHONY OF PADUA SCHOOL
45 = ST JOSEPH PRO-CATHEDRAL SCHOOL
46 = SUMNER
47 = U. S. WIGGINS
48 = URBAN PROMISE ACADEMY
49 = VETERANS MEMORIAL MIDDLE SCHOOL
50 = WASHINGTON
51 = WHITTIER
52 = WILSON
53 = WOODROW WILSON HIGH SCHOOL
54 = YORKSHIP
197 = OTHER (SPECIFY)
198 = (VOL) DON'T KNOW
199 = (VOL) REFUSED

(NOW GO TO E2.)

(IF SC2a=2 (NEWARK), ASK E1b. ELSE GO TO INSTRUCTS BEFORE E1c.)

E1b.   What is the name of the school that *(INDEX CHILD)* currently attends?

(IF CHILD HAS CLASSES AT MULTIPLE LOCATIONS, PROBE: "At which one does *(INDEX CHILD)* have MOST of his/her classes?")

(ENTER APPROPRIATE CODE FROM GREEN "TACK UP" SHEET)

1 = ABINGTON AVE
2 = ACADEMY OF ST. BENEDICT
3 = ACADEMY OF VOC CAREERS
4 = ALEXANDER ST
5 = AMERICAN HISTORY HIGH
6 = ANN ST
7 = ARTS
8 = AVON AVE
9 = BARRINGER
10 = BELMONT RUNYON
11 = BETHANY CHRISTIAN ACADEMY
12 = BETHEL CHRISTIAN ACADEMY
13 = BLESSED SACRAMENT SCHOOL
14 = BOYLAN EARLY CHILDHOOD CT
15 = BRAGAW AVE

16 = BRANCH BROOK SCHOOL
17 = BROADWAY
18 = BRUCE ST
19 = BURNET ST
20 = CALVARY CHRISTIAN SCHOOL
21 = CAMDEN MIDDLE
22 = CAMDEN ST
23 = CENTRAL
24 = THE CHAD SCHOOL/THE BLACK YOUT
25 = CHAD SCIENCE ACADEMY
26 = CHANCELLOR AVE
27 = CHANCELLOR AVE ANNEX
28 = CHEN SCHOOL
29 = THE CHILDRENS ACADEMY
30 = CLEVELAND
31 = CLINTON AVE
32 = DAYTON ST
33 = DELIVERANCE CHRISTIAN SCHOOL
34 = DISCOVERY CS
35 = DR E ALMA FLAGG
36 = DR WILLIAM H HORTON
37 = EARLY CHILDHOOD PROGRAM
38 = EAST NEWARK PUBLIC
39 = EAST SIDE
40 = EIGHTEENTH AVE
41 = ELLIOTT ST
42 = ESSEX CO. YOUTH HOUSE
43 = ESSEX CTY V N 13TH ST NWK
44 = ESSEX REGIONAL SCHOOL
45 = ESSEX RGC
46 = FIFTEENTH AVE
47 = FIRST AVENUE
48 = FOURTEENTH AVENUE
49 = FRANKLIN
50 = FULL GOSPEL CHRISTIAN ACADEMY
51 = GEORGE WASHINGTON CARVER
52 = GRAY CS
53 = GREATER NEWARK ACADEMY CS
54 = GROWING GARDEN PRE-SCH & KNG
55 = HARRIET TUBMAN
56 = HAWKINS ST
57 = HAWTHORNE AVE

58 = JERSEY PREPARATORY SCHOOL
59 = JOHN F KENNEDY
60 = JUST US KIDS DAY CARE CENTER
61 = LADY LIBERTY ACADEMY CS
62 = LAFAYETTE ST
63 = LINCOLN
64 = LINK COMMUNITY SCHOOL
65 = LOUISE A. SPENCER
66 = LOVE CENTER DAY CARE CENTER
67 = LUIS MUNOZ MARIN MIDDLE
68 = MADISON ELEM.
69 = MALCOLM X SHABAZZ HIGH
70 = MAPLE AVE SCHOOL
71 = MARIA L. VARISCO-ROGERS CS
72 = MARION P. THOMAS CS
73 = MARTIN LUTHER KING JR
74 = MCKINLEY
75 = MILLER ST
76 = MIRACLE TEMPLE DAY CARE CENTER
77 = MORTON ST
78 = MT VERNON
79 = NJ REGIONAL DAY SCH-NEWARK
80 = NEW HORIZONS COMM. CS
81 = NEW LIFE CHILD CARE LEARNING CENTER
82 = NEWARK BOYS CHORUS SCHOOL
83 = NEWARK CHRISTIAN SCHOOL
84 = NEWARK DAY CENTER
85 = NEWARK VOCATIONAL H S
86 = NEWTON ST
87 = NORTH STAR ACAD. CS OF NEWARK
88 = NORTH WARD CHILD DEVELOPMENT
CENTER
89 = NORTHERN STATE PRISON
90 = OLIVER ST
91 = OUR LADY-GOOD COUNSEL SCHOOL
92 = OUR LADY OF GOOD COUNSEL HIGH
SCHOOL
93 = PESHINE AVE
94 = PROVISION OF PROMISE ACADEMY
95 = QUEEN OF ANGELS
96 = QUITMAN COMMUNITY SCHOOL
97 = RAFAEL HERNANDEZ SCHOOL

98 = RENAISSANCE ACADEMY
99 = RIDGE ST
100 = RISING STAR LEARNING CENTER
101 = ROBERT TREAT ACADEMY CS
102 = ROBERTO CLEMENTE
103 = ROSEVILLE AVE SCHOOL
104 = REFUGE OF HOPE
105 = SACRED HEART ELEMENTARY SCHOOL
106 = SAMUEL L BERLINER
107 = SCIENCE HIGH
108 = SHILOH RAINBOW ACADEMY INC.
109 = SOUTH SEVENTEENTH ST
110 = SOUTH ST
111 = SPEEDWAY AVE
112 = ST BENEDICT'S PREP SCHOOL
113 = ST CASIMIE ACADEMY
114 = ST FRANCIS XAVIER
115 = ST JAMES PREPARATORY SCHOOL
116 = ST JOHN THE BAPTIST UKRAINI
117 = ST LUCY FILIPPINI ACADEMY
118 = ST LUCY SCHOOL
119 = ST MARY ELEMENTARY SCHOOL
120 = ST MICHAEL SCHOOL
121 = ST PATRICK'S SCHOOL
122 = ST PHILIPS ACADEMY
123 = ST ROCCO SCHOOL
124 = ST ROSE OF LIMA SCHOOL
125 = ST VINCENT ACADEMY
126 = SUSSEX AVE
127 = TEAM ACADEMY CHARTER SCHOOL
128 = TECHNOLOGY HIGH
129 = TENDER CARE
130 = THIRTEENTH AVE
131 = UNITED ACADEMY
132 = UNIVERSITY HEIGHTS CS
133 = UNIVERSITY HIGH
134 = VAILSBURG CHRISTIAN ACADEMY
135 = VAILSBURG MIDDLE SCHOOL
136 = WEEQUAHIC
137 = WEEQUAHIC DAY NURSERY & SCHOOL
138 = WEST MARKET STREET CENTER
139 = WEST SIDE HIGH

140 = WILLIAM H BROWN ACADEMY
141 = WILSON AVE
142 = ZION LEARNING CENTER
197 = OTHER (SPECIFY)
198 = (VOL) DON'T KNOW
199 = (VOL) REFUSED

(NOW GO TO E2.)

(IF SC2a=3 (NEW BRUNSWICK), ASK E1c. ELSE GO TO INSTRUCTS BEFORE E1d.)

E1c.   What is the name of the school that *(INDEX CHILD)* currently attends?

(IF CHILD HAS CLASSES AT MULTIPLE LOCATIONS, PROBE: "At which one does *(INDEX CHILD)* have MOST of his/her classes?")

(ENTER APPROPRIATE CODE FROM PINK "TACK UP" SHEET)

1 = A CHESTER REDSHAW
2 = ALTERNATIVE SCHOOL
3 = THE CHILDREN'S CENTER
4 = GREATER BRUNSWICK CS
5 = GREATER NEW BRUNSWICK DAY CARE
6 = JOHNSON & JOHNSON CHILD DEVELOPMENT
7 = LINCOLN
8 = LIVINGSTON
9 = LIVINGSTON AVE CHILD DEVELOPMENT CENTER
10= LORD STIRLING
11 = MAE J STRONG CHILD DEVELOPMENT CENTER
12 = MCKINLEY COMM
13 = MIDDLESEX CO. YOUTH CTR.
14 = N.B HEALTH AND TECHNOLOGY
15 = N.B. MIDDLE SCHOOL
16 = NEW BRUNSWICK HIGH
17 = PAUL ROBESON COMM
18 = REDSHAW
19 = ROOSEVELT ELEM
20 = ST MARY OF MT VIRGIN SCHOOL
21 = ST PETER HIGH SCHOOL

22 = ST PETER THE APOSTLE ELEMENTARY
23 = WOODROW WILSON
197 = OTHER (SPECIFY)
198 = (VOL) DON'T KNOW
199 = (VOL) REFUSED

(NOW GO TO E2.)

(IF SC2a=4 (TRENTON), ASK E1d. ELSE GO TO INSTRUCTS BEFORE E1e.)

E1d.   What is the name of the school that *(INDEX CHILD)* currently attends?

(IF CHILD HAS CLASSES AT MULTIPLE LOCATIONS, PROBE: "At which one does *(INDEX CHILD)* have MOST of his/her classes?")

(ENTER APPROPRIATE CODE FROM YELLOW "TACK UP" SHEET)

    1 = AFRIKAN PEOPLES ACTION SCHOOL
    2 = ALBERT E GRICE MIDDLE
    3 = ANNE KLIEN FORENSIC CENTER
    4 = CADWALADER
    5 = CENTRAL RECEPTION AND ADJUSTMENT FACI
    6 = COLUMBUS
    7 = DAYLIGHT/TWILIGHT H S
    8 = EDISON PREP
    9 = EMILY C REYNOLDS MIDDLE
    10 = EMILY FISHER CS OF ADV. STUDIE
    11 = EWING RESIDENTIAL TREATMENT CENTER
    12 = FAMILY GUIDANCE CENTER-CHILDREN
    13 = FRANKLIN
    14 = GEORGE E. WILSON
    15 = GRACE A DUNN MIDDLE SCH
    16 = GRANT
    17 = GREENWOOD
    18 = GREGORY
    19 = HAMILTON EAST-STEINERT
    20 = HAMILTON NORTH-NOTTINGHAM
    21 = HARRISON
    22 = HEDGEPETH-WILLIAMS SCH
    23 = HOLY ANGELS SCHOOL
    24 = HOLY CROSS SCHOOL
    25 = IMMACULATE CONCEPTION SCHOOL

26 = INCARNATION ELEMENTARY SCHOOL
27 = INTERNATIONAL CS OF TRENTON
28 = JEFFERSON
29 = JOSEPH F CAPPELLO SCHOOL
30 = JOYCE KILMER
31 = KISTHARDT
32 = KLOCKNER
33 = KUSER
34 = LALOR
35 = LANGTREE
36 = LUIS MUNOZ-RIVERA ELEM
37 = MCGALLIARD
38 = MCVS ASSUNPINK CENT
39 = MCVS PERFORMING ARTS
40 = MEADOW VIEW JUNIOR ACADEMY
41 = MERCER CO. YOUTH DET. CTR.
42 = MERCER JR/SR HIGH SCHOOL
43 = MERCER REGIONAL SCHOOL
44 = MERCERVILLE
45 = MONUMENT
46 = MORGAN
47 = MOTT
48 = MT SINAI SEVENTH-DAY ADVENTIST
SCHOOL
49 = N J REG DAY-HAMILTON
50 = NEW JERSEY STATE PRISON
51 = OFFICE OF EDUCATION ADMINISTRATIVE OFF
52 = OFFICE SYSTEMS
53 = OUR LADY OF SORROWS SCHOOL
54 = P.J. HILL
55 = PARKER
56 = PERKINS CHRISTIAN INSTITUTE
57 = RICHARD C CROCKETT MIDDLE
58 = RING KINDERGARTEN
59 = ROBBINS
60 = ROBINSON
61 = SACRED HEART SCHOOL-TRENTON
62 = SAYEN
63 = SR GEORGINE SCHOOL
64 = ST GREGORY THE GREAT
65 = ST RAPHAEL SCHOOL
66 = STOKES

67 = SUNNYBRAE
68 = TRENTON CENTRAL HIGH
69 = TRENTON COMMUNITY CS
70 = TRENTON PSYCHIATRIC HOSPITAL
71 = TRINITY EPISCOPAL ACADEMY
72 = UNI HTS/HOWARD D MORRISON
73 = VILLA VICTORIA ACADEMY
74 = VILLAGE CS
75 = WASHINGTON
76 = WILSON
77 = YARDVILLE
197 = OTHER (SPECIFY)
198 = (VOL) DON'T KNOW
199 = (VOL) REFUSED

(NOW GO TO E2.)

(IF SC2a=5 (VINELAND), ASK E1e. ELSE GO TO E2.)

E1e.   What is the name of the school that *(INDEX CHILD)* currently attends?

(IF CHILD HAS CLASSES AT MULTIPLE LOCATIONS, PROBE: "At which one does *(INDEX   CHILD)*   have MOST of his/her classes?")

(ENTER APPROPRIATE CODE FROM WHITE "TACK UP" SHEET)

1 = ANTHONY ROSSI INTER. SCH
2 = CAA GRAPE ST PROGRAM
3 = CAA WOOD STREET PROGRAM
4 = CREATIVE ACHIEVEMENT ACD#1
5 = CREATIVE ACHIEVEMENT ACADEMY
#3
6 = CUMBERLAND CHRISTIAN SCHOOL
7 = CUMBERLAND REGIONAL SCHOOL
8 = CUNNINGHAM
9 = DANE BARSE
10 = D'IPPOLITO INTERMEDIATE
11 = DR. WILLIAM MENNIES
12 = EARLY LEARNING CENTER
13 = EAST VINELAND
14 = THE ELLISON SCHOOL
15 = EMMANUEL DAY SCHOOL

16 = JOHN H WINSLOW
17 = JOHNSTONE
18 = LANDIS INTERMEDIATE SCH
19 = LITTLE ACRES LEARNING CENTER
20 = MARIE DURAND
21 = MAURICE FELS
22 = NASH EDUCATION CENTER
23 = OAK AND MAIN
24 = PAULINE J. PETWAY
25 = SACRED HEART HIGH SCHOOL
26 = SACRED HEART REGIONAL GRAMMAR
27 = SOUTH VINELAND
28 = ST. FRANCIS OF ASSISI
29 = ST MARY'S REGIONAL SCHOOL
30 = T.W. WALLACE MIDDLE SCH
31 = VETERANS MEMORIAL INT SCH
32 = VINELAND CHILDREN'S RESIDENTIAL C.
33 = VINELAND MENNONITE SCHOOL
34 = VINELAND SR HIGH-NORTH/SOUTH
197 = OTHER (SPECIFY)
198 = (VOL) DON'T KNOW
199 = (VOL) REFUSED

E2.   Regardless of whether or not *(INDEX CHILD)* eats food provided by
his/her school, how would you rate the nutritional quality of foods offered at
(INDEX CHILD)'s school? Would you say very unhealthy, somewhat unhealthy,
somewhat healthy, or very healthy?

        1 = Very Unhealthy
        2 = Somewhat Unhealthy
        3 = Somewhat Healthy
        4 = Very Healthy
        5= (VOL) School does not provide food
        8 = (VOL) Don't Know / Not sure
        9 = (VOL) Refused

(IF E2<>5, ASK E3a. ELSE GO TO INSTRUCTS BEFORE E3.)

E3a.   On most school days, does *(INDEX CHILD)* have a lunch served by the
school?

                1 = Yes
                2 = No

8 = (VOL) Don't Know
9 = (VOL) Refused

(IF E3a=1, GO TO E4. ELSE ASK E3.)

E3.   On most school days, does *(INDEX CHILD)* bring lunch from home, buy lunch at an outside restaurant or store, or buy it at a vending machine?

(IF NEEDED: Which of these ways does *(he/she)* get lunch at school most often?)

1 = Brings lunch from home
3 = Buys at an <u>outside</u> restaurant or store (whether before school or at lunch time)
4 = Buys at vending machine (whether on or off campus)
5 = (VOL) Does not eat lunch
8 = (VOL) Don't Know
9 = (VOL) Refused

The next few questions are about different kinds of foods *(INDEX CHILD)* ate or drank during the past month. Your best guess is fine. <u>You can tell me number of times per day, per week, or per month.</u>

E4. How often did *(INDEX CHILD)* drink 100% PURE fruit juices such as orange, apple, or grape juice? Do NOT include fruit-flavored drinks with added sugar like Hi-C, Gatorade, or fruit punch. You can tell me number of times per day, per week or per month.

          (IF NEEDED: This is IN THE PAST MONTH.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
2 = Gave answer times per week   (RANGE 1 - 7)
3 = Gave answer times per month   (RANGE 1 - 30)
4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
9 = (VOL) Refused

E5. Not counting juice, how often did *(INDEX CHILD)* eat fruit? Count fresh, frozen, or canned fruit.

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: "Your best guess is fine. Include apples, bananas, applesauce, oranges, fruit salad, watermelon, cantaloupe or musk melon, papaya, mangos, grapes, and berries such as blueberries and strawberries.)

(IF NEEDED, SAY: You can tell me number of times per day, per week or per month.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
2 = Gave answer times per week   (RANGE 1 - 7)
3 = Gave answer times per month   (RANGE 1 - 30)
4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
9 = (VOL) Refused

E6. How often did *(INDEX CHILD)* eat a green leafy or lettuce SALAD, with or without other vegetables?

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED: "Such as American or Western-type RAW salads with leaf lettuce, romaine, mixed-greens, and spinach.")

(IF NEEDED, SAY: You can tell me number of times per day, per week or per month.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
2 = Gave answer times per week   (RANGE 1 - 7)
3 = Gave answer times per month   (RANGE 1 - 30)
4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
9 = (VOL) Refused

E7.   NOT INCLUDING FRENCH FRIES OR OTHER FRIED POTATOES, how often did *(INDEX CHILD)* eat any other kind of POTATOES such as baked, boiled, mashed potatoes, or potato salad? You can tell me number of times per day, per week or per month.

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: Fried potatoes include French fries, potato chips, tater tots, home fries, and hash brown potatoes. This includes potatoes prepared in any fashion such as baked, boiled, mashed, au-gratin, or scalloped. It includes potatoes prepared in other dishes such as potato salad. Include white, yellow, red-skinned, yams, and sweet potatoes.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
        2 = Gave answer times per week   (RANGE 1 - 7)
        3 = Gave answer times per month   (RANGE 1 - 30)
        4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
    9 = (VOL) Refused

E8. How often did **(INDEX CHILD)** eat cooked or canned DRIED beans, such as refried beans, baked beans, bean soup, tofu, or lentils?

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: Include round or oval beans such as navy, Northern, kidney, black, pinto, soy beans, split peas, cow peas, garbanzo beans, or lentils cooked this way. Do NOT include long green beans such as string beans or pole beans.)

(IF NEEDED, SAY: You can tell me number of times per day, per week or per month.)
(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
        2 = Gave answer times per week   (RANGE 1 - 7)
        3 = Gave answer times per month   (RANGE 1 - 30)
        4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
    9 = (VOL) Refused

E9.   Still thinking about the past month…Not including what you just told me about, how often did *(NDEX CHILD)* eat OTHER vegetables such as tomatoes, green beans, carrots, corn, cooked greens, sweet potatoes, broccoli, or any other kinds of vegetables?

(IF ASKED: Do not count any of the following as vegetables: lettuce salads, potatoes, beans, or anything you have already counted.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
2 = Gave answer times per week   (RANGE 1 - 7)
3 = Gave answer times per month   (RANGE 1 - 30)
4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
9 = (VOL) Refused

E13.   How often did *(INDEX CHILD)* eat at a fast food restaurant, deli, pizza, burger, taco or chicken place where you pay before you eat?

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: You can tell me number of times per day, per week, or per month.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 - 3)
2 = Gave answer times per week   (RANGE 1 - 7)
3 = Gave answer times per month   (RANGE 1 - 30)
4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF E13=1 or 2 or 3, ASK E13a. IF E13=4, ASK E13b. ELSE GO TO E14.)
E13a. How many of these *(insert from E13)* times per *(day/week/month)* did *(INDEX CHILD)* eat healthy choices, such as low-calorie or low-fat items or salads at these places?

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1 = Gave Response   (RANGE=0 to 30) *(can not exceed answer from E13)*
2 = (VOL) No such option available
8 = (VOL) Don't Know
9 = (VOL) Refused

(NOW GO TO E14.)

E13b. Did *(INDEX CHILD)* eat healthy choices, such as low-calorie or
 low-fat items or salads at these places?

> 1 = Yes
> 2 = No
> 3 = (VOL) No such option available
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

E14.   How often did *(INDEX CHILD)* eat out at a full service restaurant?

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: You can tell me number of times per day, per week, or per
month.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How
many times a day?")

1 = Gave answer times per day   (RANGE 1 - 3)
2 = Gave answer times per week   (RANGE 1 - 7)
3 = Gave answer times per month   (RANGE 1 - 30)
4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF E14=1 or 2 or 3, ASK E14a. IF E14=4, ASK E14b. ELSE GO TO E12.)

E14a. How many of these *(insert from E14)* times per *(day/week/month)* did
(INDEX CHILD) eat healthy choices, such as low-calorie or low-fat items or
salads at these places?
        (IF RESP SAYS, "A salad comes with the meal," then this counts as a
healthy choice.)
1 = Gave Response   (RANGE=0 to 30) *(can not exceed answer from E14)*
2 = (VOL) No such option available
8 = (VOL) Don't Know
9 = (VOL) Refused

(NOW GO TO E12.)

E14b. Did *(INDEX CHILD)* eat healthy choices, such as low-calorie or
low-fat items or salads at these places?
    (IF RESP SAYS, "A salad comes with the meal," then this counts as a
healthy choice.)

> 1 = Yes
> 2 = No
> 3 = (VOL) No such option available
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

***[ROTATE ORDER OF E12, E15, E16, E17, E19…E10, E11 and E18 WERE
MOVED AFTER E19.)***

E12.   How often did *(INDEX CHILD)* eat fruits and vegetables as a snack at
home or at school? You can tell me number of times per day, per week or per
month.
            (IF NEEDED: This is IN THE PAST MONTH.)

        (INTERVIEWER NOTE: It doesn't matter if it is fruits or vegetables)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How
many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
        2 = Gave answer times per week   (RANGE 1 - 7)
        3 = Gave answer times per month   (RANGE 1 - 30)
        4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
    9 = (VOL) Refused

E15.   How often did *(INDEX CHILD)* drink fruit flavored drinks such as
lemonade, Sunny Delight, Kool-aid, Gatorade, or sweet iced teas? Do not include
100% fruit juice.

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: You can tell me number of times per day, per week, or per
month.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How
many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
    2 = Gave answer times per week   (RANGE 1 - 7)
    3 = Gave answer times per month   (RANGE 1 - 30)
    4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

E16.　How often did *(INDEX CHILD)* drink regular carbonated soda or soft drinks that are sweetened such as coke, pepsi, or 7-up? Do not include diet drinks. You can tell me number of times per day, per week or per month.

(IF NEEDED: This is IN THE PAST MONTH.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   *(*RANGE 1 – 10: 10=10 OR MORE)
2 = Gave answer times per week   (RANGE 1 - 7)
3 = Gave answer times per month   (RANGE 1 - 30)
4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
9 = (VOL) Refused

E17.　How often did *(INDEX CHILD)* eat salty snacks like chips, Doritos, and Nachos?

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED: You can tell me number of times per day, per week or per month.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
    2 = Gave answer times per week   (RANGE 1 - 7)
    3 = Gave answer times per month   (RANGE 1 - 30)
    4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

E19.　How often did *(INDEX CHILD)* eat sweet items like cookies, cakes, candy, or pies?

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: You can tell me number of times per day, per week or per month.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   *(RANGE 1 – 10: 10=10 OR MORE)*
    2 = Gave answer times per week   (RANGE 1 - 7)
    3 = Gave answer times per month   (RANGE 1 - 30)
    4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

E18.   In a usual week in the past month, how many days a week did *(INDEX CHILD)* eat breakfast?

(RANGE 0-7; 8=(VOL) DON'T KNOW; 9=(VOL) REFUSED)

_____ # DAYS

E10.   How often did *(INDEX CHILD)* eat at least two different kinds of fruits IN A DAY, including 100% fruit juice? DO NOT include fruit flavored drinks like lemonade, Hi-C,
or fruit punch.

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED: For example, a banana at lunch and an apple for a snack.)

[IF NEEDED, SAY: You can tell me number of days per week or per month.]

    1 = Gave answer times per week   (RANGE 1 - 7)
    2 = Gave answer times per month   (RANGE 1 - 30)
    3 = Less than once a month
4 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

E11.   How often did *(INDEX CHILD)* eat at least two different kinds of vegetables IN A DAY, including 100% vegetable juice?. DO NOT include fried potatoes.

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(IF NEEDED: This is IN THE PAST MONTH.)

[IF NEEDED, SAY: You can tell me number of days per week or per month.]

    1 = Gave answer times per week   (RANGE 1 - 7)
    2 = Gave answer times per month   (RANGE 1 - 30)
    3 = Less than once a month
4 = Never
8 = (VOL) Don't Know
    9 = (VOL) Refused

PHYSICAL ACTIVITY

E20.　Now think of all *(INDEX CHILD)*'s physical activity in the past 7 days. Adding up all the time *(he/she)*
spent in any kind of physical activity that increased *(his/her)* heart rate andmade *(him/her)* breathe hard, on how many days was *(he/she)* physically active for a total of AT LEAST 30 MINUTES PER DAY?

(RANGE 0-7; 8=(VOL) DON'T KNOW; 9=(VOL) REFUSED)

_____ # DAYS

(IF E20=0, SKIP TO INSTRUCTS BEFORE E22. ELSE ASK E21.)

E21.　*(IF E20=1, read:* Was *(INDEX CHILD)* physically active for a total of AT LEAST 60 MINUTES on that day? (If "Yes," enter "1." If "No," enter "0.")

(IF E20>1, read: On how many of these *(# from E20)* days was *(INDEX CHILD)* physically active for a total of AT LEAST 60 MINUTES PER DAY?

    (READ ONLY IF NEEDED: Add up all the time *(INDEX CHILD)* spent in any kind of physical activity that increases heart rate and makes (him/her) breathe hard some of the time.)

(RANGE 0-7; 8=(VOL) DON'T KNOW; 9=(VOL) REFUSED)

_____ # DAYS　　*(Answer to E21 can NOT exceed answer from E20.)*

(IF E1= 16 or 17, GO TO E24. ELSE ASK E22.)

E22.　Now thinking about the school year, on how many days during a typical week does *(INDEX CHILD)* walk, bicycle, or skateboard to or from school? (Do not include motor scooters)

(RANGE 0-7; 8=(VOL) DON'T KNOW; 9=(VOL) REFUSED)

_____ # DAYS

E23.   During the school year, how often does *(INDEX CHILD)* get any type of physical activity or exercise at school (for example, PE class, recess)? You can tell me number of days per week or per month.

> 1 = Gave answer times per week   (RANGE 1 - 5)
> 2 = Gave answer times per month   (RANGE 1 – 20; 20=20 OR MORE)
> 3 = Less than once a month
> 4 = Never
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

E24.   *(IF E1 <> 16 or 17,* **READ:)** During the school year, on an average school day, how many hours does *(INDEX CHILD)* watch TV, play video games, or use a computer outside of school? This does not include using the computer for school work.

(IF E1=16 or 17, **READ:)** On an average weekday, how many hours does *(INDEX CHILD)* watch TV, play video games, or use a computer

1 = Gave answer in minutes (RANGE 1-59)
2 = Gave answer in hours   (RANGE 1-10)
3 = (VOL) Does not watch TV/Use computer/Play video games
8 = (VOL) Don't Know
9 = (VOL) Refused

E25.   *(IF E1 <> 16 or 17,* **READ:)** During the school year, on a typical weekend DAY, how many hours does *(INDEX CHILD)* watch TV, play video games, or use a computer? This does not include using the computer for school work.
(IF E1=16 or 17,, **READ:)** On a typical weekend DAY, how many hours does *(INDEX CHILD)* watch TV, play video games, or use a computer?

(INTERVIEWER: ALWAYS PROBE WITH: "Is that for the whole weekend, or just 1 day out   of the weekend?" If resp says "whole weekend", re-ask about hours for just ONE DAY)

1 = Gave answer in minutes (RANGE 1-59)
2 = Gave answer in hours   (RANGE 1-10)
3 = (VOL) Does not watch TV/Use computer/Play video games
8 = (VOL) Don't Know

9 = (VOL) Refused

(INSERT TIME STAMP)

SECTION F: BEHAVIOR - ADULT

(QUESTIONS FOR RESPONDENT ONLY)

F1.   How many days a week do you usually sit down with your whole family for the dinner meal?

(RANGE 0-7, LESS THAN ONCE/WEEK = 8; DK=9, REF=10)

_____ Record #

The next few questions are about different kinds of foods you ate or drank during the past month. Your best guess is fine. You can tell me number of times per day, per week, or per month.

F2.   How often did you drink 100% PURE fruit juices such as orange, apple, or grape juice? Do NOT include fruit-flavored drinks with added sugar like Hi-C, Gatorade, or fruit punch. You can tell me number of times per day, per week or per month.

(IF NEEDED: This is IN THE PAST MONTH.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
       2 = Gave answer times per week   (RANGE 1 - 7)
       3 = Gave answer times per month   (RANGE 1 - 30)
       4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
    9 = (VOL) Refused

F3.   Not counting juice, how often did you eat fruit? Count fresh, frozen, or canned fruit.

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: Your best guess is fine. Include apples, bananas, applesauce, oranges, fruit salad, watermelon, cantaloupe or musk melon, papaya, mangos, grapes, and berries such as blueberries and strawberries.)

(IF NEEDED, SAY: You can tell me number of times per day, per week or per month.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   *(*RANGE 1 – 10: 10=10 OR MORE)
     2 = Gave answer times per week   (RANGE 1 - 7)
     3 = Gave answer times per month   (RANGE 1 - 30)
     4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

F4.   How often did you eat a green leafy or lettuce SALAD, with or without other vegetables
       (IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: Such as American or Western-type RAW salads with leaf lettuce, romaine, mixed-greens, and spinach.)

(IF NEEDED, SAY: You can tell me number of times per day, per week or per month.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   *(*RANGE 1 – 10: 10=10 OR MORE)
     2 = Gave answer times per week   (RANGE 1 - 7)
     3 = Gave answer times per month   (RANGE 1 - 30)
     4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

F5.   NOT INCLUDING FRENCH FRIES OR OTHER FRIED POTATOES, how often did you eat any other kind of POTATOES such as baked, boiled, mashed potatoes, or potato salad? You can tell me number of times per day, per week or per month.

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: Fried potatoes include French fries, potato chips, tater tots, home fries, and hash brown potatoes. This includes potatoes prepared in any fashion such as baked, boiled, mashed, au-gratin, or scalloped. It includes potatoes prepared in other dishes such as potato salad. Include white, yellow, red-skinned, yams, and sweet potatoes.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
    2 = Gave answer times per week   (RANGE 1 - 7)
    3 = Gave answer times per month   (RANGE 1 - 30)
    4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
    9 = (VOL) Refused

F6.   How often did you eat cooked or canned DRIED beans, such as refried beans, baked beans, bean soup, tofu, or lentils?

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: Include round or oval beans such as navy, Northern, kidney, black, pinto, soy beans, split peas, cow peas, garbanzo beans, or lentils cooked this way. Do NOT include long green beans such as string beans or pole beans.)

(IF NEEDED, SAY: You can tell me number of times per day, per week or per month.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
    2 = Gave answer times per week   (RANGE 1 - 7)
    3 = Gave answer times per month   (RANGE 1 - 30)
    4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
    9 = (VOL) Refused

F7.   Not including what you just told me about, how often did you eat OTHER vegetables such as tomatoes, green beans, carrots, corn, cooked greens, sweet potatoes, broccoli, or any other kinds of vegetables?

 (IF NEEDED: This is IN THE PAST MONTH.)

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(IF ASKED: Do not count any of the following as vegetables: lettuce salads, potatoes, beans, or anything you have already counted.)

(IF NEEDED, SAY: You can tell me number of times per day, per week or per month.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   *(RANGE 1 – 10: 10=10 OR MORE)*
      2 = Gave answer times per week   (RANGE 1 - 7)
      3 = Gave answer times per month   (RANGE 1 - 30)
      4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

F11.   How often did you eat at a fast food restaurant, deli, pizza, burger, taco or chicken place where you pay before you eat?

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED: You can tell me number of times per day, per week, or per month.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 - 4)
      2 = Gave answer times per week   (RANGE 1 - 7)
      3 = Gave answer times per month   (RANGE 1 – 30)
      4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

(IF F11=1 or 2 or 3, ASK F11b. IF F11=4, ASK F11c. ELSE GO TO F12.)

F11b. How many of these *(insert from F11)* times per *(day/week/month)* did you eat healthy choices, such as low-calorie or low-fat items or salads at these places?
1 = Gave Response   (RANGE=0 to 30) *(can not exceed answer from F11)*
2 = (VOL) No such option available
8 = (VOL) Don't Know
9 = (VOL) Refused

(NOW GO TO F12.)

F11c. Did you eat healthy choices, such as low-calorie or low-fat items or salads at these places?

>>>> 1 = Yes
>>>> 2 = No
>>>> 3 = (VOL) No such option available
>>>> 8 = (VOL) Don't Know
>>>> 9 = (VOL) Refused

F12. How often did you eat at a full service restaurant?

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED: You can tell me number of times per day, per week, or per month.)

>>> (INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 - 3)
>> 2 = Gave answer times per week   (RANGE 1 - 7)
>> 3 = Gave answer times per month   (RANGE 1 - 30)
>> 4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
>> 9 = (VOL) Refused

(IF F12=1 or 2 or 3, ASK F12a. IF F12=4, ASK F12b. ELSE GO TO F10.)

F12a. How many of these *(insert from F12)* times per *(day/week/month)* did you eat healthy choices, such as low-calorie or low-fat items or salads at these places?
>> (IF RESP SAYS, "A salad comes with my meal," then this counts as a healthy choice.)
1 = Gave Response   (RANGE=0 to 30) *(can not exceed answer from F12)*
2 = (VOL) No such option available
8 = (VOL) Don't Know
9 = (VOL) Refused

>>> *(NOW GO TO F10.)*

F12b. Did you eat healthy choices, such as low-calorie or low-fat items or salads at these places?

(IF RESP SAYS, "A salad comes with my meal," then this counts as a healthy choice.)

> 1 = Yes
> 2 = No
> 3 = (VOL) No such option available
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

[ROTATE ORDER OF F10, F13, F14, F15, F17…F8, F9 and F16 WERE MOVED AFTER F17.)

F10.   How often did you eat fruits and vegetables as a snack? You can tell me number Of times per day, per week or per month.

> (IF NEEDED: This is IN THE PAST MONTH.)

> (INTERVIEWER NOTE: It doesn't matter if it is fruits or vegetables)

> (INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
    2 = Gave answer times per week   (RANGE 1 - 7)
    3 = Gave answer times per month   (RANGE 1 - 30)
    4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

F13.   How often did you drink fruit flavored drinks such as lemonade, Sunny Delight, Kool-aid, Gatorade, or sweet iced teas? Do not include 100% fruit juice.

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: You can tell me number of times per day, per week, or per month.)
    (INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
    2 = Gave answer times per week   (RANGE 1 - 7)
    3 = Gave answer times per month   (RANGE 1 - 30)
    4 = Less than once a month

5 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

F14.   How often did you drink regular carbonated soda or soft drinks such as coke, pepsi, or 7-up? Do not include diet drinks. You can tell me number of times per day, per week or per month.
       (IF NEEDED: This is IN THE PAST MONTH.)

(INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
     2 = Gave answer times per week   (RANGE 1 - 7)
     3 = Gave answer times per month   (RANGE 1 - 30)
     4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

F15.   How often did you eat salty snacks like chips, Doritos, and Nachos?

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED: You can tell me number of times per day, per week or per month.)

       (INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
     2 = Gave answer times per week   (RANGE 1 - 7)
     3 = Gave answer times per month   (RANGE 1 - 30)
     4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

F17.   How often did you eat sweet items like cookies, cakes, candy, or pies?

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED: You can tell me number of times per day, per week or per month.)

       (INTERVIEWER: If answer is "every day" or "7 days a week", probe with "How many times a day?")

1 = Gave answer times per day   (RANGE 1 – 10: 10=10 OR MORE)
     2 = Gave answer times per week   (RANGE 1 - 7)
     3 = Gave answer times per month (RANGE 1 - 30)
     4 = Less than once a month
5 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

F16.   In a usual week in the past month, how many days a week did you eat breakfast?

(RANGE 0-7; 8=(VOL) DON'T KNOW; 9=(VOL) REFUSED)

_____ # DAYS

F8.   How often do you eat at least two different kinds of fruits IN A DAY, including 100% fruit juice NOT include fruit flavored drinks like lemonade, Hi-C, or fruit punch.

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED: For example, a banana at lunch and an apple for a snack.)

(IF NEEDED, SAY: You can tell me number of days per week or per month.)

     1 = Gave answer times per week   (RANGE 1 - 7)
     2 = Gave answer times per month (RANGE 1 - 30)
     3 = Less than once a month
4 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

F9.   How often did you eat at least two different kinds of vegetables IN A DAY, including 100% vegetable juice? DO NOT include fried potatoes.

(IF NEEDED: This is IN THE PAST MONTH.)

(IF NEEDED, SAY: You can tell me number of days per week or per month.)

     1 = Gave answer times per week   (RANGE 1 - 7)
     2 = Gave answer times per month (RANGE 1 - 30)
     3 = Less than once a month
4 = Never
8 = (VOL) Don't Know
   9 = (VOL) Refused

F19a. Now think about your physical activity both at work and at home in the past 7 days. Adding up all the time you spent in any kind of physical activity that increased your heart rate and made you breath hard, on how many days were you physically active for a total of AT LEAST 15 MINUTES PER DAY?

(RANGE 0-7; 8=(VOL) DON'T KNOW; 9=(VOL) REFUSED)

_____ DAYS

(IF F19a>0, ASK F19. ELSE GO TO F20.)

F19.   *(IF F19a=1, read:* Were you physically active for a total of AT LEAST 30 MINUTES PER DAY on that day? (If "Yes," enter "1." If "No," enter "0.")

(IF F19a>1, read: On how many of these *(# from F19a)* days were you physically active for a total of AT LEAST 30 MINUTES PER DAY?

(RANGE 0-7; 8=(VOL) DON'T KNOW; 9=(VOL) REFUSED)

_____ DAYS

(Answer to F19 can NOT exceed answer from F19a.)

F20.   Now think about the time you spent walking in the last 7 days. This includes at work and at home, walking to travel from place to place, and any walking that you might do for exercise, or leisure. During the last 7 days, on how many days did you walk for at least 10 minutes at a time?

(RANGE 0-7; 8=(VOL) DON'T KNOW; 9=(VOL) REFUSED)

_____ DAYS

(IF F20=0, SKIP TO F22a; ELSE ASK F21)

F21.   *(IF F20=2 through 7, read:)* "On average, how much time did you usually spend walking on one of those *(insert from F20)* days?"

(IF F20=1, read:) "How much time did you spend walking on that day?"

(IF F20=8 or 9, read:) "On average, how much time did you usually spend walking on a typical day?"

            1 = Gave hours per day
            2 = Gave minutes per day
            3 = Time Varies Widely

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8 = (VOL) Don't Know

9 = (VOL) Refused

(IF F21=1 or 2, GO TO F22a. ELSE ASK F21a.)

F21a.   What is the total amount of time you spent walking over THE LAST 7 DAYS?

1 = Gave hours per week   [Range = 0 - 112]
2 = Gave minutes per week [Range = 0 - 6720]
8 = (VOL) Don't Know/Not Sure
                            9 = (VOL) Refused

F22a.   Have you ridden a bicycle in the past week?

   (INTERVIEWER: Does NOT include using a stationary bike.)

       1 = Yes
       2 = No
       3 = (VOL) Don't Know
       4 = (VOL) Refused

   (IF F22a=2, SKIP TO G1. ELSE CONTINUE.)

F22.   Now think only about the BICYCLING you did to travel to and from work, to go from place to place, or solely for exercise, or leisure. Do NOT include time spent on a stationary bike.

During the last 7 days, on how many days did you bicycle for at least 10 minutes at a time?

(RANGE 0-7; 8=(VOL) DON'T KNOW; 9=(VOL) REFUSED)

_____ DAYS

(IF F22=9, GO TO SECTION G. ELSE ASK F23.)

F23.   How much time did you usually spend bicycling on a typical day?

(INTERVIEWER: An average time for one of the days on which you bicycle is being sought)

       1 = Gave hours per day
       2 = Gave minutes per day
       3 = Time Varies Widely

8 = (VOL) Don't Know
9 = (VOL) Refused

(IF F23=1 or 2, GO TO SECTION G. ELSE ASK F23a.)

F23a.   What is the total amount of time you spent bicycling over the last 7 days?

1 = Gave hours per week   [Range = 0 - 112]
2 = Gave minutes per week [Range = 0 - 6720]
8 = (VOL) Don't Know/Not Sure
                    9 = (VOL) Refused

(INSERT TIME STAMP)

SECTION G – HEALTH CARE COVERAGE

Display: Now, we're going to talk about health insurance.

G1. Do you have some form of health insurance or health care coverage, or not?
(ABC, #7)

        1 = Yes, have insurance
        2 = No insurance
        8 = (VOL) Don't Know
        9 = (VOL) Refused

(If G1=1, ask G2. Else go to G4.)
G2.   Are you mainly covered by Medicare, Medicaid, NJ FamilyCare,
insurance through a current or former job or other private insurance, or do you
have coverage from some other source? (ABC, #8)

(IF NEEDED: Medicare is the government health insurance program for people
65 and over and some younger people with disabilities. Medicaid and NJ
FamilyCare are government health insurance programs for low-income families.)

            1 = Medicare
            2 = Medicaid
            3 = NJ Family Care
            4 = Insurance through a current or former job
            5 = Other private insurance
            6 = Coverage from some other source
            8 = (VOL) Don't Know
            9 = (VOL) Refused

(IF G2=2 through 6, ASK G2a. ELSE GO TO INSTRUCTS BEFORE G4.)

G2a.   Is *(INDEX CHILD)* covered by your health insurance?

> 1 = Yes
> 2 = No
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

(If G2=5 or 6, ask G3. Else go to G4.)

G3. Is that coverage part of a program such as NJ FamilyCare or Medicaid?

> 1 = Yes
> 2 = No
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

(IF G2a=1, SKIP TO SECTION H. ELSE ASK G4.)

G4.   Does *(INDEX CHILD)* currently have some form of health insurance or health care coverage?

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF G4=1, ASK G5. ELSE GO TO SECTION H.)

G5.   Is *(INDEX CHILD)* covered by health insurance through the current or former employer of a parent or guardian or some other private insurance, is *(he/she)* covered by a program such as Medicare, Medicaid, or NJ FamilyCare, or does *(he/she)* have some other kind of health insurance?
(IF NEEDED: Medicare sometimes covers younger people who have certain disabilities).
(IF NEEDED: Medicaid and NJ FamilyCare are government health insurance programs for low-income families)

1 = insurance through current or former employer of parent/guardian
2 = Other private insurance
3 = Medicare
4 = Medicaid
5 = NJ FamilyCare
6 = other coverage
8 = (VOL) Don't Know
9 = (VOL) Refused

(If G5= 2 or 6, ask G6. Else go to SECTION H.)

G6. Is that coverage part of a program such as NJ FamilyCare or Medicaid?

> 1 = Yes
> 2 = No
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

(INSERT TIME STAMP)

SECTION H - EMPLOYMENT AND EARNINGS

The next section is about employment.

(IF (((SC5b=18 or SC5b1=5) and (SC2cc=0)) or ((SC5b>18 or SC5b1>5) and (SC2cc=1))) and ((SC7a_2 through SC7a_14 are ALL NOT 18) and (SC7a1_2 through SC7a1_14 are ALL NOT punch 5)), ASK H1. ELSE GO TO INSTRUCTS BEFORE H2.)

H1. Are you working for pay?

> 1 = Yes
> 2 = No
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

(IF (((SC5b=18 or SC5b1=5) and (SC2cc>0)) or ((SC5b>18 or SC5b1>5) and (SC2cc>1))) or ((SC7a_2 through SC7a_14 are ALL > 17) or (SC7a1_2 through SC7a1_14 are ALL > punch 4)),, ASK H2. ELSE GO TO H3.)

H2.   How many people in your household age 18 and over are working for pay? Please be sure to include yourself, if applicable.

> (RANGE: 0 to 16; 15=DK; 16=REF)

> _____ Record #

H3.   The next questions are about income that your family received during 2008. Again, by family, include all family members living there related by blood, marriage, living as married, and any children of those people.

During 2008, what was your family's total income from all sources, before taxes and other deductions? Include job wages, public assistance, social security, child support, and any other sources of income. (FHIS 7.1)

1 = Gave Annual Salary
2 = Gave Weekly Salary
3 = Gave Bi-Weekly Salary
4 = Gave Monthly Salary
5 = Gave Bi-Monthly Salary
6 = (VOL) No income whatsoever in 2008   *(GO TO H9)*
8 = (VOL) Don't Know   *(GO TO H5)*
9 = (VOL) Refused   *(GO TO H5)*

(IF H3=8 or 9, GO TO H5. IF H3=6, GO TO H9. ELSE ASK H4.)

H4.   ENTER INCOME: (DO NOT READ:)

(RANGE = 0-999999; 999999 = 999,999 OR MORE)

_____ Record #

(ALL ASKED H4 GO TO H9)

H5.   Was your family's 2008 total income from all sources, before taxes:
(READ LIST)

(READ PROBES ONLY IF RESPONDENT REFUSES TO ANSWER)
(a) Answers to questions on earnings are important to our survey because they
help explain whether people can afford the health care they need. Also, the
information you provide will be kept confidential and will only be used in
statistical summaries).

(b) Total income includes wages and salaries from jobs, net income from farms or
businesses, interest or dividends, pensions or social security, income from rental
property, estates or trusts, public assistance or welfare, social security, child
support, other sources.

(c) Your best estimate would be fine.

1 = Under $20,000,
2 = $20,000 to $49,999, or
  3 = $50,000 or greater?
8 = (VOL) Don't know
9 = (VOL) Refused

(IF H5=1, ASK H6. IF H5=8 or 9, GO TO H9. ELSE GO TO INSTRUCTS
BEFORE H7.)

H6.   Is it…(READ LIST)?

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1 = Under $10,000, or
2 = $10,000 - $19,999?
8 = (VOL) Don't Know
9 = (VOL) Refused

(ALL ASKED H6, GO TO H9)

(IF H5=2, ASK H7. ELSE GO TO INSTRUCTS BEFORE H8.)

H7.   Is it…(READ LIST)?

1 = Between $20,000 and $29,999,
2 = Between $30,000 and $39,999 or
3 = Between $40,000 and $49,999?
8 = (VOL) Don't Know
9 = (VOL) Refused

(ALL ASKED H7, GO TO H9)

(IF H5=3, ASK H8. ELSE GO TO H9.)

H8.   Is it…(READ LIST)?

1 = Between $50,000 and $74,999,
2 = Between $75,000 and $99,999,
3 = Between $100,000 and 149,999, or
4 = $150,000 or more?
8 = (VOL) Don't Know
 9 = (VOL) Refused

H9.   During the year 2008, did anyone in your family living there receive government assistance such as SSI, SSDI, or TANF (TANIF)?

(IF NEEDED: "SSI=Supplemental Security Income"
         "SSDI=Social Security Disability Insurance"
      "TANF=Temporary Assistance for Needy Families")

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

H10.   Did anyone in your family living there receive food stamps in 2008? (FHIS 7.13)

(IF NEEDED: "Food Stamps" are also referred to as SNAP (Supplemental Nutrition Assistance Program) or as having an EBT card (Electronic Benefits Transfer.)

> 1 = Yes
> 2 = No
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

H11.   Did anyone in your family living there receive WIC in 2008?

(IF NEEDED: "WIC=Special Supplemental Nutrition Program for Woman, Infants and Children.)

> 1 = Yes
> 2 = No
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

H12.   Does *(INDEX CHILD)* receive free or reduced-cost breakfast or lunch at school/daycare?

1 = Yes
2 = No
3 = (VOL) Not in school/daycare
8 = (VOL) Don't know
9 = (VOL) Refused

H14.   Do you own or rent your home? (DO NOT READ UNLESS NECESSARY)   (NSAF M-1)

1 = Owned or being bought by you/someone in your household
2 = Rented for cash, or
3 = Occupied without payment of cash rent?
8 = (VOL) Don't know
9 = (VOL) Refused

(INSERT TIME STAMP)

SECTION I - DEMOGRAPHICS

i1.   Are you of Spanish, Hispanic, or Latino origin or descent?

[PROBE FOR REFUSALS: "I understand that these questions may be sensitive. We are asking these questions to help understand different health care problems and needs people have."] (Probe used in CTS, not NASF) (NASF O1, CTS p106)

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

i2.   Is *(INDEX CHILD)* of Spanish, Hispanic or Latino origin or descent?

1 = Yes
2 = No
8 = (VOL) Don't Know
 9 = (VOL) Refused

(ASK i3 IF i1=1. ELSE GO TO INSTRUCTS BEFORE i4.)

i3.   What group are you? Would you say you are Mexican, Mexican-American, Puerto Rican, Central or South American, Cuban or some other group?

1 = Mexican/ Mexican-American
2 = Puerto Rican
3 = Cuban
4 = Central or South American
5 = Dominican
6 = Haitian
10 = Other (SPECIFY)
11 = (VOL) Don't Know
12 = (VOL) Refused

(IF (i3=1 through 10) and (i2<>2), ask i4. ELSE GO TO INSTRUCTS BEFORE i5.)

i4.   Is *(INDEX CHILD)* also *(insert response to i3)*?

1 = Yes, we are the same
2 = No, we are not the same
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF (i4=2) or (i1<>1 and i2<>2) or ((i3=11 or 12) and (i2<>2)), ASK i5. ELSE GO TO i6.)

i5.   What group is *(INDEX CHILD)*? Would you say *(INDEX CHILD)* is Mexican, Mexican-American, Puerto Rican, Central or South American, Cuban or some other group?
[NOTE: If anyone is a combination put the answer as "other" and list the combination – i.e., Mexican and South American]

1 = Mexican/ Mexican-American
        2 = Puerto Rican
        3 = Cuban
        4 = Central or South American
        5 = Dominican
        6 = Haitian
        10 = Other (SPECIFY)
        11 = (VOL) Don't know
        12 = (VOL) Refused

i6.   What is your race? (DO NOT READ LIST)

(IF "HISPANIC", PROBE: Are you Hispanic and black, or Hispanic and white?")
(NASF, O3)

        1 = Black/African American
        2 = White
        3 = American Indian/Native American/Aleutian or Eskimo
        4 = Asian/Pacific Islander
        5 = (VOL) Hispanic (ACCEPT ONLY AFTER PROBE)
        9 = Other (SPECIFY)
        10 = (VOL) Don't Know
        11 = (VOL) Refused

i7. What is *(INDEX CHILD)*'s race?

        1 = Black/African American
        2 = White
        3 = American Indian/Native American/Aleutian or Eskimo
        4 = Asian/Pacific Islander
        5 = (VOL) Hispanic (ACCEPT ONLY AFTER PROBE)
        9 = Other (SPECIFY)
        10 = (VOL) Don't Know
        11 = (VOL) Refused

i8.   Were you or *(INDEX CHILD)* born outside of the United States,
Puerto Rico, or other U.S. territories?
[IF NECESSARY: Puerto Rico and other U.S. territories (Guam, U.S. Virgin
Islands, American Somoa, Northern Marianas Islands, or Marshall Islands) are
considered inside the United States. If born in a U.S. military family, that is
considered born in the U.S. regardless of the country.] (NASF O4)

            1 = Yes
            2 = No
            8 = (VOL) Don't Know

9 = (VOL) Refused

(IF i8=1, GO TO i9. ELSE GO TO i12.)

i9.   Who was born outside of the United States? (MULTIPLE RECORD)
(PROBE: Anyone else?) (NASF, O5)

> 1 = respondent *(read-in Resp name/initials)*
> 2 = index child *(read-in Index Child name/initials)*
> 3 = Other HH member(s)
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

(IF i9=1 and/or 2, ASK i10 THROUGH i11NYR CONSECUTIVELY FOR EACH. DO NOT ASK FOR CODE 3 FROM i9. IF i9= 4 or 5, GO to i12.)

i10.   *(Are you / Is INDEX CHILD)* a citizen of the United States? (NASF, O7)

> 1 =Yes
> 2 = No
> 8 = (VOL) Don't Know
> 9 = (VOL) Refused

i11.   When did *(you/INDEX CHILD)* come to live in the United States?
(NASF, O9)

> 1 = Gave SPECIFIC Year
> 2 = Gave Number of Years
> 8 = (VOL) DON'T KNOW
> 9 = (VOL) REFUSED

(IF i11=1, ASK i11syr. ELSE GO TO INSTRUCTS BEFORE i11nyr.)

i11syr. [INTERVIEWER: ENTER SPECIFIC YEAR; ENTER AS 4 DIGITS, EX: 1970]

> "When did *(he/she)* come to live in the United States?"

> (RANGE = 1900 – 2009)

(NOW GO BACK TO i10 FOR THE NEXT PERSON. IF NO ONE ELSE, GO TO i12.) (IF i11=2, ASK i11nyr. ELSE GO BACK TO i10 FOR THE NEXT PERSON. IF NO ONE ELSE, GO TO i12.)

i11nyr.   [INTERVIEWER: ENTER NUMBER OF YEARS]
                "When did *(he/she)* come to live in the United States?"

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(RANGE = 1 TO 100)

(NOW GO BACK TO i10 FOR THE NEXT PERSON. IF NO ONE ELSE, GO TO i12.)

i12.   What is the primary language spoken in your home?

        1 = English
        2 = Spanish
        11 = Other (Specify)
        12 = (VOL) Don't Know
        13 = (VOL) Refused

i13.   What is the highest grade or level of school that you have completed?

        1 = 8th GRADE OR LESS
        2 = 9th TO 11TH
        3 = 12TH GRADE, GED OR HIGH SCHOOL DIPLOMA
        4 = Some voc//tech/business/trade school
        5 = Some voc.tech/business/trade school certificate or diploma
        6 = Some college/no degree
        7 = Associate's degree
        8 =Bachelor's degree
        9 = Some graduate/professional school/no degree
        10 = Graduate/professional degree
(MA;MS;PHD;EDD;MD;DDS;JJ/LLB, ETC)
        16 = (VOL) Don't Know
        17 = (VOL) Refused

(If I13=4 OR 5, ASK i14. ELSE GO TO INSTRUCTS BEFORE i13a.)

i14.   Do you have a high school diploma or GED?

        1 = Yes
        2 = No
        8 = (VOL) Don't Know
        9 = (VOL) Refused

(If Resp is the Mother of the Index Child (i.e. – (SC7=2 for Resp) AND (FR1a=3 or 4 or 5 or 7 or 8 or 9 or   10 or 12 for Index Child), then go to i15. Else ask i13a.)

i13a.   What is the highest grade or level of school that *(INDEX CHILD)*'s mother has completed?

1 = 8th GRADE OR LESS
2 = 9th TO 11TH
3 = 12TH GRADE, GED OR HIGH SCHOOL DIPLOMA
4 = Some voc//tech/business/trade school
5 = Some voc.tech/business/trade school certificate or diploma
6 = Some college/no degree
7 = Associate's degree
8 = Bachelor's degree
9 = Some graduate/professional school/no degree
10 = Graduate/professional degree
(MA;MS;PHD;EDD;MD;DDS;JJ/LLB, ETC)
16 = (VOL) Don't Know
17 = (VOL) Refused

(If I13a=4 OR 5, ASK i14a. ELSE GO TO i15.)

i14a. Does *(INDEX CHILD)*'s mother have a high school diploma or GED?

1 = Yes
2 = No
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF (Sc2cc=1), GO TO CLOSING. ELSE ASK i15.)

i15. Are you the Head of the Household?

(IF NEEDED: This would be the person in your household who provides 50% or more of the financial support and maintenance to 1 or more other people in that household who are closely related to him/her by blood, marriage or adoption.)

(INTERVIEWER: THIS INCLUDES SINGLE PERSON HHs.)

1 = Yes
2 = No
3 = (VOL) Respondent shares joint head of household
8 = (VOL) Don't Know
9 = (VOL) Refused

(IF i15=1 or 3, GO TO CLOSING. ELSE ASK i16.)

i16. How is the head of the household related to *(INDEX CHILD)*?

1 = his/her father
2 = his/her mother

3 = his/her step-father
4 = his/her step-mother
5 = his/her foster father
6 = his/her foster mother
7 = his/her grandfather
8 = his/her grandmother
9 = his/her legal guardian (male)
10 = his/her legal guardian (female)
11 = his/her legally adopted father
12 = his/her legally adopted mother
13 = partner of respondent
14 = partner of other household member
15 = his/her uncle
16 = his/her aunt
17 = his/her brother
18 = his/her sister
19 = his/her cousin
20 = his/her father-in-law
21 = his/her mother-in-law
22 = his/her great grandfather
23 = his/her great grandmother
24 = his/her other relative, specify: _____
25 = other, specify: _____
26 = Don't Know
27 = Refused

(INSERT TIME STAMP)

CLOSING.   Thank you very much for your time.   I want to get your name and your mailing address so I can send you the check as a token of our appreciation.

(INTERVIEWER: IF RESP. REFUSES, FIRST PROBE WITH…"Please know that this information will be held in strictest confidence and will NOT be shared beyond the research team.")

1 = Gave Response
9 = (VOL) Refused

(IF CLOSING=1, GO TO MYGETA. IF CLOSING=2, GO TO CS1.)

(PROGRAMMER: SHOW CONTACT INFO AS A GRID ON 1 SCREEN. UPDATE GRID AS INFORMATION IS BEING ENTERED FROM "MYGETA.")

RESPONDENT NAME -:

STREET -:
APT NUMBER -:
CITY *:
STATE -:
ZIPCODE -:

MYGETA.   INTERVIEWER: RECORD RESPONDENT NAME

        1 = Gave RESPONDENT NAME
        3 = (VOL) DON'T KNOW
        4 = (VOL) REFUSED

MYGETA.   INTERVIEWER: RECORD STREET

        1 = Gave STREET
        3 = (VOL) DON'T KNOW
        4 = (VOL) REFUSED

MYGETA.   INTERVIEWER: RECORD APT NUMBER

        1 = Gave APT NUMBER
        2 = No Apartment Number
        3 = (VOL) DON'T KNOW
        4 = (VOL) REFUSED

MYGETA.   INTERVIEWER: RECORD CITY

        1 = Gave CITY
        3 = (VOL) DON'T KNOW
        4 = (VOL) REFUSED

MYGETA.   INTERVIEWER: RECORD STATE

        1 = Gave STATE
        3 = (VOL) DON'T KNOW
        4 = (VOL) REFUSED

MYGETA.   INTERVIEWER: RECORD ZIPCODE

        1 = Gave ZIPCODE
        3 = (VOL) DON'T KNOW
        4 = (VOL) REFUSED

(NOW GO TO W1.)

(IF CLOSING=9, ASK CS1. ELSE GO TO INSTRUCTS BEFORE W1.)

CS1.   Would you at least be able to provide us with the cross streets that are nearest to your home?

> 1 = Yes / Gave Response (Record Verbatim):
> 2 = No / Refused

_____

WORKSHEET INSTRUCTIONS

(IF CLOSING=1, ASK W1. ELSE GO TO R2.)

W1.   In addition to the $10 we will be sending you, we will also be sending you a tape measure and worksheet to record you and your children's height and weight. If you complete and send back the worksheet, we will send you an additional $10 as a token of our appreciation.

> 1 = CONTINUE

RE-CONTACT INFO

R2.   Thank you for your cooperation and for taking the time to participate in this important study. In the future, we may be contacting you again to collect some follow-up information on health care issues and concerns. Like the interview today, your participation to a follow-up interview will be voluntary and your responses will remain confidential. Would you be willing to provide us with the name or initials and phone number of 2 friends or family members who would know how to contact you in the event that we would be unable to reach you at this phone number?

> 1 = Yes, willing to provide names/numbers
> 2 = No, refuses to provide names/numbers

(IF R2=1, GO TO R2a. ELSE GO TO W2.)

R2a.   What is the name or initials of the 1st family member or friend?

> 1 = Gave Response
> 9 = (VOL) Refused

(IF R2a=9, GO TO W2. ELSE GO TO R2b.)

R2b.   And what is the phone number for the 1st family member or friend?

1 = Gave Response
                    9 = (VOL) Refused

      (IF R2b=9, GO TO W2. ELSE GO TO R3a.)

R3a.   What is the name or initials of the 2nd family member or friend?

                    1 = Gave Response
                    9 = (VOL) Refused

      (IF R3a=9, GO TO W2. ELSE GO TO R3b.)

R3b.   And what is the phone number for the 2nd family member or friend?

                    1 = Gave Response
                    9 = (VOL) Refused

W2.   Finally, before we say good-bye if you would like to have more
information about Medicaid, NJ Family Care or NJ Ease I can give you the phone
numbers.

(PROVIDE NUMBERS REQUESTED: Medicaid: 1-800-356-1561; NJ Ease: 1-
877-222-3737; NJ FamilyCare: 1-800-701-0710) (MULTIPLE RECORD)

             1 = Didn't want numbers
             2 = Gave Medicaid
             3 = Gave KidCare/FamilyCare
             4 = Gave NJ Ease

CLOSING 2   Thank you for your cooperation and for taking the time to
participate in this important study.

LANG.   INTERVIEWER PLEASE ENTER THE LANGUAGE OF
INTERVIEW

             1 = ENGLISH
             2 = SPANISH

(INSERT TIME STAMP)

APPENDIX B

INSTITUTIONAL REVIEW BOARD APPROVAL FORM:

RUTGERS UNIVERSITY

December 10, 2010

P.I. Name: Yedidia
Protocol #: 08-501M

Michael Yedidia
Center for State Health Policy (CSHP)
112 Paterson Street, 5th Floor
College Ave Campus

Dear Michael Yedidia:

√

(Initial / **Amendment** / Continuation / Continuation w/ Amendment)

Protocol Title: "New Jersey Childhood Obesity Study"

This is to advise you that the above-referenced study has been presented to the Institutional Review Board for the Protection of Human Subjects in Research, and the following action was taken subject to the conditions and explanations provided below:

Amendment to Approval Date:	12/8/2010	**Expiration Date:**	4/10/2011
Expedited Category:	8a		

This approval is based on the assumption that the materials you submitted to the Office of Research and Sponsored Programs (ORSP) contain a complete and accurate description of the ways in which human subjects are involved in your research. The following conditions apply:
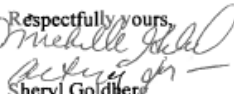
- **This Approval**-The research will be conducted according to the most recent version of the protocol that was submitted. **This approval is valid ONLY for the dates listed above;**
- **Reporting**-ORSP must be immediately informed of any injuries to subjects that occur and/or problems that arise, in the course of your research;
- **Modifications**-Any proposed changes MUST be submitted to the IRB as an amendment for review and approval prior to implementation;
- **Consent Form(s)**-Each person who signs a consent document will be given a copy of that document, if you are using such documents in your research. The Principal Investigator must retain all signed documents for at least three years after the conclusion of the research;
- **Continuing Review**-You should receive a courtesy e-mail renewal notice for a Request for Continuing Review before the expiration of this project's approval. However, it is your responsibility to ensure that an application for continuing review has been submitted to the IRB for review and approval prior to the expiration date to extend the approval period;

Additional Notes: - Administratively Expedited Amendment Approval per 45 CFR 46.110(b)(2) on 12/8/10 for Additional Key Personnel: N. Fitzgerald & J. Gutierrez
- PI is to contact the IRB prior to the recruitment of additional subjects or further interactions/interventions with subjects.

Failure to comply with these conditions will result in withdrawal of this approval.

Please note that the IRB has the authority to observe, or have a third party observe, the consent process or the research itself. The Federal-wide Assurance (FWA) number for the Rutgers University IRB is FWA00003913; this number may be requested on funding applications or by collaborators.

Respectfully yours,

Sheryl Goldberg
Director of Office of Research and Sponsored Programs
gibel@grants.rutgers.edu

cc: Susan Brownlee

APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL FORM:

ARIZONA STATE UNIVERSITY

Office of Research Integrity and Assurance

To:	Punam Ohri-Vachaspati
From:	Mark Roosa, Chair Soc Beh IRB
Date:	04/08/2011
Committee Action:	**Expedited Approval**
Approval Date:	04/08/2011
Review Type:	Expedited F7
IRB Protocol #:	1104006295
Study Title:	New Jersey Childhood Obesity Study
Expiration Date:	04/07/2012

The above-referenced protocol was approved following expedited review by the Institutional Review Board.

It is the Principal Investigator's responsibility to obtain review and continued approval before the expiration date. You may not continue any research activity beyond the expiration date without approval by the Institutional Review Board.

Adverse Reactions: If any untoward incidents or severe reactions should develop as a result of this study, you are required to notify the Soc Beh IRB immediately. If necessary a member of the IRB will be assigned to look into the matter. If the problem is serious, approval may be withdrawn pending IRB review.

Amendments: If you wish to change any aspect of this study, such as the procedures, the consent forms, or the investigators, please communicate your requested changes to the Soc Beh IRB. The new procedure is not to be initiated until the IRB approval has been given.

Please retain a copy of this letter with your approved protocol.