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**CHILDHOOD FEEDING PRACTICES AND PARENTING STYLES IN
HISPANICS**

by
Kasi Spinelli

A Thesis

Submitted to the
Department of Psychology
College of Science and Mathematics
In partial fulfillment of the requirement
For the degree of
Master of Arts in School Psychology
at
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Thesis Chair: Roberta Dihoff, Ph.D.

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Abstract

Kasi Spinelli
CHILDHOOD FEEDING PRACTICES AND PARENTING
STYLES IN HISPANICS

2014-2015

Roberta Dihoff, Ph.D.
Master of Arts in School Psychology

The purpose of this study was to detect an ethnic difference in Hispanic and feeding practices in early childhood. It is further hypothesized that there will be a relationship between parenting styles and feeding practices. 24 Rowan graduate students completed a survey, the Toddler Feeding questionnaire by Chaidez & Kaiser (2011). The items on the survey were divided into questions that asked about parenting styles, feeding practices, environmental factors, and demographics.

The ethnicity was analyzed by using a one-way ANOVA (within) to discover any associations between the parenting styles and feeding practices items on the survey. There was not a significant difference between ethnicity and parenting styles or with feeding practices. However, there was significant findings with the feeding practices and parenting styles which was analyzed by using a bivariate correlation. This indicates that ethnicity does have an impact on feeding practices and parenting styles.

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Chapter 1

Introduction

Need for Study

Obesity is an ongoing dilemma in the United States of America. Since obesity is a chronic disease, preventing obesity is a long-term process. In order to prevent obesity in adulthood, an intervention must take place in childhood. In the United States, 25% of children are overweight and 11% are obese. Unfortunately, 70% of obese adolescents carry obesity into their adult lives (Dehghan, Akhtar-Danesh & Merchant, 2005). Robert Wood Johnson's data has noticed obesity rates are increasing in the Hispanic population and African American population. I will focus on the Hispanic population.

The obesity prevalence was high among Hispanics (22.4%) than non-Hispanic white youth (14.1%) in 2011-2012. During the ages 2-5, Hispanics are at higher risk of being obese or overweight. Hispanics are effected the most by all the factors that contribute to becoming obese or overweight (Childhood Obesity Facts, 2014). They have many different cultural aspects that increase their chances. Due to their socioeconomics, feeding habits, parenting style and view on physical activity impacts of obesity is prevalent among Hispanics.

Purpose

The goal of this study was to detect an ethnic difference amongst parenting styles. This was be achieved by identifying the parenting style items on the survey and take the scores on those items and comparing it to the different ethnic groups—Hispanic and Caucasian. Furthermore, the purpose of this study was to find a relationship between parenting styles and feeding practices.

Hypothesis

It is hypothesized that inappropriate eating patterns will relate to weight issues in the children. More specifically, feeding issues in the Hispanic children in the birth to 5 year old range will have a higher overweight or obese rate. It is also hypothesized that a gender and age difference pattern will be discovered.

Operational Definitions

Obesity: measurement of the body mass index (BMI), participants that are in the 95th percentile.

Body mass index (BMI): is an indicator of body fatness that is calculated from a person's weight and height.

95th percentile: the BMI falls into this percentile. Anything below means 95% of the time people with the same age and sex's BMI are at or below the specific BMI and anything above the 95% means 5% of people with the same age and sex's BMI is higher than the specific BMI.

Limitations

A convenience sample size was used; therefore, it cannot be generalized to the rest of the population. A small sample size was used and there was not a significant amount of participants in each ethnic category. There were only 4 participants in the Hispanic category and 10 in the Caucasian category. Participants failed to complete the survey or did not fill out items; therefore, caused difficulties arose when processing the data.

Assumptions

It is assumed that all the students asked to participate would and answer all the questions truthfully and to the best of their ability. It was also assumed that ethnicity

would have an influence on feeding practices and parenting styles. Furthermore, it was assumed that a pattern would be identified between parenting styles and feeding practices.

Summary

24 Rowan graduate students in the Education department filled out a survey, the Toddler Feeding questionnaire by Chaidez & Kaiser (2011) about their child or children and how their feedings practices were from the age of birth to 11-years-old. The items on the survey refer to parenting styles, feeding practices, environmental practices, and demographics. The survey was used to indicate a relation between parenting styles and feeding practices. There were no significant findings between ethnicity, feeding practices and parenting styles.

Chapter 2

Literature Review

Background on Obesity

Obesity is a continuous dilemma in the United States of America. Not only is obesity an individual problem but it is a population problem as well (Childhood Obesity Prevention 2012). Research has found that obesity is high in the United States in most sex and age groups (Flegal et al., 2010). It is even more alarming that the rate of childhood obesity is rapidly increasing. Obesity is defined by the body mass index (BMI) of someone and to be classified as obese the BMI must be in the 95th percentile.

According to the Nutrition Journal, obesity is caused by energy intake being too high for the energy that is released. There are many reasons why this may occur but the factors that play a significant role in developing obesity are personal life choices and cultural environment. In 2007-2008, the National Health and Nutrition Examination Survey (NHANES), reported an estimated 34.2% adults overweight in the United States. Out of the 34.2%, 33.8% are obese and 5.7% are morbidly obese.

According to the Center for Disease Control and Prevention, there are currently approximately 12.7 million children and adolescents (2-9 years-old) in the United States that are obese. Moreover, during the ages 2 to 5, Hispanic children are five times more likely to be obese (Goldfarb, 2014).

Data taken from the Hispanic Health and Nutrition Examination (HHANES) showed that Mexican-Americans had a higher prevalence of overweight and obesity for both genders. The HHANES also displayed a slight trend amongst the Mexican-

American population; the prevalence of obesity increased as age increased for both genders as well.

A study done in 2006 titled, "Identifying Risk for Obesity in Early Childhood", by Nador et. al., used data from the National Institute of Child Health and Human Development Study of Early Child Care and Youth Development to examine the growth of healthy U.S. children from 10 different locations. The participants were born in 1991. The participants were measured for height and weight at 7 different times: 24, 36, and 54 months and 7, 9, 11 and 12 years. The purpose of the study was to assist clinicians by identifying children, using BMI to determine the risk of overweight and obesity at age 12 years at earlier ages.

The results of the study suggested children whom remain in the lower range of normal BMI are less likely to become overweight or obese in adolescence during this time period where the trend of obesity is increasing. The study also suggested that the more times a child's weight was categorized in the 85th percentile; the more likely they were to stay overweight. This is manifested in the preschool years and is reinforced and strengthens during the school-age years. The children who are less than or are in the 75th percentile for BMI are at an increased risk of being overweight by the age of 12 years. Moreover, children who are less than the 50th percentile for BMI are less likely to become overweight by the age of 12 years. These results put emphasis on the importance of being able to recognize signs of overweight or obesity in early ages.

The purpose of this current study was to detect an ethnic difference amongst parenting styles. This was be accomplished by identifying the parenting style items on the survey and take the scores on those items and comparing it to the different ethnic

groups—Hispanic and Caucasian. The purpose of this study was to also find a relationship between parenting styles and feeding practices.

Eating Patterns

The dynamics of home eating habits have drastically changed over the years. As stated in, “Parents Are Key layers in the Prevention and Treatment of Weight Related Problems”, an increasing amount of families are spending their money on foods not prepared at home. Rather, it is currently a trend to eat outside of the home due to convenience because the families do not have enough time to prepare a meal. Another trend that has developed is that children and adolescence are doing the food shopping and preparing the meals because more mothers are working and do not have the time to do so. If the parents prepared their meals, the less likely their children will eat sweet snacks and drinks.

Meal structure is an important factor in preventing obesity. Unfortunately, it is more common for families to eat alone than as family. The feeling of companionship that comes with eating as a family provides a positive atmosphere and models appropriate food habits. Furthermore, the more a child eats independently and decides what to eat for themselves, the more likely they are to choose unhealthy foods and skip meals. If a child partakes in family meals, they are more likely to consume more fruits, vegetables, and dairy foods (Golan & Crow 2004; Videon& Manning, 2003). Another study found that the more family meals a family has, the more likely the family will eat fruits, vegetables, grains, and calcium-rich foods and they consume less soft drinks (Neumark-Sztainer et al, 2003).

There is a type of parenting style that can impact the risk of the child becoming overweight or obese. The stricter the parents are increases the chance of their child becoming overweight. If the parents monitor their child's diet and physical activity, it can help reduce the risk of their child becoming obese. Furthermore, if the parents praise or give tangibles to the child for healthy eating, it can decrease the risk of the child becoming obese (Golan & Crow, 2004).

Specifically in the Mexican culture, they have a strict parenting style which emphasizes respecting authority. However, the Mexican American parents represent a variety of parenting styles. A study done, "Is parenting style related to children's healthy eating and physical activity in Latino families?", examines the different types of parenting style with Hispanic families to determine if it had an impact on their children's healthy eating patterns. As a result to the study, the Hispanic parents that monitor their child's diet and reinforce healthy eating, positively related to the child eating healthy food. The same was for physical activity. Parents that used appropriate discipline had an effect on their child eating healthier foods. However, the parent's discipline was not a significant impact to children's eating habits or physical activity. The same was for the parenting control.

The more excessively controlling a parent is about their child's eating patterns, the more likely it will have an effect on them being able to maintain a normal weight. It has also been suggested that child-feeding practices that focus on external environmental features can negatively impact the child's ability to respond to internal cue indicating hunger and satisfaction. External cues are when a child is verbally prompted or is pressured to eat more food. If a mother restricts their child from having certain snack or

the child perceives it that way, the child is more likely to uncontrollably eat these restricted foods in unrestricted settings.

Another study done in 2005, by Hughes et. al, examined different parenting styles with three different ethnicities. The study found that, specifically with Hispanics, one-third of them displayed an authoritarian pattern when it came to feeding styles. This type of feeding pattern usually involves a lot of restrictive feeding and pressure to eat.

This study also found a type of permissive parenting style was found primarily in Hispanics more than the other ethnics, indigenous. This type of parenting style can be unhealthy because the parents usually give into their children and allow them to have whatever they request. They are also less likely to use threats or bribes to influence their child's eating. It is important for children to be monitored and have some type of direction in early years of life for their food intake. If they do not have any structure for what they eat, the bad eating habits will continue into adulthood and could lead to becoming overweight or obese.

It has been suggested by research that the most effective feeding style to use when influence a child is Authoritative feeding. This feeding style is associated with a higher attempt to get the child to consume dairy, fruits, and vegetables and higher consumption of the child eating dairy and vegetables. (Patrick et al., 2005).

It is common for many people who are obese to suffer from depression due to their inappropriate feeding habits. (Leckie & Withers, 1967). Furthermore, there is a subgroup of people who are obese that binge eat. People who have BED show higher levels of psychological distress (Grissett & Fitzgibbon, 1996). One study that was done in 1998 investigated the correlation of binge eating disorder (BED) and different ethnic

groups. They used only women as their participants. The study did find a strong relationship between Hispanic women and binge eating symptoms were greater than the Black and White women. The study also showed that more Hispanic women had BED (9.6%) than the Black (3.9%) or white women (1.8%). This study also found that for Hispanic women the BMI and the BDI, which was used to assess how severe their depression was, strongly influenced how likely they would be prone to binge eating and how severe it is. Overall, the study suggests that BED is more severe and strongly associated to depression in Hispanic women than the Black or White women (Fitzgibbon, Spring, Avellone, Blackman, Pingitore, & Stolley, 1998).

Although there has not been much research done on the Hispanic diet in isolation, there has been research comparing the diets of Hispanics born in the U.S. and Hispanics born in foreign countries. In one study done, that examined three Hispanic subpopulations—Cuban, Mexican, and Puerto Rican, suggested that Hispanics who were born in foreign countries had healthier dietary habits than Hispanics who were born in the U.S. The results of the study showed that out of the Hispanics-Americans that were born in foreign countries, the Mexicans consumed more rice, fruits, and vegetables. Furthermore, Puerto Ricans consumed more fruits and Cubans consumed more vegetables than the Hispanics-Americans that were born in the U.S. Foreign-born Hispanic-Americans have more traditional diets that consist of low fat foods—beans, tortillas, and rice (Gordon-Larsen, Harris, Ward, & Popkin, 2003).

There has been a study done by C. M. Devine, W.S. Wolfe, E. A. Frongillo Jr, & C. A. Bisogni titled, “Life course events and experiences: association with fruit and vegetable consumption in 3 ethnic groups that examined how life-course experiences and

events are associated with fruit and vegetable consumption in Black, Hispanics, and Whites,” in 1999. They found that many Hispanics that were born in their home country express their ethnic identity through more might be more important to them than a Hispanic who was born in the U.S. Unfortunately, it might be difficult for the Hispanics to continue their diet when they move to the U.S due to the certain fruits and vegetables that are not available. Due to their changing food environment, their diet can be dramatically affected and force them to adapt to a new diet that is more convenient in the U.S. (Devine et. al., 1999).

Breast Feeding

The American Academy of Pediatrics (AAP), highly suggests that mothers exclusively breastfeed about the first 6 months of their child’s life. AAP also recommends that the mother should continue breastfeeding after the first six months combined with new age appropriate foods that are introduced.

Different feeding styles can impact the risk of a child becoming obese or overweight. Parents that use pressured feeding increase the chances of their child being obese or overweight. Pressured feeding style is when the caregiver encourages the infant to finish the whole bottle or use “bottle propping,” which is leaning the bottle up against something instead of holding it. By using this technique, the caregiver is constantly allowing their infant to over eat and not gain a sense of satisfaction to when to stop eating in the future. Parents that use responsive feeding style decrease the risk of their child becoming obese or overweight. Responsive feeding style is when the parent feeds their infant only in response to cues. This way the child will not develop overeating habits.

Another type of habit that can lead to a child becoming obese later on in childhood is when the parent leaves the bottle in the crib with the child. This allows the child to have access to food whenever he/she pleases. It does not help the child develop healthy eating habits.

A study done, “Racial and ethnic differences associated with feeding-and activity related behaviors in infants”, which suggests that Hispanic parents are more likely to encourage their infant to finish the bottle (69%) more likely than black (50%) or white (29%). Hispanics also were more likely to immediately feed their child when they cried (47%), blacks (19%) and whites (16%).

There has not been a lot of research done on Hispanic women who breast feed to see if it would decrease the chances of their child becoming obese later on in life. Over the past decade, the prevalence of obesity has dramatically increased amongst pregnant women in the United States. The NHANES has reported that half of the Black and Mexican American women who reproduced were overweight or obese (Kugyelka, Rasmussen, & Frongillo, 2004).

Another study that investigated the suggestion that breastfeeding can help prevent children from being overweight or obese, used data from the NHANES III. The sample size was 2685 children from the ages of 3-5 years that were born in the U.S. The results of the study were significant, 37% of mothers that breastfed reduced the risk of their child being overweight compared to 16% for children who were never breastfed. They also found that there was a 30% reduced risk of the child becoming overweight for children who were full-time breastfed for three months or longer.

The same study found that there was a 0.1% decreased chance of being overweight if the timing of the introduction of solid foods was delayed by each month. (Hediger, Overpeck, Kuczmariski & Ruan, 2001). It has been suggested to delay the introduction of solid foods to infants to reduce the risk of the child becoming overweight later in life. To reduce the risk even more, solid foods should be introduced until after the infant is 6 months of age. It is important to avoid an excessive amount of high-calorie snacks for infants. Moreover, it is crucial to watch if the infant's weight increases closely (Deckelbaum & Williams, 2001).

A study done by Davis, J. N., Goran, M. I. & Whaley, S. E., in 2012, examined the effects of breastfeeding and sugar-sweetened beverage intake on prevalence of overweight and obesity in Hispanic toddlers. The toddlers in the study were 2-4 years-old. Participants that breastfeed their child decrease the odds of being obese by 45% and decreased the odds of being overweight by 28%. Participants who did not consume any sugar-sweetened beverages decreased the chances of obesity by 31%. Participant's who breastfeed and did not consume any sugar-sweetened beverages had a stronger effect on their child by decreasing the chances of obesity or overweight by more than 60% compared to the participants who did not breastfeed and consumed a high intake of sugar-sweetened beverages. The results of this study suggest that the consumption of sugar-sweetened beverages only affected participants who did not breastfeed or breastfed for less than 12 months.

Physical Activity/Television Viewing

The less inactive a child is the greater chance the child has of becoming obese. Both physical activity and watching television independently affect the risk of a child

becoming obese (Eisenmann, Bartee, Smith, Welk, & Fu 2008). More recently, children spend more time watching television than they spend time being in school. The less physical activity a child participates in, the more likely that child will have more fat on them (Gortmaker, Must, Sobol, Peterson, Colditz, & Dietz, 1996).

Television watching is a major contributor of inactivity. In the beginning of the 2000's, 99% of adolescents had televisions in their home and 65% have on in their bedroom Utter, Neumark-Sztainer, Jeffery, & Story, 2003). This has most likely increased since then. Just by having a television in the bedroom can increase the hours of television watched primarily in women, infants, and children population. Eating meals in front of the television can increase the risk of becoming obese or overweight because it is associated with less healthy eating habits (Christakis, Ebel, Rivara, & Zimmerman, 2004).

From the researchers that completed the study, "Parents are key layers in the prevention and treatment of weight related problems", if a child watches more than one hour of television per day, it has been associated with a high intake of fast foods, sweets, chips, and pizza, and lower intake of fruits and vegetables. Furthermore, they explain that the being exposed to food advertisements can cause children to request the specific foods and influences their dietary patterns.

Previous studies have found that children with parents of lower education levels spend more time watching television than children with parents who received higher education degrees. Moreover, minority children watch more hours of television per week than white-Caucasian children. Therefore, B. A. Dennison, T. A. Erb, & P. L. Jenkins in 2002 designed a study to examine race and ethnicity and/or parental education level

increased a child in pre-school's (1-4 years-old) risk of becoming obese or overweight and the amount of time the child watches television. The results of the study did in fact show a significant finding that the amount of time watching television was related to the prevalence of child overweight amongst pre-school children of low-income families. The Hispanics did in fact watch more television than the white-Caucasian children of low-income families.

They also found that children with television sets in their room watch 4.8 more hours per week than the children who do not. They found that by the child having a television set in their room, it strongly increases the risk of the child becoming obese or overweight.

Many people associate physical activity with other positive healthy behaviors. Many people believe this because if they are exercising they are not doing negativity activities, for instance, abusing substances or television watching (Pate, Heath, Dowda, & Trost, 1996).

Most studies research physical activity and television watching independently, the study, "Combined influence of physical activity and television viewing on the risk of overweight in US youth," wanted to examine the interaction of physical activity and television watching in adolescents. They found that the relationship between physical activity and television watching was extremely complex. The study found that if the adolescent watched less than one hour of television per day, then it did not increase the risk for them to become obese or overweight regarding the level of the physical activity (moderate or vigorous). However, the level of physical activity did affect the risk of becoming obese or overweight if the child watched more than four hours of television.

Even further, this interaction affected the females more than the males. They believe this may happen because the adolescent males showed greater levels of habitual physical activity than girls. This is significant because many of the previous studies did not show that there was impact for gender.

Even though the females are affected more by the interaction, males did store that they were affected by the interaction as well. The males did not show an increase risk in overweight or obese unless they were in the high television/ low moderate physical activity category. Even further, the males who watched more than four hours of television a day have an increased risk by 20-40%, regardless of how much moderate or vigorous physical activity they participate in.

The amount of time children spend being physically active and watching television are primary factors when preventing obesity. A study done using adolescences suggest, Hispanics adolescence do not get sufficient physical activity. From the survey they used, Hispanics reported being moderately to vigorously physically active only zero to two times per week. For adolescence, this is not enough to prevent obesity or overweight. This study also showed that the Hispanic adolescence spent more time view television per week than the non-Hispanic whites (Gordon-Larsen, McMurray, & Popkin, 1999).

Socioeconomic, Ethnicity, Race, and Gender

Ethnicity, race, gender and socioeconomic are all key factors that can impact a person's health. In general, if a child lives in a lower-income household, it doubles their chances of being food insecure. There is a negative association between poverty and dietary intake in Hispanic children, especially in the households where the parents speak

Spanish. The lower-income a family received in a Spanish speaking household, the worse their diets were. The majority of the Spanish speaking households lacked macronutrients, energy from fat and has less food insufficiency.

Gender is one of the key factors for the risk of obesity; it can be even more crucial factor when it is combined with low socioeconomic status (SES). Monteiro et al. noted in 2000 a trend that obesity was more prevalent for women than men in rural areas than in urban settings. In 2003, a study conducted by, P. Gordon-Larsen, L. S. Adair, & B. M. Popkin, found that all men are more likely to be obese if they live in a household with income at or above 350% of the poverty level (33%) than women (29%). In contrast women are more likely to be obese if they live in a household with income below 130% of the poverty line (42.0%) than men (29.2%).

Starting around the past 20 years, Hispanics in the United States have surprisingly better health care than most would expect, however, most are characterized by a low socioeconomic status (Kaplan, Huguet, Newsom, & McFarland, 2004). Many studies have proven that neighborhoods of low income families have more children and adults who are obese than neighborhoods with families that receive higher incomes. This is due to the fact that many families in lower-income, rural areas purchase high foods that are high in fat and high in carbohydrates energy-dense foods (Uauy, Albala, & Kain, 2001). Unfortunately, Latino children are impacted the most by this.

Families and communities have a significant influence on their children and their eating patterns. Parents can influence the family by the foods they expose them to or by which foods they allow the family to eat (Golan & Crow, 2004). However, the parents

might not be the ones to blame. It might due to the resources that are available to them. There are many environmental factors that contribute to obesity or being overweight. Currently, there are more inexpensive food options and they are available in more places. There are also more options to receive larger portions of food for an inexpensive price. The new trend in this generation is “getting the best value,” which causes more people to want to get the most for the least amount of money (Hill & Peters, 1998).

Communities of low-income and a higher percentage of minorities in it have a significant less amount of supermarkets and convince stores that provide fresh and affordable foods, such as whole grains or low-fat dairy products and meats. Since there is less access to supermarket, this causes them to purchase the majority of their groceries at local corner stores. These types of stores do provide many health choices and tend to market the unhealthy choices (Kumanyika & Grier, 2006).

Families who live in areas with limited resources can negatively affect a family’s dietary intake and food insufficiency. Hispanic children are highly impacted by this. There diet intake is also effect if the Hispanic families are receiving lower-income, on average making lower than \$13,307 a year than Hispanic families that make \$32,331 or more annually.

If the family receives food stamps, the child will most likely experience food insufficiency and lack vitamin A in their diet. These findings suggest that the food stamp program is not successful in eliminating food insecurity. If the child experiences food insufficiency, it can cause the child to develop negative eating habits. The child might base their eating patterns on foods with lower nutritional quality which could potentially

lead to childhood obesity. Obviously, Childhood obesity can continue into adulthood and might cause other health complications as well (Mazur, Marquis, & Jensen, 2003).

It is important for the whole community to be involved to prevent obesity from occurring. If families do not have access or the financial means to afford healthy foods, they will most likely develop unhealthy eating patterns. Schools need to be involved as well; children spend a majority of their time in school. However, this might be difficult for many schools in inner-cities and low-income areas. Obesity prevention programs require a lot of funding that many low-income schools cannot afford (Kumanyika & Grier, 2006).

A study titled, “Racial/ethnic, socioeconomic, and behavioral determinants of childhood and adolescent obesity in the United States: analyzing independent and joint associations,” was one of the first studies to analyze the independent and joint effects of different socioeconomic, demographic, and behavioral characteristics on childhood and adolescent obesity. The results of their study did show a significantly higher risk in Hispanic children and adolescent for obesity. There was not only an independent association with being Hispanic but there were also independent associations with having a non-metropolitan residence, lower household education and high poverty levels, low neighborhood social capital, and increased levels of television watching and physical inactivity.

Public health practitioners have been trying to enforce family and neighborhood-based intervention to prevent childhood obesity, however, the focus is still on the children’s mothers. This is due to the research that has already been done. While it is important to focus on the mother, the childhood daily live has a greater impact due to all

the different factors in it. The more people that are involved in the intervention, the greater the chances are of the intervention being a success (Kaufman & Karpati 2007).

Other Complications

There are many other health complications that can exist, however, most can comorbid and be related to obesity or being overweight. Being overweight or obese is often comorbid with high blood cholesterol, type 2 diabetes, coronary heart disease, and other health issues (Panel, 1998).

Type 2 diabetes is commonly associated with obesity. Type 2 diabetics are not insulin dependent but many of them eventually will need insulin therapy (National Collaborating Centre for Chronic Conditions, 2008). Type 2 diabetes is a very costly disease to the victim and the country (Diabetes Prevention Program Research Group, 2002). Out of the people that have diabetes, 90% of them have Type 2 diabetes. It can cause many other severe complications such as affecting the eye, the nervous system, and kidneys (National Collaborating Centre for Chronic Conditions, 2008). Type 2 diabetes affects about 8 percent of adults in the United States. Type 2 diabetes is a preventable disease that can be prevented the same way obesity can (Diabetes Prevention Program Research Group, 2002). Not only is type 2 diabetes associated with obesity, but developing type 2 diabetes it can more than double the chances of developing cardiovascular disease and decrease a person's life expectancy by an average of seven years (National Collaborating Centre for Chronic Conditions, 2008).

Type 2 diabetes for the most part is mainly found in adults and has a slow onset (National Collaborating Centre for Chronic Conditions, 2008). Even though it is more common for adults to have Type 2 diabetes, children can get it as well. In fact there is

evidence for an increasing rate of children developing type 2 diabetes. Not only is it increasing in children, but the young minorities are more likely to develop it (Rosenbloom, Joe, Young, & Winter, 1999). Hispanic adults have an increased risk for diabetes. Most of the Hispanic adults with diabetes have type 2 diabetes (Neufeld et. al, 1998).

A study done in 1998 by Neufeld et. al., examined the medical records of 55 Mexican-American pediatric patients with lower-income. The result of their study showed that out of the 55 patients, 17 (31%) of them had type 2 diabetes. Moreover, all 17 patients that had type 2 diabetes were obese as well. The results suggest that type 2 diabetes might be common among young Mexican-Americans.

Cardiovascular disease (CVD) has caused many premature deaths and also has a later onset which generally develops in middle aged adults (World Health Organization, & UNAIDS, 2007). There are many difference kinds of CVDs. A common one is a heart attack which occurs when there is a blood clot in the heart and does not allow blood to flow throughout the heart. Most people survive their first heart attack. Another type of CVD is ischemic stroke which is the most common of strokes. This occurs when the blood vessels that work with the brain are blocked, most likely from a blood clot. This causes cells to die because without blood supply, the brain stops functioning. Due to the lack of blood and oxygen to the brain, it might cause a victim of a stroke to have permanent damage. The cells that die do not get replaced with new ones. Fortunately, not all the brain cells might die and the injured cells repair themselves. (What is Cardiovascular Disease?, 2014).

Prevention

There is not one single solution to reverse obesity. To reverse obesity it takes a combination of techniques. A combination of techniques are required to reverse obesity. It is crucial to start the intervention during childhood because it is will be easier to teach the children how to live a healthy lifestyle and it will have a greater chance carrying on into adulthood. Furthermore, it is harder as an adult to lose weight than for a child. (Akhtar-Danesh , Deghan & Merchant2005).

In the past, there were only two types of childhood obesity interventions models that were used, an individual model and a dyadic approach. The individual-child model targets changing the child's behavior. On the other hand, the dyadic approach uses the child and parent and views the as the lever for altering behaviors. Unfortunately, neither model had significant long-term results.

Obesity is a complex disorder that has multiple contributing factors that cause it, therefore, to prevent obesity multiple steps need to be taken. The most efficient way to prevent obesity is to use evidence-based action plans. It is crucial to maintain the energy intake to the energy that is being released. Maintaining an appropriate energy balance may sound easy; however, it is complex due to all the factors that contribute to maintaining an appropriate energy balance (Koplan, Liverman & Kraak, 2005).

Child targeted interventions are the dominated interventions used in many countries. However, in one study done, the resulted suggest that using parent targeted early interventions to prevent obesity are more effective than child targeted interventions. This might be due to the fact that the adult was viewed as an authority figure and role

model by the child. Furthermore, the study focused on health conscious choices instead of focusing on losing weight (Golan & Crow, 2004).

The study “Validation of an instrument to assess toddler feeding practices of Latino Mother”, by, Virginia Chaidez and Lucia L. Kaiser, used a convent sample of 94 Latino women from California. The women were recruited if they identified themselves as a Latino and if they had a child between the age of 12 and 24 months. The participants filled out a questionnaire to contain 34 items which was similar to the Hughes and colleagues Caregiver’s Feeding Style Questionnaire. These items were intended to reflect indulgent and authoritative feeding practices, home environmental influences, and parental goals. The survey also accounted for household characteristic, early-infant feeding practices, the toddler’s deity intake and anthropometrics.

The results of the study done by the World Health Organization (WHO), indicated indulgent feeding practices are associated with a higher calorie intake. This is due to the evidence of the indulgent practices in Latino children are associated with a high energy consumption. This study, unfortunately, did not find the same link between indulgence and overweight. This could be due to the age of the children used in the study because they were much younger than the study done by the WHO.

This study noticed that one of the questions loaded on both the indulgence practice and environmental influences factors. Their interpretation of this is that indulgent parents feeding practices could be more influenced by household environmental factors than those of authoritative parents. Authoritative parents might rely more on health provider advice and internal goals when it comes to feeding their

child, while an indulgent parent might rely more on the advice from their husband or parents.

Results of the regression analyses they performed indicated that indulgent feeding practices in Latino children might contribute to increase energy consumptions, mainly through higher intakes of fat and saturated fat. The study expected this effect due to higher carbohydrates and added sugar intakes. This could be due to the demographics of the of the Latino women in their study, their sample did not retained cultural dietary habits of consuming more traditional foods and less sugary ones, or the children who had free access to food, were consuming small, more often, unsupervised amounts of different foods that went unnoticed.

The sweetened beverages were the only food group associated with feeding practices. Overall, the authoritative parents had a lower child intake of sweetened beverages and the indulgent parents had a higher intake of sweetened beverages. The authoritative feeding style has been associated with increased consumption of fruits, vegetables, and dairy. Which in many other past studies, include the study done by Patrick, et.al (2005), suggest that authoritative most effective feeding type (Chaidez & Kaiser, 2011).

The survey used by Chaidez and Kaiser's study was the same surveys used in this study. However, the survey was used to try to detect a relationship between inappropriate feeding patterns and ethnicity. The survey was also be used to see if their was an age and gender difference.

Chapter 3

Methodology

Subjects

There were 24 Rowan Graduate students from the Education department that filled out a survey, the Toddler Feeding Questionnaire, by Chaidez & Kaiser (2011). There were a total of 34 items on the survey and 3 demographic questions in the beginning asking the child's age (one or two children) and their ethnicity. The participants answered the questions by using a 1 through 5 scale with 1 being never and 5 being always. Four of the participants were Hispanic, 10 of the participants were African American, and 10 were Caucasian. However, the Hispanic and Caucasian data were compared and the African American participants were disregarded.

Variables

The independent variables used in the study were age, ethnic, and gender and the dependent variable was the scores from the different items from the survey. The different items were categorized into five groups—indulgent parenting style, authoritative parenting style, whether or not the parent promoted sugary foods or drinks to their child, environmental factors and 3 demographic questions. The demographic questions were whether or not the parents took anemia into consideration when choosing foods for their child to eat, whether or not they keep their child maintain a healthy weight in mind when choosing food for their child, and whether or not they give their child foods to make them happy.

Materials

A survey that was used was the Toddler Feeding Questionnaire, by Chaidez & Kaiser (2011). Participants were asked to best answer the questions about their child or how they were raised. The participants answered a series of questions about their child or what their feeding practices were as a child. The questions were divided into three categories that reflected—indulgent and authoritative feeding practices, home environmental influences, and parental goals. The indulgent parenting style items asked questions such as, “I give my child foods that he/she likes. The authoritative parenting style items asked, “I keep a regular snack schedule for my child”. The promoting sugary drinks and foods items referred to the questions such as, “I let my child have a drink of soda if he/she sees others in the house drinking it and wants it”. The environmental factors included questions such as, “My child watches 2 or more hours of television daily”. There were also three demographic questions at the end of the survey—“I feed my child foods that prevent anemia,” “I feed my child foods that maintain a healthy weight,” and “I feed my child foods that make him/her happy.”

Procedure

The surveys were handed out before graduate classes or during the break. The participants were asked to fill out the survey to the best of their ability. The items on the survey were coded in the five categories and then the data was entered in SPSS. The ethnic was analyzed by using a one-way ANOVA (within) to discover any associations between the parenting style items on the survey. The feeding practices and parenting styles were analyzed by using a bivariate correlation.

Chapter 4

Results

No ethnic differences were found on the responses to the Toddler Feeding Questionnaire. The hypothesis was not supported. However, there was a significant positive correlation, $r(24) = .311, p = .05$, shown in figure 1, between “indulgent parenting style” and if the parent “gives their child foods that make him/her happy.” This indicates that the parenting style can influence the feeding practices that are performed on the child. There is also an increase in the higher they scored for “feeding their child foods to make them happier” (4-5), the higher the parents scores were for “indulgent parenting style.”

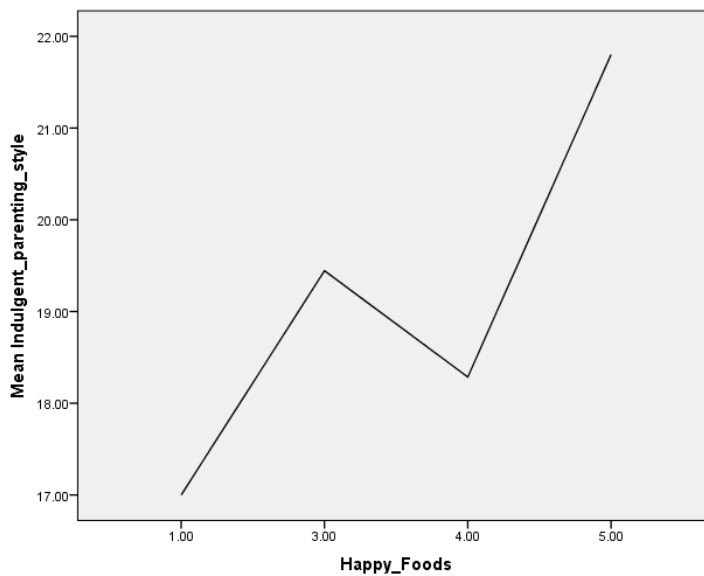


Figure 1. Positive correlation between “indulgent parenting style” and if the parent “gives their child foods to make him/her happy.”

There was a significant negative correlation, $r(24) = -.595, p = .05$, shown in Figure 2, amongst parents that promote sweets to their children and parents that feed their child foods that maintain a healthy weight. This suggests that parents that are concerned with maintaining a healthy weight for their child do not promote sweets to their child. There was a significant decrease (scores 3-5) from the participants that scored between for “feeding their child foods that maintain a healthy weight” scored lower for “promoting sweets to their child.”

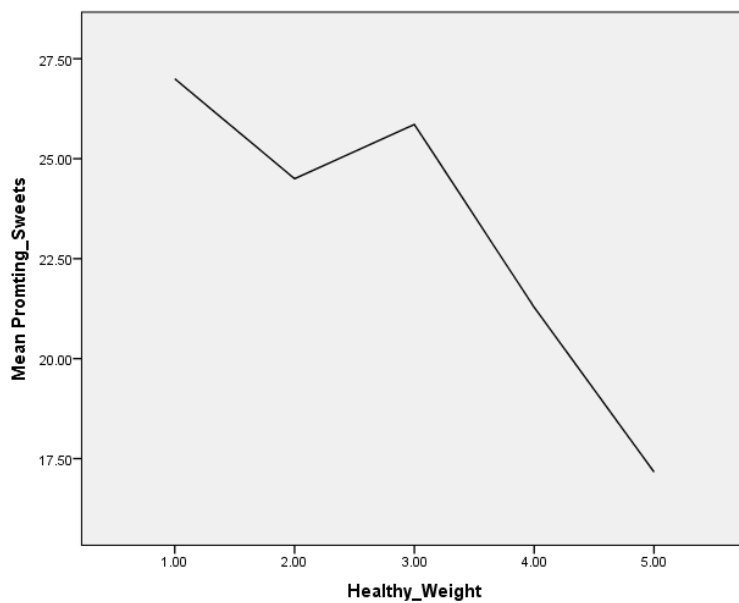


Figure 2. Negative correlation between “feeding their child foods that maintain a healthy weight” and “promoting sweets to their child.”

Chapter 5

Discussion

Conclusions Regarding Feeding Practices, Parenting Styles, and Ethnicity

There was no significant ethnic difference between feeding practices and parenting styles. The only significant finds were amongst the parenting styles and feeding practices. This indicated that ethnicity does not have an impact on feeding practices and parenting styles. Hispanic parents did not favor a certain type of parenting style which is what was predicated. An anticipated trend was predicted to be discovered. Parenting styles do however; have an impact on feeding practices. The type of parent styling a parent chooses effects how the child will care on feeding practices as they get older. There were no significant findings between age and gender as well. She strengthens the idea that the parenting style has a significant impact on the feeding practices a child will develop.

The previous study, “Validation of an instrument to assess toddler feeding practices of Latino Mother”, by, Virginia Chaidez and Lucia L. Kaiser, did however find that the Hispanic mothers were either indulgent or authoritative. This could be due to the fact that the study used a larger sample size. Furthermore, this study only used Latino mothers that were currently raising infants or toddlers. In this study, the participants did not have to be currently raising an infant or toddler.

In common with the previous study, an association between feeding practices and parenting styles was discovered as well. The indulgent Latino mothers did in fact promote poor food choices to their children and vice versa for the mothers who practiced Authoritative parenting style.

Limitations

A convenience sample size was used; therefore, it cannot be generalized to the rest of the population. The convenience sample was Rowan graduate students from the education department. A small sample size was used and there was not a significant amount of participants in each ethnic category.

Moreover, unlike the “Validation of an instrument to assess toddler feeding practices of Latino Mother,” by, Virginia Chaidez and Lucia L. Kaiser, the participants were not all mothers. This could have greatly influenced the result of this study. If all the participants were currently raising infants or toddlers, the probability of the participants accurately filling out their surveys would increase. Some of the participants had to think back to their childhood which might have had an influence on the results. Since the participants had to think back to their childhood, this creates a larger margin for errors to occur when filling out the survey.

Even further, some of the participants were not parents. Therefore, they had to fill out the survey based on how their parents. This also creates room for errors to occur because the participant might have to guess on of the answers because they were unsure or due to lack of memory.

Participants missed some of the questions which hindered the process of imputing the data. Some participants failed to fill out the age of the child, ethnicity, or failed to complete all of the items on the survey. Surveys that were not filled out properly were unable to be used. This also affected the sample size. The participants might have failed to fill out the surveys properly due to lack of attention to the demographics in the

beginning or the directions might not have been clear enough. For future references, the directions should be elaborated on.

Future Research

Future research possibilities are to have a larger sample size with more participants in each ethnicity group. Another suggestion for future research is to include the child's weight to see if there is a comparison between feeding practices, parenting styles and weight of the child. To include the child's weight and height as the "Validation of an instrument to assess toddler feeding practices of Latino Mother," by, Virginia Chaidez and Lucia L. Kaiser did. This is significant because obesity is such a problem in our country and more research needs to be done on it to help prevent it and decrease it.

Future research should also incorporate different type of ethnicities. This could discover whether or not certain ethnicities favorite certain parent styles. This could also help create culture sensitive prevention plans based on their ethnicity.

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Appendix

Family Feeding Practices with Young Children



PAPER SURVEY (ALTERNATE CONSENT)

We are inviting you to participate in a research survey entitled “Family Feeding Practices with Young Children” We are inviting you because you are the parent of a young child. In order to participate in this survey, you must be 18 years or older.

The survey may take approximately 15 minutes to complete. Your participation is voluntary. If you do not wish to participate in this survey, do not respond to this paper survey. The number of subjects to be enrolled in the study will be approximately 50 participants.

The purpose of this research study is to identify the unique challenges parents of young children experience in feeding their children. Results will be included in a Master’s thesis.

Completing this survey indicates that you are voluntarily giving consent to participate in the survey.

There are no risks or discomforts associated with this survey. There may be no direct benefits to you; however, by participating in this study, you may help us understand things that interfere with children eating.

Your responses will be anonymous. We will store the data in a secure computer file and the file will be destroyed once the data has been published. Any part of the research that is published as part of this study will not include your individual information. If you have any questions about the survey, you can contact Roberta Dihoff at dihoff@rowan.edu , but you do not have to give your personal identification.

Please respond for children aged birth to 4. This can either be your children or practices of your parents.

Child's Age _____, Gender M or F

Child #2 Age _____, Gender M or F

Ethnicity _____

Directions: For the following questions please pick the number based on the key provided: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Most of the time, & 5 =Always.

1. I give my child foods that he/she likes.

1 2 3 4 5

2. I encourage my child to eat foods even if he/she does not like them.

1 2 3 4 5

3. I let my child have something to eat whenever he/she asks.

1 2 3 4 5

4. I keep a regular snack schedule for my child.

1 2 3 4 5

5. I keep a regular meal schedule for my child.

1 2 3 4 5

6. I let my child drink soda.

1 2 3 4 5

7. I give my child fruit juice when he/she is thirsty.

1 2 3 4 5

8. At mealtimes I offer my child a sweetened beverage like Kool Aid, Gatorade, or punch.

1 2 3 4 5

9. I can calm my child with something to eat or drink when my child is upset.

1 2 3 4 5

10. I give my child a small treat like cookies, candy or chips.

1 2 3 4 5

11. My child eats the same foods prepared for the family.

1 2 3 4 5

1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Most of the time, & 5 =Always.

12. My child sits with the family at mealtimes.

1 2 3 4 5

13. At family mealtimes we watch television.

1 2 3 4 5

14. If my child does not want what is prepared, I give him/her something else.

1 2 3 4 5

15. I let my child have a snack such as chips, cookies or crackers if he/she sees a household member eating them.

1 2 3 4 5

16. In my house grown-ups drink soda.

1 2 3 4 5

17. I let my child have a drink of soda if he/she sees others in the house drinking it and wants it.

1 2 3 4 5

18. When I prepare dinner at home I include at least two vegetables.

1 2 3 4 5

19. I give my child a fruit or vegetable for snacks.

1 2 3 4 5

20. My child eats food from a restaurant or fast food.

1 2 3 4 5

21. During cold weather I let my child go outside to play.

1 2 3 4 5

22. My child watches 2 or more hours of television daily.

1 2 3 4 5

1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Most of the time, & 5 =Always.

23. I watch 2 or more hours of television daily.

1 2 3 4 5

24. I feed my child based on advice from family members such as my mother or mother-in-law.

1 2 3 4 5

25. I feed my child based on advice from my husband or partner.

1 2 3 4 5

26. I feed my child based on advice from my child's doctor or other healthcare workers.

1 2 3 4 5

27. I feel bad if I do not give my child something he/she wants to eat or drink.

1 2 3 4 5

28. It is difficult to offer healthy, balanced meals.

1 2 3 4 5

29. I let my child eat or drink whatever he asks for between meals as long as he/she eats well at mealtimes.

1 2 3 4 5

30. My child does not go outside to play if it is cold because I do not want him/her to get sick.

1 2 3 4 5

31. I limit outside playtime because I worry about my child's safety.

1 2 3 4 5

Directions: For the following questions please pick the number based on the key provided:

1 = Not too important, Rarely = Important, but I don't know enough to make changes, 3 = Important, but I don't do anything differently, 4 = Important, and I have made some changes, 5 = Important, and I am confident I do this well.

32. I feed my child foods that prevent anemia.

1 2 3 4

33. I feed my child foods that maintain a healthy weight.

1 2 3 4

34. I feed my child foods that make him/her happy.

1 2 3 4