5-8-2015

A Comparison of Nutritional Health among Parent-Child Dyads Living in Rural Settings

Molly Geissler
The College at Brockport, molly.geissler@gmail.com

A Comparison of Nutritional Health among Parent-Child Dyads Living in Rural Settings

A Senior Honors Thesis

Submitted in Partial Fulfillment of the Requirements
for Graduation in the College Honors Program

By
Molly Geissler
Nursing Major

The College at Brockport
May 8, 2015

Thesis Director: Dr. Susan E. Lowey PhD, RN, CHPN, Assistant Professor, Nursing

Abstract

Obesity in the United States has become the most widespread nutritional disease affecting adults, adolescents and children. Statistics show that one-third of all children and adolescents living in the United States are either overweight or obese. The need for interventions to reduce obesity during these critical childhood and adolescent years is crucial in the effort to stop it from continuing on into adulthood. The purpose of this project is to investigate the parental perceptions of their child's weight and apply the information to rural areas. By using a review of literature, data will be analyzed about both parental perceptions and the unique challenges of living in a rural community. Findings from this study will help to identify areas that warrant improvement in nutrition and healthy lifestyles for adolescents. In order to design interventions, we must first begin to understand areas that parents and their children perceive to be problematic in regards to healthy eating and weight.

Introduction

Obesity in the United States is a rapidly growing epidemic that is affecting an increasing number of Americans every year. It is considered the most widespread, preventable nutritional disease of the twenty-first century that not only affects adults, but also adolescents (Byrne, Nauta & Wesley, 2009). An adolescent is defined with many different age ranges but the general consensus is a person between 7 to 21 years of age (Cassata, Keeney & McElmurry, 2004). The prevalence of obesity has tripled since 1980 with no indication of the rates reaching a plateau (Lee & Seo, 2012). One out of every six adolescents is obese and one out of every three is at risk for developing obesity (Peterson & Schwartz, 2010). The need for interventions for adolescent obesity is crucial in the effort to stop it from continuing on into adulthood. Statistics show 70-80 percent of obese adolescents will remain obese as they continue into adulthood (About Child Obesity, 2014). One study found that 85 percent of children who were overweight at ten to fifteen years of age were obese as adults at age twenty-five (Peterson & Schwartz, 2010).

The consequences of being overweight in youth are not only in the physical aspect but also socially, mentally and emotionally (Birchmeier, Kotula, Sass-DeRuyter & Riesch, 2012).To prevent obesity and its associated problems before it reaches adulthood, behavior modifications and interventions need to be introduced at a young age. Parents and caregivers of the adolescents are the biggest influences in their lives in creating a healthy environment (Danford & Marvicsin, 2013). Therefore, their perceptions of the habits of adolescents are crucial in guiding them towards a healthy lifestyle (Hearst, Klein, Lytle, Pasch & Sherwood,

2011). By establishing a set of behaviors that includes healthy eating habits and activity levels, they can help adolescents maintain a healthy weight (Hearst, Klein, Lytle, Pasch & Sherwood, 2011). With parents playing such a crucial role in the health status of an adolescent, it is essential for them to be able to correctly identify issues with not only the weight of the adolescent but also of themselves and the contributing factors creating the problem. Contributing factors can include but are not limited to the parent's own personal habits, such as eating and activity and the surrounding geographical environment.

Due to the fact that little progress has been made in the reduction of obese adolescents, more research needs to be conducted (Birchmeier et al., 2012).One way to address this problem is to is to find out information about parents of adolescents and their surrounding environment. The main focus of this thesis is a comprehensive review of literature pertaining to the perceptions parents have about their adolescent's weight and the factors that influences these views. Parental perceptions are a significant factor to include in the research on adolescent obesity because if the parents cannot recognize a problem, no effort to reduce weight or engage in a healthier lifestyle will be made (Hearst, Klein, Lytle, Pasch & Sherwood, 2011). Furthermore, one specific influencing factor that will be closely examined is how the geographic area that the parent-adolescent dyad resides in can influence perceptions. For this thesis, rural communities will be the primary focus based on their unique needs and features. By examining the details of rural communities and how they can attribute to adolescent obesity, in combination with examining and understanding parental perceptions in general information

can be applied to the unique needs of the geographical location. As a result, precise and detailed information can be provided to use to in the effort to reduce adolescent obesity. Insight provided by this literature review can be used by medical professionals in an effort to better understand the rising trend adolescent obesity.

Significance of the Problem

Obesity in adolescents is a problem of great significance. Being obese during adolescence increases the risk to experience many health problems. The increasing trend in adolescent obesity leads to a rising number in adolescents who suffer from conditions such as type 2 diabetes, high blood pressure, high cholesterol and nonalcoholic fatty liver disease (Lee & Seo, 2012). Furthermore, there is an increased risk for bone and joint problems, sleep apnea and also the psychological and social problems associated with being obese (CDC, 2014). Psychological and social problems include poor self-esteem, bullying by peers and lack of a peer group during adolescent years (Lee & Seo, 2012). Eating disorders, anxiety and depression have been reported in adolescents suffering from these problems as well (Bradlyn, Harris, & Moore, 2012). Many of these will continue on into adulthood as Lee and Seo (2012) state that obese adolescents are more likely than their non-obese peers to become obese adults. With such an early onset of significant health problems at a young age, these conditions increase the risk of serious problems such as heart disease, cancer and stroke as they age as well (Adamson et al., 2014). The early onset of psychological and social problems can also

continue on into adulthood. Adolescents who suffered bullying and poor self-esteem at a young age are more vulnerable to suffer from depression, anxiety and other psychological disorders as adults as the abuse continues during their lifetime (Lee, Lee & Harris, 2013).

There is also a significant increase in disability and unemployment usage throughout the United States which can be attributed to the increase in obesity. Based on the health problems associated with obesity, more and more diagnosed with the condition are finding that they unable to function in a way to be productive in the workforce (National League of Cities, 2014). Even if able to work, it is estimated over $117 billion dollars in lost wages are accounted for each year directly related to obesity in the workforce due to the higher rate of injury and accidents (National League of Cities, 2014). Due to the increase in disability and unemployment benefits attributed to obesity, this is also a greater cost to the nation. Businesses are often suffering due to job absenteeism from obese employees, costing $4.3 billion annually with these costs continuing to rise as well (National League of Cities, 2014).

The great significance of adolescent obesity is further supported by more financial facts as well. The National League of Cities (2014) states that obesity within the United States cost $190.2 billion annually; nearly 21% of the nation's medical spending. Childhood and adolescent obesity alone accounts for $14 billion in direct medical costs (National League of Cities, 2014). Medical costs related to obesity are expected to rise as the obese adolescents of today become tomorrow's obese adults. In ten of the nation's cities with the highest obesity rates, the direct cost of obesity and obesity-related disease is approximately $50 million per

100,000 residents (National League of Cities, 2014). If these cities were to cut their obesity rates down to the national average, it is estimated each community could have a combined savings of $500 million in direct health care costs annually (National League of Cities, 2014). Increasing obesity rates also affects the nation's ability to protect itself (Peterson & Schwartz, 2010). More than 25% of adolescents between the ages of 17-21, eligible to enroll in military services, are not able to due to the fact that they do not meet the required weight thresholds (Barry, Gollust & Niederdeppe, 2013). With a decline in people eligible to participate, the military often finds itself struggling with recruitment and maintain a healthy flow of men and women entering and leaving the service (Peterson & Schwartz, 2010).

These facts lead to the conclusion that being obese in adolescence is a significant problem that can persist into the future, causing a plethora of issues in different areas throughout the nation. By stressing the diverse consequences of adolescent obesity and the severity of those consequences, there is an emphasis on the need for change. In order for change to occur, specific factors contributing to the problem need to be identified and reviewed. The significance of the issue emphasizes the need for current research to be reviewed in this thesis. Synthesizing the current research with specific geographical locations and their unique needs can provide insight on specific factors contributing to adolescent obesity and how to modify them. The purpose of this thesis is to take the research of the geographical locations and synthesize the parental perception data currently available in order to provide insight into this significant problem.

Body Mass Index

With excess body fat attributing to many health and financial problems, it is important to have a standardized system of measuring adolescents' amount of body fat in order to determine if they are considered obese. The Body Mass Index, or BMI, is the tool used within the United States and throughout the studies within this literature review. According to Peterson & Schwartz (2010), obesity is measured by using the BMI tool which provides a number determined by a person's height and weight that is a reliable indicator of body fatness for most adolescents. A person with a BMI less than 18.5 is considered to be underweight, from 18.5 to 24.9 is normal weight, from 25.0 to 29.9 is overweight, and greater than 30.0 is obese (Peterson & Schwartz, 2010). Being at this level puts them in or above the 95th percentile, a common statement used to classify obese adolescents in research studies. Having an age and gender specific BMI for adolescents is important due to the changes over the years as they grow and the differences between males and females (Peterson & Schwartz, 2010).

Method

In order to collect information for this review of literature on adolescent obesity and parental perceptions, research articles were collected through online databases. Between November 2013 and Jun 2014, articles were reviewed and chosen to be used for the review. MEDLINE databases, CINAHL Plus and Health Source: Nursing / Academic Edition were the online databases used to search for scholarly articles. Specific keywords were used to locate articles to use such as "adolescent obesity". These keywords were paired with either "parental perceptions" or "rural communities" based on the need for data.

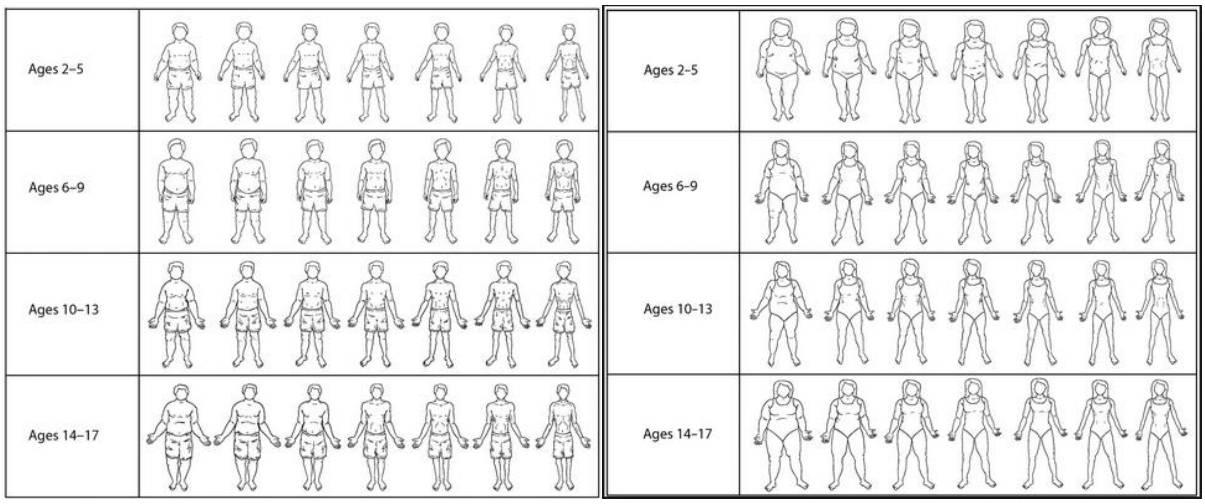
Selecting articles was done based off of specific inclusion criteria. Three main inclusion criteria were chosen based on the need for this research. Articles had to have at least a population in the study being in the age range for adolescents. The other two inclusion criteria were either the study was based in a rural location or the article focused on parental perceptions of weight and influencing factors. Exclusion criteria for this project were articles that were not peer reviewed or editorials.

After using databases and keywords to find research articles, a total of 37 were found to meet the inclusion criteria. Further elimination was conducted based on the findings of the study and significance of them. In total, fifteen articles were analyzed and reviewed for the purpose of this literature review.

Parental Perceptions

Parental perceptions are one of the key factors studied when researching adolescent obesity. Parents are part of the focus in determining if changes need to be made and deciding on interventions. Since they influence what their child eats and the activity they receive, it is important to understand if they can accurately assess their child's weight and recognize the need for change in their lifestyle. The first aspect studied with parental perceptions is their ability to correctly identify and recognize their child as obese based off physical features. Next, it needs to be known if a parent can adequately assess their child's diet and exercise amounts and their own habits as well. Finally, it needs to be assessed if a parent knows about their surroundings and environment and if it can provide the resources they need.

One way for parents to identify and recognize their adolescent as obese is through the physical characteristics of them. Body type and overall appearance can be some of the features parents use to evaluate their adolescent. A study entitled "Parents' Perceptions of Their Child's Weight and Health" primarily focus on physical features of adolescents (Ariza, Binns, Eckstein, Mikhail, & Millard, 2006). Parents of children aged up to 17 years old were provided with a survey asking questions about the physical features of the adolescent. The group of participants had their BMI's calculated in order to compare the perceptions of their weight category by their parents to their actual weight category. The first question assessed the parent's perception of their child's weight by asking the question "I feel as if my child is…" with response options of: underweight, a little underweight, about the right weight, a little overweight or overweight (Ariza, Binns, Eckstein, Mikhail, & Millard, 2006). For the purpose of this study, the term overweight is considered to be at or above the 95^{th} percentile in weight, or what classifies to be obese based on the BMI scale. Parents were also provided a chart with sketches of boys or girls (below) and told to circle the figure the most represented their child based on gender and age. This chart provides direct assessment of physical features of adolescents.



Ariza, A., Binns, H., Eckstein, K., Mikhail, L., & Millard, S. (2006). Parents' perceptions of their child's weight and health. Pediatrics, 117(3), p. 684-685.

Other questions included in the survey included medical conditions that could contribute to limitations of the child, such as in growth or physical activity. This was for the purpose to eliminate any data that could skew the final result as to why an adolescent is obese unrelated to diet and exercise. A final two questions one the survey asked the parent's if they had any concern about the health effects of their child's weight status and the importance of parents as a role model based on the importance of parental influence in youth's lives. Results of this study disclosed that few parents of overweight, or greater than 95th percentile weight status adolescents, felt that there child was overweight or expressed worry about their child's weight (Ariza, Binns, Eckstein, Mikhail, & Millard, 2006). Most parents circled a level three sketch figure, which falls under the category of "about the right weight" for this survey, despite the high amount of participants in the greater weight categories. However, the results from the sketch assessment more sensitively assessed the child's BMI than did the parental report by

words (Ariza, Binns, Eckstein, Mikhail, & Millard, 2006). This provided a better understanding of a parent's ability to identify physical features. Finally, most parents felt that they were a heavy influence on their child's life based on their status as their primary role model (Ariza, Binns, Eckstein, Mikhail, & Millard, 2006). Overall, this study concluded that the parents in this study had low recognitions of their child's overweight status based on physical features. With their low recognition there was low concern for the adolescent's weight as well.

Literature suggests that the surrounding environment can influence how a parent perceives their adolescent's weight. Researchers conducting a study called "Parental Perceptions of Their Adolescent's Weight Status: The ECHO Study", focused on just this. This study consisted of 375 parent-adolescent dyads and collected data on individual adolescent and parent level, such as demographics, weight, perceptions, eating and activity, as well as information about their home environment, school environment and neighbor or physical environment (Hearst, Klein, Lytle, Pasch, & Sherwood, 2011). After calculating both parent and adolescent BMI, the study went on to analyze the results of the survey. Similar to previous research, results concluded that parents do not consistently recognize when their adolescent is obese (Hearst, Klein, Lytle, Pasch, & Sherwood, 2011). Less than 50% of the parents surveyed were able to correctly classify their adolescent as obese based on their calculated BMI (Hearst, Klein, Lytle, Pasch, & Sherwood, 2011). Furthermore, mothers in the study were only able to correctly report their adolescent's weight 21% of the time and overweight parents were more likely to underestimate their adolescent's weight as well (Hearst, Klein, Lytle, Pasch, &

Sherwood, 2011). A gender bias was also found, where adolescent boys were more likely to be classified by their parents in a lower weight class than were adolescent girls (Hearst, Klein, Lytle, Pasch, & Sherwood, 2011). Parents were surveyed on their own eating and activity habits as well. The study found that while most rated their diet as "average" or "healthy", most stated that their activity levels were not meeting the standard requirements (Hearst, Klein, Lytle, Pasch, & Sherwood, 2011). The environmental questions asked on the survey about home, school and their neighborhood were also analyzed as part of the study. The participants could select dissatisfied, neutral or satisfied for all types of environments. Approximately 56% selected dissatisfied in all three categories, indicating other problems influencing them that could be contributing to their issues with weight and weight identification. A limitation was that no further explanation to the dissatisfaction was addressed (Hearst, Klein, Lytle, Pasch, & Sherwood, 2011). The final conclusion of the study stated the importance of parents being able to correctly identify if their adolescent is overweight, identifying needs in the community and influencing factors that could help to motivate and educate families to provide healthy environments and healthy changes (Hearst, Klein, Lytle, Pasch, & Sherwood, 2011).

Another area of literature contributing to the research parental perceptions and adolescent obesity focused on parenting styles. These studies aimed at targeting how different parenting styles influence the BMI of the adolescent and the parental recognition of obesity. Research conducted by Danford & Marvicsin (2013) in "Parenting Efficacy Related to Childhood Obesity: Comparison of Parent and Child Perceptions" suggested that by examining

efficacy of parents, factors that influence an adolescent's BMI could be determined. The rationale for this study was "if a parent is able to set limits and boundaries easily with their child then it seems they could also structure the eating and activity environment in the home" (Danford & Marvicsin, 2013). If a parent perceived themselves in a high efficacy category, it could be assumed that the adolescent's BMI would be within an acceptable range. The study compared 27 parent-child dyads and focused on control and discipline style of the parents. The BMI of the adolescents were taken and both the parent and adolescent evaluated the control and discipline levels within the family. Parents were also asked to evaluate themselves as role models when it comes to eating habits and diets. Results showed no significant relationship between parenting efficacy and child BMI (Danford & Marvicsin, 2013). The results of efficacy were based on the perceptions of both adult and child. The child often rated the parent's efficacy as average in control and discipline whereas parents rated themselves higher. Where the children rated efficacy as 74% average and 26% high, parents rated at 52% average and 48% high (Danford & Marvicsin, 2013). Although there was a significant difference between the child and parent perception, no significant finding between parenting efficacy and influence on BMI of the adolescent was found. Based on these results, parental efficacy can be eliminated as a contributing influencing factor to adolescent BMI. Parents that rated themselves with high efficacy also rated themselves as high in the role model category for eating habits and activity. Those rating themselves as average were more likely to state that they needed

improvement in an area but could not specify if it was in eating habits or activity levels, a limitation to this study (Danford & Marvicsin, 2013).

Parenting styles were also examined through research conducted in "Parenting Styles and Body Mass Index Trajectories from Adolescence to Adulthood". With a study sample of 20,745 adolescents in grades seven through twelve, or ages 11-21, the research focused on determining how the BMI of adolescents growing up with authoritarian parents differed from those with dissociated parents (Costanzo et al, 2012). The subjects were studied for a period of eleven years. Results from this study concluded that each type of environment has long term effects on obesity (Costanzo et al, 2012). Both styles, dissociated and authoritarian were both associated with altered BMI trajectories relative to parenting style. Adolescents growing up with dissociated parents were positively associated with higher BMIs (Costanzo et al, 2012). Authoritarian parenting style concluded that some of their adolescents were associated with greater weight in adulthood but not significantly like adolescents with dissociated parents (Costanzo et al, 2012). Based on the results of both literatures on parenting styles, it can be concluded that it is an influence on parents which inadvertently affects the BMI of adolescents. The perceptions parents have on their style has direct impact on the way an adolescent is raised. Because of this, children have different amounts of parental influence on diet and exercise, which ultimately contributes to differences in BMI. Both studies concluded that parents get their parenting styles from experiences in their own life, whether from their own parents or other influential figures (Costanzo et al, 2012, Danford & Marvicsin, 2013). Parenting styles

also correlates with their eating habits and activity levels. Therefore, parenting style inflluences many aspects of an adolescent's life that impact their BMI. With parents being one of the biggest influences in an adolescent's life, their parenting style can play a huge role in their current and future BMI.

A final theme found throughout literature review was the role of weight based interventions for adolescents. If a parent was aware of such interventions, they were more likely to perceive their adolescent's weight more accurately. A final piece of literature represents this theme on family-based interventions for obese adolescents. Research conducted by Cushing, Steele & Steele (2012) investigated a parent's perception on the need for intervention for their adolescent's weight and the outcome of said intervention. The study examined the willingness of parents and adolescents to partake in weight intervention therapy. The researchers collected BMI data from all participants and offered the therapy to all without stating the results of their BMI percentile. However, some participants did not fall in the obese category, but simply in the overweight or "normal" weight category. This was done in order to assess a parent's perception of their child's weight and if they could adequately gauge that their adolescent needed weight intervention. Essentially, this tested parents to see if they could recognize their adolescent as obes.Approximately 89% of participants falling in the obese category enrolled in a 10-week, family-based weight loss program (Cushing, Steele & Steele, 2012). Descriptive analyses of information provided for the study indicated that the average adolescent participating was 70.1% over their ideal BMI score (Cushing, Steele & Steele,

2012). After the course of the program, a 5.5% average reduction in overage was seen by participants, concluding this was a successful weight reduction program (Cushing, Steele & Steele, 2012). Parents attributed their participation in the weight loss program simply based on the offer, which increased their awareness to their adolescent's weight problem (Cushing, Steele & Steele, 2012). Therefore, it is unable to determine if they recognized obesity before the offer. They expressed their decision was balanced with that of the adolescent's willingness because they were the ones actually partaking in the program (Cushing, Steele & Steele, 2012). The findings concluded that having options for weight-loss for adolescents widely available can increase the parental perceptions of their adolescent's weight and encourage them to seek treatment (Cushing, Steele & Steele, 2012). Furthermore, a balance of parental and adolescent decision making was emphasized in the analysis of the results (Cushing, Steele & Steele, 2012).

Based on the information from the review of literature about parental perceptions, many concluding results can be determined. First, it can be difficult for parents to adequately perceive their adolescent's weight in many diverse areas. Parents show to inadequately assess weight based on physical features and were unable to place their adolescent in an accurate weight category. Secondly, surrounding environments are an important factor to consider when measuring parental perceptions. The perceptions parents have can be directly related to their home, school or neighborhood environment. It is also important to assess the parent's perception on their own eating and activity habit as a role model to their adolescent. If they do

not see themselves as meeting recommended guidelines, then this may contribute to how they perceive their adolescent's weight. Additionally, it was concluded that parenting style can influence an adolescent's BMI. However, parents still need to be able to accurately assess their style and the BMI of their adolescent in order for a healthy lifestyle to pursue. Finally, a parent can come to the realization that their adolescent needs weight loss intervention when approached with the need for an intervention from professionals. They may not perceive their child as overweight, but an outside source may awaken them to the idea. With the intense amount of information offered from these studies, some influences of parental perceptions of their adolescent's weight can be determined and applied for further investigation.

Rural Communities

A rural community is typically described in the broadest sense but many definitions are not consistent. However, the U.S. Census bureau and the Office of Management and Budget both define what an urban and suburban area is and define rural areas as those that are not in the other two categories (Adamson et al., 2014). This is done because of the many differences between rural communities such as size, environmental characteristics, demographics and socioeconomic characteristics (Adamson et al., 2014). Rural communities are often under-studied when it comes to factors about them that influence parental perceptions of adolescent obesity. Numerous studies have reported limitations includes the population in the study not reflecting the overal population, often focusing only on urban and suburban populations of the United States (Danford & Marvicsin, 2013). This is often because of the greater accessibility

to these populations and the excess of health care facilities that can be used find participants and to gather data (Danford & Marvicsin, 2013).

Despite the lack of research on parental perceptions of those residing in rural communities, research has been conducted on adolescent obesity in them. Rural communities are important when considering adolescent obesity because studies show the risk for it is higher in them Adolescents living in rural areas are 25% more likely than those in metropolitan areas to be overweight or obese (Adamson et al., 2014). Barriers based on geographical location are often the main factors that influence the trend for higher obesity rates

Many barriers exist in rural communities that residents face when it comes to reducing adolescent obesity. For example, there is less access to opportunities for physical activity and healthy eating, limited resources to provide nutritious food and higher poverty levels (Adamson et al., 2014). Residents of rural communities tend to eat diets higher in fat and calories, watch more television and exercise less (Adamson et al., 2014). Access to healthy food can be limited by the lack of grocery stores and supermarkets. Most rural areas only have convenience stores that offer few healthy, affordable food options. If supermarkets are an option, many do not have a wide variety of fresh, healthy food options which limits the choices available for meals. Rural areas are typically only served by fast food restaurants with cheaper options (Adamson et al., 2014). Adding to the problem is the close proximity of fast food restaurants to not only adolescent's home but also their schools. This leads to more accessibility to unhealthy options and in turn an increase in obesity rates (Peterson & Schwartz, 2010). Adamson et al (2014) also states that adolescents tend to eat more food prepared away from the home, consuming

more calories, typically in saturated fats. The high poverty levels often faced by rural communities makes healthier options harder to afford for most families based on the higher cost of fruits and vegetables versus fast food options (Adamson et al., 2014). According to Lee, Lee & Harris (2013), there is an extraordinarily high incidence in obesity among underprivileged groups, such as those living in households affected by poverty. Physical activity is also limited due to adolescents spending more time in front of screens, such as playing video games, watching TV and surfing the internet (Adamson et al., 2014). Furthermore, Adamson et al (2014) adds that even behaviors such as walking or biking to school have decreased by almost half. It is often found that safety is an issue. There is a lack of bike lanes and sidewalks to use, making parents nervous about allowing their adolescents to walk or bike (Adamson et al., 2014). Safety is also so important to parents that they are more willing to drive their adolescent or have them take public options to help guarantee a safe arrival to school (Adamson et al., 2014). In addition, physical activity can be limited by the lack of safe recreation sites to support such activities (Lee, Lee & Harris, 2013). Without safe parks and playgrounds for adolescent's to use, they are more apt to stay indoors and participate in screen time activities.

The social factors of the rural environment an adolescent lives in can strongly influence them. The adolescent's family environment influences their choices with parents having a strong impact. For example, what food is available inside the home and dining out are usually influenced by the decisions of the parents. With limits on food options from supermarkets and

convenience stores along with higher costs, a healthy meal can be hard to prepare for most families (Adamson et al., 2014). Additionally, the disadvantages of living in a rural community are typically felt by all inhabiting the community. Disadvantaged adolescents are usually surrounded by peers and families in the same situation, lacking in resources, limited physical activity and low income levels, leading to reinforcement of unhealthy behaviors (Lee, Lee & Harris, 2013). Rural school districts are normally disadvantaged and lacking in funds, which results in less access to physical education programs and healthy food options (Lee, Lee & Harris, 2013). Everyone attending the school faces the same situation, making it hard to recognize a need for change based on this situation be all that is known or considered "normal" for them.

Availability of services is a further issue faced by rural communities. This area includes both access to health care services and the quality of them. Lack of availability of services are often is often a barrier residents of a rural area face. Despite the high need, 60% of rural white Americans and 75% of rural minority Americans live in designated Health Provider Shortage Areas, where there is a severe lack of physicians to provide care (Adamson et al., 2014). Studies show that even if there is a primary care provider available, the quality of time spent or available may not be adequate for residents based on the high demand for service (Adamson et al., 2014). Rural residents are usually required to travel longer distances for healthcare which limits or even prohibits residents from accessing crucial health care services (Adamson et al., 2014). For adolescents requiring frequent and more intense levels of obesity treatment, visits to

the practice may be unattainable which results in many adolescents not receiving care or possibly partaking in life-changing therapies (Adamson et al., 2014). Rural families also are more likely to struggle financially, making it hard to access specialty health services that charge at higher costs. The cost of the long distance travel may also burden families which creates another barrier to healthcare for rural residents. While obesity treatment for the obese adolescent may just require help from a primary care provider or a specialist, the cost of the service may just be out of reach for the family (Adamson et al., 2014).

Synthesis of Data

Parental perceptions of an adolescent's weight can play a crucial role in guiding them towards a healthy lifestyle. Due to the lack of parental perceptions of adolescents living in rural communities, data from current studies can be used in combination with rural area statistics to formulate ideas and create a foundation for future research. Current research is able to provide factors that can influence parental perceptions of their adolescent's weight.

The first parental perception is strictly based of physical feature assessment. Previous research indicates that parents often cannot perceive that their adolescent is in need of health interventions for their weight based on physical features alone. With a significant amount of parents not correctly identifying their adolescent in urban and suburban communities, rural residing parents may follow the same trend as well. However, based on the trend of rural adolescents to engage in unhealthier eating habits and lower physical activity habits, it may also be easier for rural parents to assess their adolescent's obesity easier. The trend of social

factors also has to be taken into account when addressing rural families. The reinforcement of unhealthy behaviors can play a crucial role. If nobody else in the community is identifying their adolescent as obese and in need of a lifestyle change, then why should anyone else? This data exemplifies the need for specific research in rural communities in order to better address their needs.

Another parental perception is based on the dissatisfaction with their surroundings and a continuation being unable to correctly identify the weight category for the adolescent. When applying this result to rural communities, there are many barriers rural communities face that need to be accounted for. The resources available to these areas are typically limited, including healthy food options and places for exercise. Therefore, this likely precipitates a dissatisfied vote from rural residents based on their typical environment.

The perception of parenting habits has to be considered for rural communities as well. However, it is important to remember the reinforcement factor of rural communities. Research from urban and suburban communities focused on the ability of parents to set limits for their kids, specifically with diet and activity. Rural communities are often faced with limited options for their diet and a lack of safe exercise environments. Since there are limits already in place simply based on geographical location, it can be hard for parents to limit their only few options. Parenting habits of diet and exercise may also be influenced by the barriers of rural communities. Based on the limitations, parents may assume that they are doing the best they can with the resources they have and rate themselves as average or above average.

Finally, research concluded that parental perceptions of their adolescent's weight can be influenced by the availability of weight loss interventions. In rural communities, it has been stated that locations offering such services are not as frequently available or require families to travel long distances. This influencing factor may be unavailable for parents and could hinder their ability to perceive their adolescent as overweight.

Parental perceptions of adolescent obesity can heavily influence the changes that need to be made to reverse the growing trend. By taking influencing factors of parental perceptions from urban and suburban research and applying them to the features known about rural communities, gaps in research can be identified. With this identification made, a plan can be set in place for future research in the effort to fully understand what exactly influences parents of adolescent's residing in rural communities. Eventually, when problem areas are identified, efforts can be made to change them and help fight the adolescent obesity epidemic. Efforts can also be made in the specific areas identified and help to get the resources required for positive change.

Future Implications

It is obvious that additional research needs to be completed for rural dwelling adolescents. This thesis provided guidelines, based on a synthesis of data, on what to expect when evaluating those whom live in rural communities. Additional qualitative and observation research must be conducted to further assess the rural environment fully. Based on the qualities of rural communities being adapted to the perceptions of parents of urban and suburban communities, gaps in research can be identified. This synthesis of data provides specific areas

of research to be completed. For example, there is a gap in research in whether or not rural parents perceive their environment as an influence to their adolescent's weight or not. Furthermore, research needs to be conducted about the availability of adolescent obesity services for rural community members. Finally, this provides awareness of the problems rural communities often face and how they can contribute to adolescent obesity. With it being such a significant problem, targeted areas of research can be conducted in an effort to reverse this trend.

Medical Significance

Adolescent obesity is a major problem for the healthcare industry. The medical problems associated with adolescent obesity are quite significant and so is the cost related to treating such conditions. The results produced by synthesizing data from the reviews of literature provide us with gaps in research and areas of rural communities to be investigated. When these areas are identified, efforts can be made to change them, ultimately impacting the adolescent obesity. This impact will be against the rise in adolescent obesity. The healthcare field can learn about how to focus when they need to do for members of these communities. Educating adolescents and families based on the specific needs of their location can be done as well. This can also help for early screenings for those at greatest risk and preventative measures taken for all community residents. Parents can be educated on specific problems and how to avoid them. Overall, the medical field can gain a plethora of focused knowledge and target

specific areas that aid in the rising adolescent obesity rate, hopefully reverse and eliminating them.

Conclusion

In conclusion, adolescent obesity is a major problem rapidly growing in the United States. In order to reverse this trend, efforts need to be made to investigate the contributing factors to the problem. Research has concluded that parents are often the biggest influences in an adolescent's life when it comes to lifestyle and diet habits. Knowing this information, a parent also needs to be able to correctly identify their adolescent as obese and determine the need for change. Rural community members often face unique challenges related to adolescent obesity. By combining current research of parental perceptions of adolescents and connecting the information with the traits of rural communities, gaps in research can be identify and increase awareness for the need in these communities. In order for research and change to be initiated, influencing factors need to be determined and eliminated in the effort to reduce the growing rate of adolescent obesity.

References

About Child Obesity. (2014). Retrieved from http://www.childobesity.com/CO_FamCOInfo.html

Adamson, K., Alfero, C., Anthony, T., Ashbaugh, B., Bailey, J., Brennan, R., . . . Wilger, S. (2014). Childhood prevention strategies for rural communities. *Newmours,* 2- 55.

Ariza, A., Binns, H., Eckstein, K., Mikhail, L., & Millard, S. (2006). Parents' perceptions of their child's weight and health. *Pediatrics, 117*(3), 681-689.

Barry, C., Gollust, S., & Niederdeppe, J. (2013). Framing the consequences of childhood obesity to increase public support for obesity prevention policy. *American Journal of Public Health, 103*(11).

Birchmeier, B., Kotula, K., Lyles, A., Riesch, S., Sanders, L., & Sass-DeRuyter, S. (2012). How do treatment-seeking overweight youth and their parents describe weight promoting factors in their family? *Journal of Community Health Nursing, 29*, 187-209.

Boisvert, J., & Harrell, A. (2015). Integrative treatment of pediatric obesity: Psychological and spiritual considerations. *Integrative Medicine: A Clinician's Journal*, *14*(1), 40-47.

Bradlyn, A., Harris, C., & Moore, L. (2012). Exploring the relationship between parental concern and the management of childhood obesity. *Maternal and Child Health Journal, 16*, 902-908.

Brennan, L., Walkley, J., & Wilks, R. (2012). Parent and adolescent reported barriers to participation in an adolescent overweight and obesity intervention. *Obesity, 20*(6), 1319-1324.

Brownell, K., & Novak, N. (2012). Role of policy and government in the obesity epidemic.*Circulation AHA Journals*, (126), 2345-2352.

Bryne, C., Nauta, C., & Wesley, Y. (2009). School nurses and childhood obesity: An investigation of knowledge and practice among school nurses as they relate to childhood obesity. *Issues in Comprehensive Pediatric Nursing*, *32*, 16-30.

Cassata, L., Keeney, G. B., & McElmurry, B. J. (2004). Adolescent health and development in nursing and midwifery education.

CDC. (2014). Childhood obesity facts. Retrieved from http://www.cdc.gov/healthyyouth/obesity/facts.htm

Costanzo, P., Fuemmeler, B., Hoyle, R., Ostbye, T., Siegler, I., Williams, R., & Yang, C. (2012). Parenting styles and body mass index trajectories from adolescence to adulthood. *Health Psychology*, *31*(4), 441-449.

Cushing, C., Steele, M., & Steele, R. (2012). Weighing the pros and cons in family-based pediatric obesity: Parent and child decisional balance as a predictor of child outcomes.*Children's Health Care*, *41*, 43-55.

Danford, C., & Marvicsin, D. (2013). Parenting efficacy related to childhood obesity: Comparison of parent and child perceptions. *Journal of Pediatric Nursing*, *28*, 422-429.

Farooqi, I. S. (2014). Defining the neural basis of appetite and obesity: from genes to behaviour. *Clinical Medicine*, *14*(3), 286-289.

Fowler-Brown, A., & Kahwati, L. (2004). Prevention and treatment of overweight in children and adolescents. *Am Fam Physician*, *69*(11), 1-8.

Hearst, M., Klein, E., Lytle, L., Pasch, K., & Sherwood, N. (2011). Parental perceptions of their adolescent's weight status: The echo study. *Am J Health Behav.*, *35*(2), 248-255.

Lee, C., & Seo, D. (2012). Association of school nutrition policy and parental control with childhood overweight. *Journal of School Health*, *82*(6), 285-293.

Lee, H., Lee, J., & Harris, K. (2013). Multiple levels of social disadvantage and links to obesity in adolescence and young adulthood. *Journal of School Health*, *83*(3), 139-149.

National League of Cities. (2014). Childhood obesity by the numbers. Retrieved from http://www.healthycommunitieshealthyfuture.org/learn-the-facts/economic-costs- of-obesity/

Nowicka, P., & Van-Ryzin, M. (2013). Direct and indirect effects of a family-based intervention in early adolescence on parent - Youth relationship quality, late adolescent health and early adult obesity. *Journal of Family Psychology*, *27*(1), 106-116.

Peterson, J., & Schwarz, S. (2010). Adolescent obesity in the United States. Retrieved from http://www.nccp.org/publications/pdf/text_977.pdf

Thomas, B., & Zhu, L. (2013). School-based obesity policy, social capital, and gender differences in weight control behaviors. *American Journal of Public Health*.