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Childhood feeding practices in African Americans

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CHILDHOOD FEEDING PRACTICES IN AFRICAN AMERICANS

by

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Dedication

I dedicate this manuscript to my family and friends who helped me along the way.

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Abstract

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The purpose of this study was to explore the feeding practices of minority children specifically looking at African Americans from birth to 11 years old to see if there are any red flags so that professionals can be alerted for a concern with obesity. Previous research conducted on feeding styles and patterns of adults have shown some clues as how a parent plays a key role in the etiology of childhood obesity (Chaidez & Kaiser, 2011). One strategy that is used when looking at obesity is to look at physical activity as well as parenting styles which includes authoritative, authoritarian, and positive reinforcement (Kitzman-Ulrich, Wilson, St. George, Lawman, Segal & Fairchild, 2010). Today 35.2 percent of non- Hispanic Black youths between the ages of 2-19 are overweight and or obese (Ogden et al., 2012). This has increased over the last decade the percentage of African American children has jumped from 10.7 percent to 19.8 percent (Ashcraft, 2012). This study specifically looking to find if there was a correlation between ethnicity and parenting styles.

To look at this theory, surveys were given out to graduate students at Rowan University, specifically parents for them to fill out about their feeding practices of their children. The surveys were given out over a week length to random graduate courses on campus. The results of the data collected showed that there was no connection between ethnicity and parenting styles, but that that there was a significance in parenting styles and feeding practices.

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Chapter 1

Introduction

Need for Study

Obesity is becoming more of a problem in today's society. The question is exactly where does this all derive from, does it start in the beginning stages of childhood, is it prevalent in a person's genetic material, or is it due to outside factors such as food environment and socio- economic status. Obesity is on the rise in every ethnicity but specifically in African American children and adults. This can lead to many more complications over the course of their lives. There have been many studies done over the past few decades on obesity and one way to prevent such a problem is to start at the root of it and look at children first by looking at feeding patterns that are associated with the parents and the child. When looking at problematic feeding patterns and parenting styles this can show if there is an association with obesity. By looking at this specifically in educating the parents they can use the tools to properly embrace a healthier lifestyle to prevent the epidemic of obesity. In the study I will particularly be focusing on African American children. According to the Robert Wood Johnson foundation non-Hispanic Black youth (35.2 percent) aged 2-19 are overweight or obese (2014). Nationally, the obesity rate for these individuals is still considerably higher (16.9 percent).

Purpose

The goal of this study is to survey the feeding patterns of minority children specifically looking at African American children aged birth to 11 years to determine if there are red flags that can alert professionals concerning a potential for obesity. We will specifically be surveying graduate students who are mothers or fathers of all ethnicities

asking them a series of questions on a scale of 1 to 5 about their feeding patterns that they practice with their child. One representing never have done and five representing always. The series of questions reflected upon their specific parenting styles that included indulgent, authoritative and home/ environmental influences.

Hypothesis

It is hypothesized that eating patterns will reflect ethnic differences, specifically African Americans. It is further hypothesized that eating patterns will relate to parenting styles of this specific ethnicity. It is also hypothesized that gender differences will be found as well.

Operational Definitions

The following operational definitions were used throughout this study as follows:

Obesity: a BMI at or above the 95th percentile of the CDC sex-specific BMI for age growth charts (Ogden, C., Carroll, M., Kit, B., & Flegal, K., 2014). This is also your excess total of body fat.

Overweight: a BMI between the 85th and 95th percentiles (Ogden et al., 2014). Percentiles are represented by age specific growth charts.

Body Mass Index (BMI): is determined by you actual body weight divided by the square of your height in meters.

Hypertension: is defined as abnormally high blood pressure, normal blood pressure (BP) in adults can be defined as systolic BP <120 mm Hg and diastolic <80 mm Hg (Ferri, 2015)

Feeding style/ patterns: is defined as feeding practices or behaviors portrayed by the parent (Chaidez & Kaiser, 2011).

Anemia: is defined as a hemoglobin level 2 standard deviations below normal for age and sex. Iron deficiency anemia is anemia resulting from inadequate iron supplementation or excessive blood loss (Ferri, 2015).

Assumptions

It is assumed that the graduate students filling out the survey understood each and every question and answered them truthfully. It is also assumed that the participants didn't lie about the information that they were given on the survey. In order for this to happen it is then assumed that it will show red flags associated with feeding patterns that can lead to obesity.

Limitations

The sample size in this study is limited to Rowan Graduate Students only so this might cause problem in showing insignificant findings associated with lack of a large sample size. Since our sample size is convenient we will not be able to generalize to the general population. Also, we assume that we will be getting enough ethnic participants, specifically African Americans in order to show an increase and association between ethnicity and parenting styles. Each participant will fill out the questionnaire in its entirety not leaving out any questions by leaving them blank. This will cause a problem in data collection. For results of this study to become more useful, future studies using larger populations should look into tracking the child's height and weight to further prove an association between obesity and inappropriate feeding patterns to what was found in the current study.

Summary

A person's weight impacts many aspects of everyday life. Concerns related to physical health, psychological well-being, and general day to day functioning are seen in the popular and professional literature. One aspect to look into is feeding patterns and parenting styles associated with the rate of obesity. Along with these life threatening problems, obesity is prevalent in the African American community more so than other ethnicities. The literature that is reviewed gives the readers insight on what exactly they found to be important findings when looking into this problem. Specifically looking at the cultural, environmental and biological factors associated with this topic in the general population of adults and children to the adult and child population in the African American community along with the feeding patterns associated with this ethnicity as well. The following research will further show the different components that correlate with obesity and parental feeding patterns.

Chapter 2

Literature Review

Feeding Patterns and Parenting Styles of African Americans

Previous research conducted on feeding styles and patterns of adults have shown some clues as how a parent plays a key role in the etiology of childhood obesity (Chaidez & Kaiser, 2011). One strategy that is used when looking at obesity is to look at physical activity as well as parenting styles which includes authoritative, authoritarian, and positive reinforcement (Kitzman-Ulrich, Wilson, St. George, Lawman, Segal & Fairchild, 2010). Parent feeding styles refers to how the parent responds to cues that are given from their child when they are hungry (2011). Every parent is different when they are feeding their child these practices include the control that the parent has of the amount of food the child eats. As well as their mealtime environment, how well the child eats also including dietary intake of the child and what exactly is the child eating (2011). Parenting styles/feeding practices that are looked at include indulgent, authoritative and environmental influences (2011). Indulgent parenting (low demandingness/ high responsiveness) style/feeding practice refers to a child's wants and needs but offers little or no structure, expectations and discipline (Chaidez & Kaiser, 2011). An authoritative parenting (high demandingness/ high responsiveness) style/ feeding practice refers to a parent who provides structure and rule-setting, but is still mindful of the child's thoughts and feelings and are highly responsive to their child's eating cues and behaviors allowing them to participate in the feeding process, yet set limits and have clear expectations regarding the child's needs (Chaidez & Kaiser, 2011; Polfuss & Frenn, 2012). African American families have shown to use an increase in authoritarian feeding behaviors

which includes restricting and monitoring their child's food intake (Polfuss & Frenn, 2012).

Dietary intake for African Americans tends to fall short when looking at the proper recommendations for children such as, maintaining a healthy body weight, eating proper fruits, vegetable, whole grains and saturated fats (Odoms-Young & Fitzgibbons, 2008). It is linked that a low socioeconomic status of African Americans is associated with poor parental feeding patterns which can then lead to a risk for obesity. A child's dietary pattern can be very similar to their parents feeding strategies which then will affect them long term in their food preference (2008). With low SES in mind Thompson & Bentley (2013) stated that when looking at African American mothers they had said that when they breast fed their child that this would alter the perception of the idea of breast feeding their child due to the environment they were in. That this would then make their child not independent and too "lazy" and "spoiled" and would not be able to survive in such a low SES environment (2013). After analysis was done on this particular study Thompson & Bentley (2013) found that early feeding practices among low SES African Americans had lower levels of breast feeding and high levels of early solid foods and juice intake which led to age inappropriate feeing practices.

Parents choose what to buy for their children when it comes to eating, this includes what is purchased, prepared, and offered in their home (Harris & Ramsey, 2015). What parent's model to their children also has an effect on their eating habits and what is available to them. In a study on parental modeling by Harris & Ramsey (2015) looked at African American fathers where they were asked a series of questions

concerning what they had available for their children and found that paternal intake did have a significant effect on their children.

When a child is young their parents are the ones who are monitoring their food that includes how much they are eating, what they are eating and how often. So when looking at parental patterns of African Americans early feeding practices shape long term eating and health behaviors by teaching their children how, what and when to eat (Thompson & Bentley, 2013). The parents play a key role in early feeding patterns, which this then leads to larger micro and macro environments that shape the beliefs and practices of the individual (2013).

Definitions of Obesity/ Overweight

According to the NHLBI Obesity Education Initiative Expert Panel on the Identification, evaluation and treatment of obesity in adults (1998), obesity is defined as an excess total of body fat. The BMI (Body Mass Index) for an obese adult is more than 30 kg/M2. An obese child/ adolescent (2-19 years of age) is based off of a BMI at or above 95th percentile (Ogden, Carroll, Kit & Flegal, 2012). BMI is determined by your actual body weight divided by the square of your height in meters. Overweight is also another factor, the Centers and Disease Control and Prevention (2014), define it as having excess body weight which is due to a person's height from fat, bone, water, muscle or it can be a combination of all of them. Overweight in adults is calculated by a BMI greater than 25 to 30kg/m2 (Fleming, Robinson, Thomson, Graetz, Margono, Mullany & Gakidou, 2014). In adolescence/ children overweight is determined by a BMI between the 85th and 95th percentiles; percentiles are represented according to age specific growth charts (Ogden et al., 2012). Both obesity and overweight are said to be a

result of a caloric imbalance which is explained by too few calories used up for the amount of calories one consumes (2012).

Fleming et al. (2014), found that both overweight and obesity rose up to 27.5% in adults and 47.1% in children this was calculated from 1980-2013. When comparing back in 1980 the number of obese and overweight individuals was 857 million, in 2013 the amount increased to 2.1 billion (2014). Due to research today it is said that more than a third of the United States population is obese, it is predicted that in the upcoming years that it will rise to almost half 42% to 51% (Pruchno, Wilson-Genderson & Gupta, 2014). Being obese and overweight both are extremely prevalent today and some factors that are due to this include ethnic minority groups and individuals with a low socio-economic status (Jensen, Ryan, Loria & Millen, 2014).

Obesity in the Adult and African American Communities

Obesity in the adult community is becoming a serious issue and is increasing; today approximately 20% of adults at the age of 65 or older are obese and will continue to rise and more than 78 million adults in the United States are currently obese (Villareal, Chode, Parimi, Sinacore, Hilton, Armamento-Villareal, Napoli, Qualls & Shah, 2011; Jensen et al., 2014). As stated before obese adults were categorized by their body mass index (BMI) at the age of 20 years or older with a BMI greater or equal to 30 which then was split into 3 grades with grade 3 being the highest rate of BMI (Ogden et al., 2014).

Previous research by Ogden et al. (2012) found that obesity in adults has found a major increase in women. In 2003-2004 the obese percentage for women aged 60 years or older was 31.5% it then increased to more than 38% in 2011-2012. Compared to research conducted from 1980-2013 by Fleming et al. (2014) obesity percentages in

adults rose up to 27.5%. Not only is the adult community in the U.S. (developed) rising but also other countries are as well (developing), which gender plays a role in this rise such as males in developed countries are more likely obese whereas in developing countries woman are more likely to be obese (2014). Many of the studies previously done on adult obesity look at the different factors that are associated with one another. Such as Ogden et al. (2012) a study done on the prevalence of obesity in adults and children found that there was no increase in obesity on the total population in the U.S. but there was a significant increase in adult obesity aged 60 years and older.

When comparing adulthood obesity in the general population to the African American community research has found that it is growing. The predominance of obesity in the African American community exceeds that of Caucasian Americans by a significant margin (Kumanyika, Whitt-Glover & Haire-Joshu, 2014). Overweight and obese African American women is 1.4 times greater (66 %) than Caucasian women (47%) (Abraham, Kazman, Zeno & Deuster, 2013). The obesity prevalence from 1999-2000 and 2009-2010 was higher among black women than white women annually (Kumanyika, Whitt-Glover & Haire-Joshu, 2014). This population is among the highest alongside Hispanics in the Unites States (Mehta, Kruger & Sokol, 2011; Salsbury & Reagan, 2009). In the US National Health and Nutrition Examination Survey (NHANES) showed that 76.2% of African American adults aged 20 years plus compared to 67.2% of Caucasians had a BMI levels of 25 or greater (Ogden et al., 2012).

Obesity in General Population of Children and African American Children

Obesity in children aged 2-5 years has almost doubled in a year span from 5%-12.1% and tripled for children aged 6-11 years (6.5%-18%) and in adolescents aged 12-19 percentages jumped from 5%-18.4% (Hoelscher, Kirk, Ritchie & Sabo-Cunningham, 2013; CDC, 2014; Flegal, Tabak & Odgen, 2006; Dietz, 2004). BMI is one of the main denominators when defining obesity but it varies in children. For example, to screen if a child is obese the BMI varies due to the age of the child and then is compared to BMI of children who are not in the population based off of their sex and age (Flegal et al., 2006). In the development of a child being overweight there are two major periods to look at the prenatal period and adolescence (Dietz, 2004). By looking at these two periods it is said that an infant who is born heavier increases the risk to becoming overweight compared to an infant that is born with a low birth weight (Dietz, 2004; Huang, Lanza & Anglin, 2013). Also studies have suggested that up to 80% of children who are overweight will lead to becoming an obese adult (2004). Studies have found Ogden et al. (2012) recently in 2009-2010 that children and adolescents from the ages 2-19 that actually more boys (7 million) were obese than girls (5 million).

Some studies done on childhood obesity believe you should start with an early intervention program when the child is in preschool. One study did just this by looking a specific intervention program called the Head Start Center located in Mississippi. They looked at over 200 locations in the state so their sample size was extremely large. Harbaugh, Bounds, Kolbo, Molaison & Zhang (2009) found that 17.9% of the preschoolers were at risk and 20.6% were overweight. There are many advocates that are trying to reverse obesity in children and one of them is the Robert Wood Johnson

Foundation and they plan to do this by 2015 (Hoelscher et al., 2013). One study found that childhood obesity actually declined in children aged 2 to 5 years from 14% in 2003-2004 to 8% in 2011-2012 that's almost half (Ogden et al., 2014).

On the contrary, obesity in African American children in on the rise. It is more prevalent in African American children and is one of the highest in the United States (Davis, Young, Davis & Moll, 2011; Mehta, Kruger, & Soko, 2011). This could be due to many factors, such as environmental, genetics, or early onset in infancy. With the combination of their ethnicity, disadvantaged status, and inner-city-dwelling these all represent as to why this population is one of the highest in the US for the obesity epidemic (Mehta, Kruger& Sokol, 2011). Today 35.2 percent of non- Hispanic Black youths between the ages of 2-19 are overweight and or obese (Ogden et al., 2012). This has increased over the last decade the percentage of African American children has jumped from 10.7 percent to 19.8 percent (Ashcraft, 2012). There is a higher rate in adolescent non-Hispanic Black boys compared to non-Hispanic Black girls. Large new born African American infants aged 2-5 years are more likely to be obese in childhood than average newborns (Mehta, Kruger & Sokol, 2011).

Consequences Due to Obesity: General Population vs. African Americans

Obesity can be affected by multiple different factors in adulthood biological, social, and cultural. Culture and how an individual was brought up is another factor to take into consideration this as well ties into ethnicity. Obesity in adults' can lead to many risk factors such as, death, hypertension, diabetes among other health issues as well as what people are exposed to in their environment. One study found that liver cancer was associated with adulthood obesity (Berentzen, Gamborg, Holst, Sorensen & Baker,

2014). Back in 2010 it was estimated for 3.4 million causes of deaths were due to obesity (Fleming et al., 2014). A study done on the mortality rate of obesity found great significance in increased death rates among obese adults compared to adults who were not obese. It seemed to be greater in adults 45-64 years. (Borrell & Samuel, 2014).

In the African American community the list of risks that obesity causes are extensive including stress, depression, anxiety and eating disorders. Some of these are not just prevalent in African Americans but are straight across the board in every race. As stated earlier as well in obesity in adults, African American women primarily have a higher level of BMI which in turn leads to death (Sutherland, 2013). This race is more effected by diseases than compared to other cultures (40%) vs. Caucasians (14.9%) specifically in hypertension and more likely to result in death as well as other complications such as, type 2 diabetes, and stroke (2013). Hypertension is a greater health problem in African American adults than whites (Hudson, 2008). African American women are also prone having greater abdominal fat than Caucasian women (Abraham, Kazman, Zeno & Deuster, 2013).

Consequences Due to Obesity in General Population of Children vs African Americans

The Robert Wood Johnson Foundation (2014) found that if a child has obesity early onset it is said that it is associated with increasing their risk for type 2 diabetes, high blood pressure and other cardiovascular diseases such as sleep apnea, and asthma. When looking at hospital discharges, Dietz (2014) found, sleep apnea and gallbladder disease tripled among children aged 6-17. Previous research has shown that children who are obese and overweight are at a higher risk of developing hypertension, high expenditure,

high maternal BMI, rapid early infant growth, temperamental difficulties and hindered maternal sensitivity to infant cues (Worobey & Trytko, 2014; Hudson, 2008). Other researchers have found that low self-esteem and other psychological problems are linked to obesity (Young-Hyman, Schlundt, Herman-Wenderoth & Bozylinski, 2003).Some evidence suggests that parents play an important role in whether or not their child is obese or becomes obese. For instance, parents are the ones making their child food and controlling their child's portion size so if the child's portion size is too much than they are over-eating which can cause weight gain (WHO, 2014).

Additionally, childhood obesity often leads to adult obesity which increases the likelihood for future health problems. For instance, obese children are more likely to become obese adults, thus increasing the likelihood of adult disease, such as liver cancer (Berentzen et al. 2014). Childhood BMI (obesity) was significantly associated with the risk of liver cancer later in adulthood (Berentzen et al., 2014).

Now when looking at the children in the African American population these children are more likely to develop diabetes than non-Hispanic white children, the percentages compared to other ethnicities is tremendous. Forty nine percent of African American girls have the risk of developing diabetes verses 31.2 percent of non- Hispanic girls (Robertwood Johnson Foundation, 2014). African American children are more likely to develop diabetes than non-Hispanic White children, the percentages compared to other ethnicities is tremendous 49% of black girls have the risk of developing this vs. 31.2% of white girls (Robert Wood Johnson Foundation, 2014).

Biological Factors and Self Esteem Issues Associated with Obesity in General Population vs. African Americans

Biological factors must be taken into consideration when looking at both the general population and the African American community for obesity. Along with the biological part of looking into obesity a person's self-esteem as well takes a toll on an individual. Pachucki, Lovenheim & Harding (2014) compared relationships within the family associated with obesity. The only child of obese adults is 2.2 times more likely to become obese. Additionally, when both parents are overweight and or obese, the likelihood of their child becoming obese also increases (2014).

Young-Hyman et al. (2003), looked at many aspects that were affected by children who were obese, one in particular that stood out was how African American children have lower self-esteem when their parents target them as overweight/obese and they found this to be significant. Another study on this topic Ashcroft (2012) as well surveyed African American boys about how they felt about being obese/overweight and got different responses such as "It's just me, who I am?", "I'm confused and I feel bad", "Something bad might happen", and It don't mean nuthin". In these responses these children are aware that it could lead to future health problems as well as they have lower self-esteem because of it. This affects them in their everyday lives. Related to self-esteem, depression is also associated with obesity in African American children. A study done previously by Davis et al. (2011) found 83% of parents reported that their children were overweight and that when asked about their acceptance of being overweight on a scale of 1-10 (10 being the most non-excepted) they scored 7 or higher. The children's average weight was

152.41 which was considerably high for the simple fact that they were at the age of 10 (2011) and approximately 33% of displayed signs of depression.

Environmental Factors Associated with Obesity: General Population vs African Americans

These particular studies look at the physical activity of the individual communities as well as their environment that they live in and what resources they have available to them. Physical activity is a major component in the rising of obesity and the lack of activity is a leading reason to the rise in obesity in the African American and Hispanic communities, especially in women and is the fourth leading cause of death in the world (Abraham et al., 2013). African Americans are less likely to be physically active than Caucasian Americans and they have less leisure time activity, fewer hours spent standing per day (2013). Physical activity is found to be lower in African Americans particularly in females compared to males (Odems-Young & Fitzgibbons, 2008). Aerobic fitness is also important in the development of obesity, if a person works out more they are less likely to develop obesity than if they did (2013).

Physical activity as well as in adults too does play a considerable factor of obesity in children as well. The relationship between the two obesity and physical activity in children indicate that low activity can be a contributing factor to obesity (Thomas, 2006). This activity decreases as the children get older from 1.8 % to 2.7% per year for boys and from 2.6% to 7.4% for girls (Kohl & Hobbs, 1998). With physical activity being a factor when a parent feels it is unsafe for their child to go outside because of the environment they live in this also plays a role in obesity, having their child take part in secondary activities such as TV, video games become first (Hudson, 2008).

Now with physical activity playing a part in the risk factors associated with obesity, advertising in the communities also is taken into consideration when looking at obesity as well as what is available to them. Pruchno, Wilson-Genderson & Gupta (2014) looked at the effects a neighborhood that an adult lived in and their local food environment (i.e. convenient stores, bars and pubs, fast-food restaurants and grocery stores) and how that contributed to obesity. In this particular study Pruchno et al. (2104) found that after doing statistical analysis food environment and adults with a mean age of 60.7 showed significance with one another. Advertisers target specifically African American children in their neighborhoods. In an article on the matter they found that fast food chains in a predominately African American neighborhood were 60% more likely to advertise to children than white neighborhoods (Ferdman, 2014).

When talking about obesity as whole, affecting everyone it as well is a result due to environmental influences (Kumanyika, Whitt-Glover & Harie-Joshu, 2014). This includes how television and outside factors specifically target the African American communities when advertising certain products. The repeated and high, when compared to Caucasians, exposure of African American children and adults to ethnically targeted advertisements and promotions for high calorie foods and beverages and inactive forms of entertainment may effectively drown out health positive advice (Pwell, Szczypka & Chaloupka, 2010; Grier & Kumanyika, 2008; Yancey, McCarthy, Cole & Williams, 2013; Grier & Lassiter, 2013). Fast food and candy advertisements are greater in TV programs that focus on African American prime time TV audiences and they have twice the number of food commercials (Hudson, 2008). Exposure to food advertisements per day among African American youths ages 12-17 increased by 5.2% from 2003-2007

(Robert Wood Johnson Foundation, 2014). Lastly, the study done by Huang, Lanza & Anglin (2013) among the several factors that were looked at and researched in their study they also found that when a child aged 10-14 watched more television (nine hours) compared to a child who watched less than two hours a day was found to be more likely obese.

Socio-economic status as well plays a role when looking at the environmental factors associated with obesity. In the African American community research found that these children are more likely to live in poverty than other children which places these individuals at risk (Lutfiyya et al., 2008). The neighborhoods are factors with these children and socioeconomic status all play a part in the obesity prevalence in the African American communities. Income impacts childhood BMI in these two specific ways: unsafe neighborhoods and the cost of accessibility of healthy foods in low –income communities (Lutfiyya et al., 2008).In the 2009 Youth Risk Behavior Survey revealed that African American children 32.1% did not participate in physical activity as well as 30.4% used the computer more than three hours a day, 55.5% watched more than three or more hours of television a day, 33.7% of them drank a sugar-sweetened carbonated beverage at least one time per day, and lastly, 73.4% consumed fewer than 5 servings of fruits and vegetables (Eaton, Kann, Kinchen, et al., 2009).

Cultural Influences on Obesity in African Americans

Culture has a big influence on every ethnicity, not just African Americans, but when it comes to obesity in this culture research has found some interesting associations between the two. This includes one's parenting styles and how they are raised. For example, Parenting styles related to feeding practices have an impact on a child's dietary

intake and food preference (Knowlden & Sharma, 2013). Specifically, looking at the feeding styles and behaviors of the parents with their children when they are born in their first years of life. Parental breastfeeding and length of the feeding are significant when looking at a child's body mass index (Davis, Young, Davis & Moll, 2011). Perrin et al. (2014) looked at all these contributing factors and found that parents caring for their 2 month old infants had a high frequency of behaviors that may increase their child's risk for obesity. They found that African American parents were more likely to encourage their child to finish eating their breast milk when feeding (2014) as well as they were more likely to put their child to bed with a bottle at least once a day (37 %). African American parents (35%) were more likely to prop their child's bottle during feeding time compared to Hispanic parents (20%).

Again in previous studies and statistics when linking the amount of television watched was a factor in obesity this study found this to be true as well. African American parents 68% reported that their infants watched TV 546 minutes per day (Perrin et al., 2014). This specific research shows considerably how much the parent puts their child at risk for obesity doing all of these things. While the parents both can play a role in increasing the risk for their child to become obese the mother themselves have a big impact on their child especially when they are pregnant. The food that they eat and drink all those nutrients or lack of go right to the baby. So with that in mind these factors can increase the risk for their child to become obese in many different ways. A higher maternal weight before the pregnancy and smoking during were found to be associated with the likelihood of adolescent obesity (Huang, Lanza & Anglin, 2013; Mehta, Kruger & Sokol, 2011). The age at which the mother had the child at was also a risk associated

with an increase in obesity in their child. Such as, children born to mothers (25-29) years of age had an increase in obesity at age 10 compared to children who were born to younger mothers (2013).

Another point that studies have found as to why obesity is more prevalent in the African American community is that their culture is more accepting of the fact. African Americans value the weight of their women and embrace the curves and full bodies of them. Within the community women are viewed as attractive, smart and sexy (Sutherland, 2013). They also have higher levels of self-esteem associated with being overweight/obese (2013). It is likely that these perceptions of women in the African American community about their body size may have an impact on the prevalence of obesity in this ethnic community (Robinson, 2008).

Purpose

With all of these studies that have been conducted on the obesity epidemic in the world and with all of their findings that have been very influential for future research there have been limitations to the studies. Such as, too little sample size, not enough evidence to support their theories, or what they hypothesized was not significant at all. One aspect that has not been addressed is when exactly does the child show early onset signs of obesity. This specific study will look at that exactly by reviewing surveys of the parents and how they answered the questions of these individuals specifically looking at African Americans and comparing them to other minority groups as well as looking at the parenting styles and how that will affect the outcome of their child. We will be comparing this particular group and seeing how the parents feeding patterns affect the outcome of their child and if there is a relation to parenting styles and feeding practices.

Chapter 3

Methodology

Participants

The current study involved 24 graduate students of 4 year public university. Four of the participants were Hispanic, ten were Caucasian, and ten were African American. Of these participants they were all selected randomly and voluntary in their graduate courses on campus. To be included in the study, participants also needed to sign the informed consent. Respondents did not receive any incentive or compensation for their participation. These participants were asked to reflect back and write down their child's age, gender and ethnicity. If the participant was not a parent they were then asked to reflect back to the earliest they could remember as to when they were a child. They then answered the questions to the best of their ability to reflect that of their parents' parenting styles.

Materials

Collection of this data took place over a course of a week on campus during the spring of 2015. Parents of the children were given the TFQ to fill out to reflect back to their child or children. The children ages ranged from birth to 11 years. The survey they were given was based off of the survey that was used in the study by (Chaidez & Kaiser, 2011). There were 34 questions that they had to answer which pertained to their feeding practices and parenting styles associated with their child. The questions ranged from answering on a scale of 1 to 5, one being never have done to 5 being always. The last three questions that the participants answered were different than the others they were on a 1 to 5 scale but one being "not too important" and 5 being "Important, and I am

confident I do this well". The questions that were answered in the survey reflected that of parental goals pertaining to their child or when they were one. These questions were scored based on their answer with the first question pertaining to preventing anemia, the second pertained to maintaining a healthy weight for their child and the last question pertained to feeding their child foods that made him or her happy.

The main focus of the survey was to assess feeding practices and patterns of parents. The survey was scored based off of the four feeding practices that we came up with of Indulgent, Authoritative, Promoting Sweets, and Environmental Factors. Each of these categories parenting styles had seven questions that fell under each of these categories. For example, an Indulgent question from the survey included "I give my child foods that he/she likes". An indulgent feeding practice reflects a caregiver style that caters to their child and offers little or no structure (Chaidez & Kaiser, 2011). For an example of an Authoritative parenting style "I encourage my child to eat foods even if he/she does not like them. An authoritative style reflects a caregiver that offers structure, guidance and positive modeling of eating behaviors (Chaidez & Kaiser, 2011). As for a question pertaining to Promoting Sweets "I give my child fruit juice when he/she is thirsty". Lastly, an example of an Environmental question is "I limit outside playtime because I worry about my child's safety". Environmental influences refer to factors that include family eating cues and household food accessibility (Chaidez & Kaiser, 2011). Lastly, the last 3 questions of the survey pertained to parental goals which were how important and confident the person felt in feeding or have being fed these foods. Refer to Appendix for the survey.

Design

It was hypothesized that eating patterns will show a reflection in ethnic differences. It is further hypothesized that eating patterns will relate to parenting styles and gender differences will be found. The dependent variables that were measured were the gender and ethnicity. These were both measured by the demographic questions that were first answered by the participants. The independent variables were the parenting style and feeding practices. These were both measured by the survey questions that were answered by the participants. The data that was analyzed used a one -way analysis of variance (ANOVA) when comparing ethnicity to parenting styles and feeding practices and a bivariate correlation when comparing parenting styles and feeding practices.

Procedure

The participants were given a survey to fill out concerning their parenting styles and feeding practices. These participants were asked to reflect back and write down their child's age, gender and ethnicity. If the participant was not a parent they were then asked to reflect back to the earliest they could remember as to when they were a child. They then answered the questions to the best of their ability to reflect that of their parents' parenting styles. The data collection took place over a course of a week on campus. There was no harm to the participants who participated in the study. The survey took participants about 10-15 minutes to fully complete. After they finished the questionnaire all the data was then collected and then marked, scored, put into SPSS statistical software and analyzed. Analysis of variance (ANOVA) was used as well as a bivariate correlation when comparing parenting styles and feeding practices.

Chapter 4

Results

The current study explored the feeding practices and parenting styles of African Americans, Hispanics and Caucasians, specifically with regard to an association between ethnicity, feeding practices and parenting styles. After performing statistical analysis of a one way analysis of variance (ANOVA), no ethnic differences were found in the response to the Toddler Feeding Questionnaire. This meant that there was no significance when comparing ethnicities to parenting styles. There was a significant positive correlation 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 illustrates this as follows.

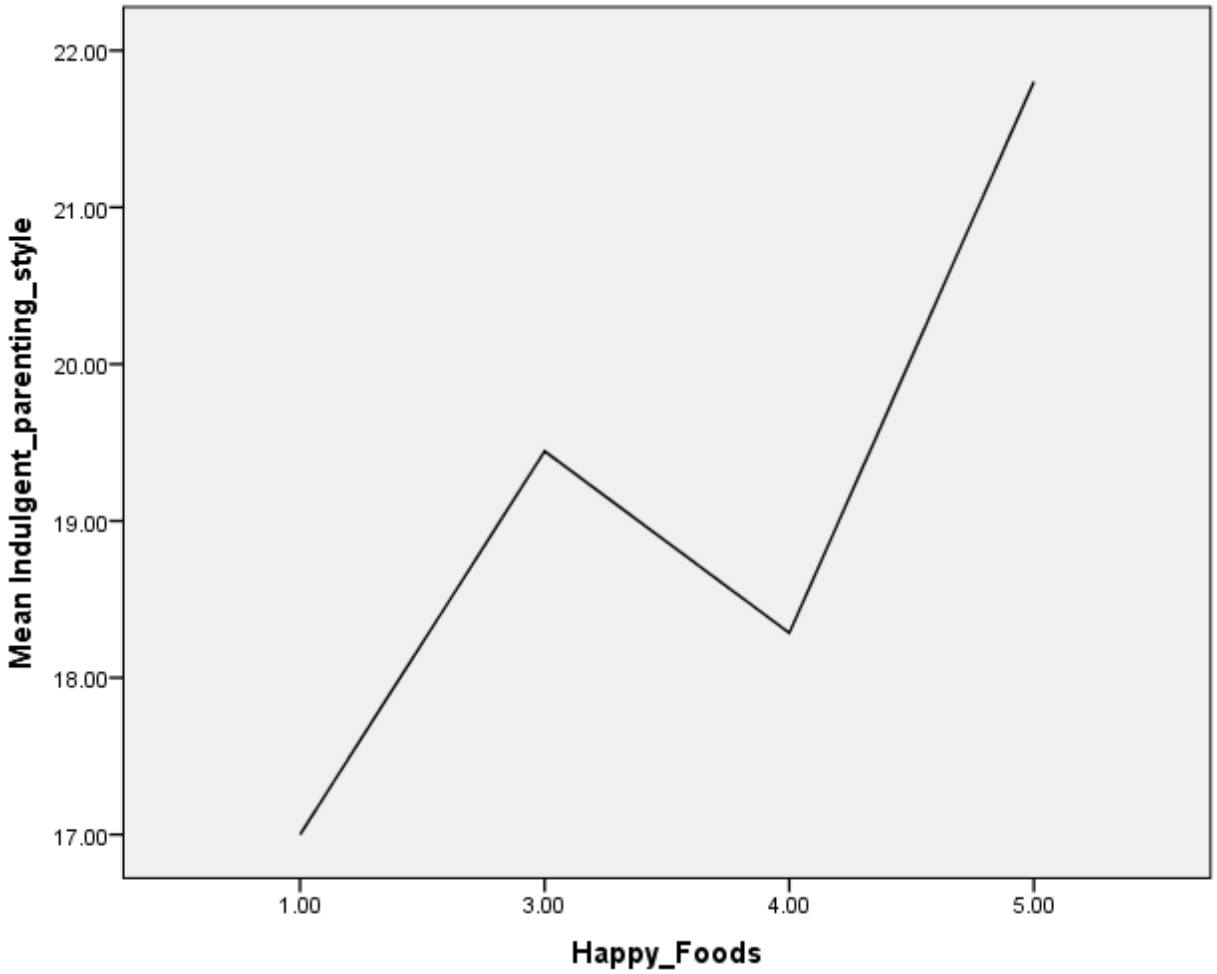

Figure 1. Comparing a correlation between indulgent parenting styles and happy foods fed to child.

There was a significant negative correlation amongst parents that promote sweets to their children and parents that feed their child foods that maintain a healthy weight. This implies 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 from the participants that scored between a 3-5 for "feeding their child foods that maintain a

healthy weight" scored lower for "promoting sweets to their child." Figure 2 illustrates this below.

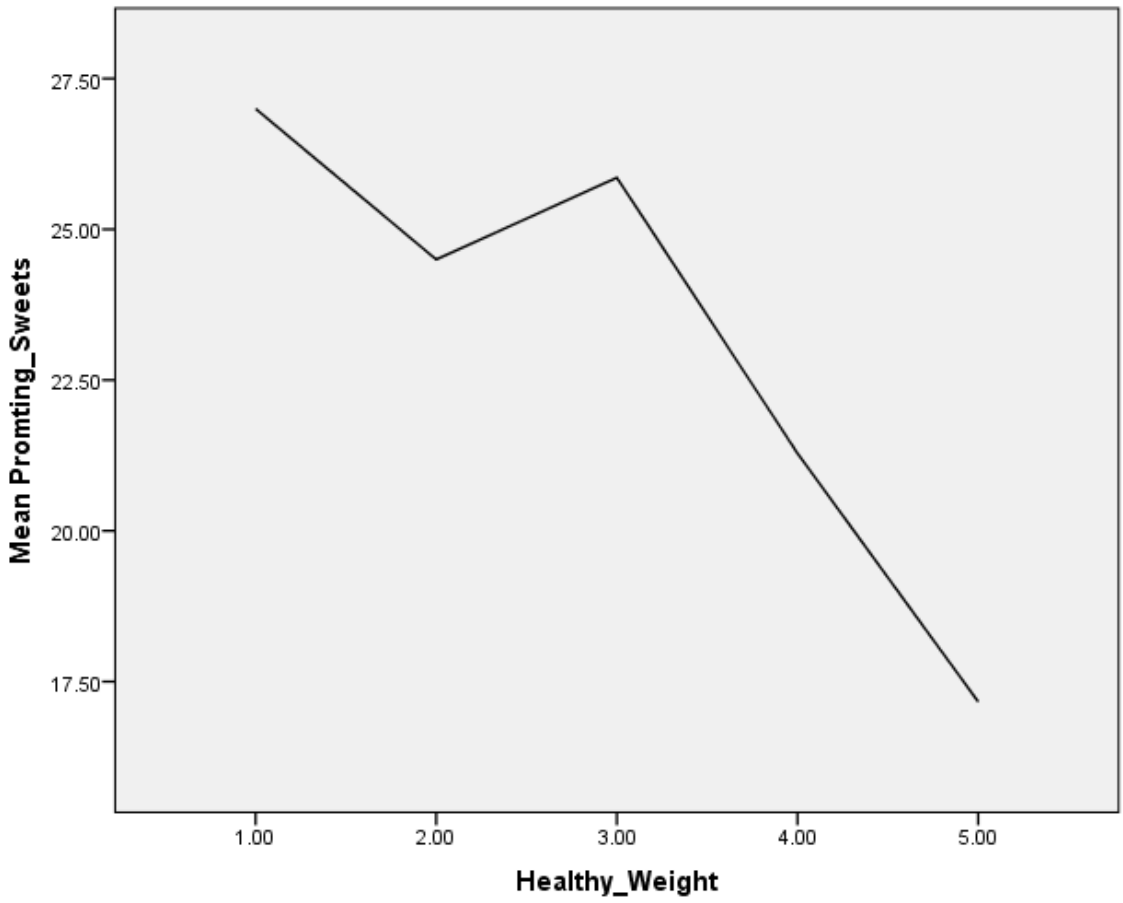

Figure 2. Comparing a negative correlation between parents promoting sweets to maintain a healthy weight

Chapter 5

Discussion

The purpose of this study was to find out if when assessing parental feeding patterns and parenting styles of African Americans that they would show a correlation between the variables that possibly would also indicate a rise in the obesity epidemic. It is hypothesized that eating patterns will reflect ethnic differences, specifically African Americans. It is further hypothesized that eating patterns will relate to parenting styles of this specific ethnicity. It is also hypothesized that gender differences will be found as well. In the study there was 24 participants that were analyzed, of the 24, 4 of the participants were Hispanic, 10 were African American and 10 were Caucasian. The data was analyzed through the SPSS statistical software.

Even though, there was not a correlation between ethnicity and parenting styles and feeding patterns like we had hoped for there was some significance in our findings. It was found that there was a positive correlation between parenting style specifically indulgent and feeding practices, more so, foods that make a child happy. There also was a negative correlation between parents that promote sweets to their child compared to maintaining a healthy weight for their child. This specifically means that a parent is concerned with maintaining a healthy weight for their child based off of the foods that are given.

Explanation

It was predicted as stated earlier that we were hoping to find a correlation between ethnicity and parenting styles/ feeding patterns. Instead we did not find significance in these variables. I think a lot of the problems that were associated with not finding what

we had anticipated had to do with the collection of the data. We had not collected enough participants as hoped for to be able to compare ethnicities. As well as there was a problem in the reliability in the participants specifically pertaining to filling out the survey. Some left pages blank which in turn could not be used in the subject pool, as well as the main focus of demographics left the first three lines asking "gender, ethnicity and age" blank. So this affected our hypothesis and data collection greatly.

Compared to the study by Chaidez & Kaiser 2011, they used this same Toddler Feeding Questionnaire which we based our study off of, but they looked specifically at the Hispanic population and conducted their study over the course of 6 months. Their sample size was much larger specifically 94 women compared to the twenty four in the current study. The 24 participants that were collected for the study lacked a non-representative sample size. They also had participants write down their child's height and weight. If this method was integrated into the current study it more specifically would correlate to associations between feeding patterns and obesity.

Implications

The current findings imply that parenting styles can influence feeding practices for their child, specifically an indulgent parenting style and feeding their child foods that make him or her happy. As well as parents who are concerned with their child's weight do not promote them to eat foods such as sweets. This helps the general population to understand the dilemma between certain parenting styles and feeding practices. For further investigations researchers should look at more specifically when the parent introduced certain foods to their child early on and at what age. By including this in the research, future studies can pin point when and how this can affect the child and possibly

show if there is a significance between the two. If parents offer solid foods too soon or early onset this could be influencing the negative affect of weight gain in the child. Fein, Labiner-Wolfe, Scanlon, & Grummer- Strawn, 2008 support the idea that introducing certain foods to a child early in the first year of life can imply both short term and long term implications. As well as what type of food that is being fed to the child and how early the child is being transitioned from milk to breastmilk or to the types of solid foods and beverages. Gibbs & Forste, 2013 found that when mothers introduce solid foods before the age of 4 months that this is increased with weight gain in infancy and early childhood.

Limitations

Due to the small sample size of 24 participants this affected the study greatly. This made it difficult to generalize to the current population. Also, when given the time to hand out the surveys data should have been collected over a longer period of time, which this then could have affected our sample size and possibly increased. The size of the population being looked at was gathered from only graduate students at Rowan University, this affected the findings as well. If there were more participants of ethnic background specifically, African Americans this would have made comparison and could possibly showed a significance between ethnicity and feeding patterns. Also, participants did not fill out the questionnaire fully which affected the outcome of the study. Those who did not fill out the survey in its entirety were unable to be compared with the other populations.

Future Directions

When looking further into this specific topic of feeding practices of African Americans, researchers should look into adding height and weight of the child in the survey. This would possibly show a significance between ethnicity and an association with obesity. More specifically, researchers could conduct just looking at African Americans and not the general population and other minority groups. As well as looking at the course of the child over a year instead of having participants refer back to when they were a child and or if they had children. If all of these factors were modified and taken into consideration, the outcome of the data could have shown a significant association between negative feeding practices associated with African Americans.

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Appendix

Toddler Feeding Questionnaire

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

Version #: 1
Version Date: 3/22/15

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

Version #: 1
Version Date: 3/22/15

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 5

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

1 2 3 4 5

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

1 2 3 4 5

Version #: 1
Version Date: 3/22/15