

Rowan University

Rowan Digital Works

Theses and Dissertations

5-5-2014

An exploration of the lived social, emotional, and academic experiences of obese adolescents within three conceptual frameworks using mixed methods research

Julie Benavides

Follow this and additional works at: <https://rdw.rowan.edu/etd>



Part of the [Elementary and Middle and Secondary Education Administration Commons](#)

Recommended Citation

Benavides, Julie, "An exploration of the lived social, emotional, and academic experiences of obese adolescents within three conceptual frameworks using mixed methods research" (2014). *Theses and Dissertations*. 363.

<https://rdw.rowan.edu/etd/363>

This Dissertation is brought to you for free and open access by Rowan Digital Works. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of Rowan Digital Works. For more information, please contact graduateresearch@rowan.edu.

**AN EXPLORATION OF THE LIVED SOCIAL, EMOTIONAL, AND
ACADEMIC EXPERIENCES OF OBESE ADOLESCENTS WITHIN THREE
CONCEPTUAL FRAMEWORKS USING MIXED METHODS RESEARCH**

by

Julie Benavides

A Dissertation

Submitted to the
Department of Educational Leadership
College of Education
In partial fulfillment of the requirement
For the degree of
Doctor of Education
at
Rowan University
December 5, 2013

Dissertation Chair: Leslie Spencer, Ph. D.

© 2013 Julie Fatima Benavides

Dedication

I would like to dedicate this dissertation to my three children Jayden, Alden, and Ariana. Everything that Mommy does is to inspire you all to do great things in your life. I love the three of you endlessly.

Acknowledgements

My sincere thanks go to all of the people who have stood by me, supported and helped through this endeavor. First, to my husband Aldo whose encouragement, love, and patience have made this possible. For certain, without his understanding I would not have completed this doctoral program. Next, to my mother, Maritza and grandmother, Vejita you both have always made me feel as though I could accomplish whatever I set my mind to. The confidence instilled in me has come from both of you. Thanks for teaching me to always reach for the stars.

Next my heart felt thanks and gratitude go to the chair of my dissertation committee, Dr. Leslie Spencer. I can't thank you enough for sharing your knowledge, for guiding me, and for your continuous feedback throughout the entire dissertation process. I am so thankful that you agreed to chair my committee. Your support and motivation helped me get through this process even when "life" got in the way. Your positive morale and academic support carried me through this difficult and challenging process. To my committee members, Dr. MaryBeth Walpole and Dr. Shari Willis thank you for sharing in the journey and experience with me, your expertise and insight has enhanced the quality of my dissertation. It is with great appreciation that I also acknowledge the school district, administrators, and students who opened their doors and invited me to collect data.

Lastly, but certainly not least, I have to thank my dissertation buddy throughout this long journey, Dr. Angelina Pecoraro. Thank you for always checking up on me. I am eternally grateful for your encouragement.

Abstract

Julie Fatima Benavides

AN EXPLORATION OF THE LIVED SOCIAL, EMOTIONAL, AND ACADEMIC
EXPERIENCES OF OBESE ADOLESCENTS WITHIN THREE CONCEPTUAL
FRAMEWORKS USING MIXED METHODS RESEARCH

2013

Leslie Spencer, Ph. D.

The primary purpose of this mixed methods study was to explore the experiences of obese adolescents and to investigate middle and high school students' attitudes toward obese students. During phase one, quantitative data was collected through the Attitude Toward Obese Persons (ATOP) survey. The survey research sample was 1448 middle and high school students. The quantitative data was analyzed through cross gender and grade level comparisons. Results indicated both female and male students in middle school and high school have a slightly positive attitude toward obese students.

During phase two, qualitative data was collected through focus groups with 5 middle school boys and one on one interviews with 2 middle school girls. Phase two findings revealed emergent themes of experiences within sports, school, and family for male adolescent participants and friends, school, and family for female adolescent participants. All participants described detailed experiences they face as a result of their overweight status. Implications were suggested for the Southern New Jersey school district board of education and future researchers.

Table of Contents

Abstract.....	v
List of Figures	ix
List of Tables	x
Chapter 1	1
Obesity Among Adolescents	1
Problem Statement.....	7
Purpose of Research.....	9
Central Research Question.....	11
Definition of Terms.....	11
Conceptual Framework.....	13
Transformative Framework.....	14
Maslow's Hierarchy of Needs Theory	14
Bronfenbrenner's Ecological Systems Theory	16
Significance of Study	17
Limitations and Delimitations	18
Organization of the Study	19
Chapter 2	20
Literature Review	20
Obesity	20
Leading Causes of Obesity	21
Genetics	22
Ecology and Behavior	23
Health Risks	25
Social and Emotional Risks	25
Academic Risks	29
Conclusion	30
Chapter 3	33
Methodology	33

Purpose Statement	33
Research Questions	34
Rationale and Assumptions of a Mixed Methods Research Design	35
Quantitative Research	38
Qualitative Research	38
Participants	39
Approvals	40
Instrumentation	41
Attitudes Toward Obese Persons (ATOP)	42
Focus Group and Interview Protocol	42
Demographic Questionnaire	43
Data Collection	44
Data Analysis	47
Data Quality and Rigor	49
My Role as Researcher	50
Chapter 4	51
Findings	51
Participants and Quantitative Data Collection Procedures	51
Attitudes Toward Obese Persons	53
Scoring	55
Attitudes of Middle School vs. High School Respondents	56
Gender Differences in Attitudes	56
Results of Analysis of Attitudes, Beliefs, and Perceptions Toward Obese Students	57
Qualitative Data Collection Procedures	60
Middle School Boys	62
Emergent Themes	63
Sports	64
School	65

Family.....	67
Middle School Girls.....	68
Emergent Themes.....	68
Friends.....	69
School.....	70
Family.....	70
Connections To The literature And Theoretical Framework.....	71
Chapter 5.....	74
Discussion And Conclusion.....	74
Summary of the Study Purpose.....	74
Summary of the Study.....	74
Study Findings.....	75
Limitations.....	79
Methodology Challenges.....	80
Implications.....	81
Leadership.....	83
References.....	87
APPENDIX A: LETTER OF INFORMED CONSENT.....	102
APPENDIX B: ATOP: Attitudes Toward Obese Persons Scale.....	103
APPENDIX C: Demographic Questionnaire.....	104
APPENDIX D: Interview Protocol Draft.....	105
APPENDIX E: Scoring Instructions for ATOP.....	106
APPENDIX F: Invitation to Students.....	107

List of Figures

Figure	Page
Figure 1-1 Adult Obesity Rates of Four Developed Countries Adapted from OECD Obesity Update, 2012	2
Figure 1-2 The Prevalence of Obesity In America Over Three Decades	5
Figure 1-3 The Influence of Framework and Theory on This Research Project	13
Figure 1-4 Maslow's Hierarchy of Needs	15
Figure 1-5 Bronfenbrenner's Ecological Systems Theory	17
Figure 2-1 Prevalence of obesity among children and adolescents, by age group United States, 1963—2008	21
Figure 3-1 Research Phases	37
Figure 4-1 Middle School Male Participants Emergent Themes	64
Figure 4-2 Middle School Female Participants Emergent Themes	69

List of Tables

Table	Page
Table 1 Correlations between research questions, interview protocol and ATOP survey	44
Table 2 Participant Totals in Frequencies	52
Table 3 Response Frequencies to Items on the ATOP for the total sample (N=1,448)	54
Table 4 Summary of Overall ATOP Scores for all students (middle and high school)	55
Table 5 ATOP Scores of Middle School and High School Respondents	56
Table 6 ATOP Scores of Male and Female Respondents	57
Table 7 Most Frequent Response and Percentages of ATOP Statement of Middle And High School Students	59
Table 8 Participant Demographics	62

Chapter 1

Obesity Among Adolescents

An “epidemic” is defined by Merriam-Webster’s dictionary as “ the rapid spread of a disease to many people”. Given the current prevalence of obesity around the world, the term “epidemic” is appropriate for describing the current status of obesity for adolescents. The prevalence of obesity continues to rise in both developed and developing countries (World Health Organization Technical Report, 2000). Nearly one in three children and teens are overweight or obese (American Heart Association, 2011). A person who is overweight or obese can be described as having an excess of body fat (Dehghan, Akhtar-Danesh, & Merchant, 2005). The Centers for Disease Control and Prevention define obese as at or above the 95th percentile of Body Mass Index (BMI) for age and overweight as between 85th to 95th percentile of BMI for age. BMI is calculated using a person’s height and weight. More specifically, BMI for children and adolescents is calculated and compared to their peers with common gender and age range and charted on a gender BMI-for-age graph (Nihiser, Lee, Wechsler, McKenna, Odom, Reinold, Grummer-Strawn, 2007).

Americans have higher rates of obesity than any other developed country (Zullig, Ubbes, Pyle, & Valois, 2006). According to the Obesity Update 2012 by the Organisation for Economic Co-operation and Development, among its thirty-four member countries, the United States leads in the percentage of obese adults. Figure 1-1 compares obesity rates among the adult population in four randomly selected developed countries.

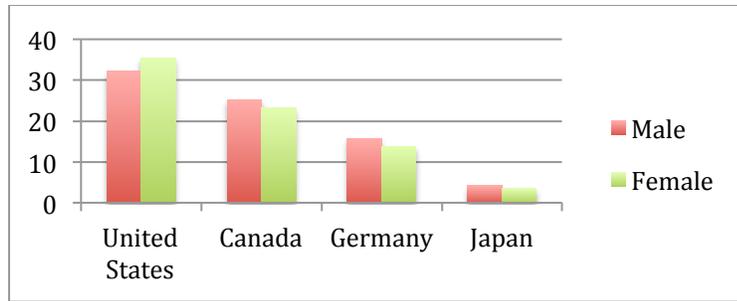


Figure 1-1 Adult Obesity Rates of Four Developed Countries Adapted from OECD Obesity Update, 2012

The prevalence of obesity in the United States has continued to rise since the 1980s among all age groups (Ogden & Carroll, 2010). Furthermore, during the past three decades this prevalence has nearly tripled for adolescents (Lawrence, Hazlett & Hightower, 2010; Wechsler, McKenna, Lee, & Dietz, 2004). Nearly 12.5 million children and adolescents ages 2 to 19 are obese (Ogden & Carroll, 2010). Healthy People is a national organization that provides 10-year objectives for improving the health of all Americans. In Healthy People 2010 the U.S. Department of Health and Human Services brought national awareness to the importance of adolescent weight status, recognizing overweight and obesity as one of 10 leading health indicators. This status acknowledges that health officials recognize the importance of health promotion and encourage widespread participation from health professionals, schools, and community organizations (Centers for Disease Control and Prevention, 2010).

The objective of Healthy People 2010 was to reduce the percentage of adolescents who are overweight or obese by at least 5%, however several years into the course of the development and progression of Healthy People 2010, it appeared the initiative would not reach its goal (U.S Department of Health and Human Services, 2006). As a result, the

Department of Health and Human Services, other federal agencies, and public stakeholders collaborated to develop Healthy People 2020, which set new more aggressive goals and objectives. Healthy People 2020 aims for a 10% reduction in the proportion of adolescents who are obese. In addition, Healthy People 2020 is designed to promote better health and prevent excessive weight gain in youth by influencing multiple levels of intervention and prevention through inter-relationships between individuals, families, environments, communities, and policy makers (Healthy People, 2020). Unlike Healthy People 2010, Healthy People 2020 places emphasis on collaborative efforts from individuals, policy makers, and organizations such as schools to support diet and weight changes. Healthy People 2020 reports health risks and behaviors associated with weight to be influenced at both the individual and environmental levels. Therefore, Healthy People 2020 has taken an ecological approach and includes schools as one of several environmental influences to support health-enhancing environments.

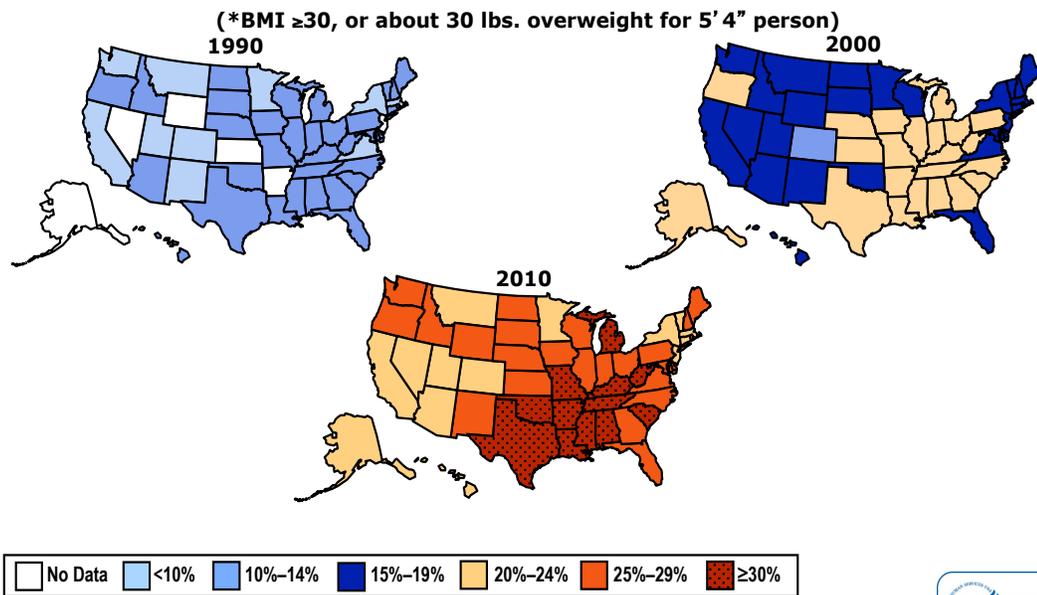
The fight against obesity has also intrigued the interest of politicians. In 2010, First Lady of the United States, Michelle Obama, created the Let's Move initiative to end childhood obesity across the nation. Let's Move encourages many stakeholders to get involved and support children in becoming more active, eating more nutritious foods, and adopting more healthful lifestyles (www.letsmove.gov). The Let's Move campaign has encouraged communities to work together to spread the message of obesity prevention. Mrs. Obama demonstrates her interest in shared support by urging schools to add healthy living to curriculums, community leaders to empower families to make healthy decisions, elected officials to take action through policies that support an end to childhood obesity, and children to stay active and eat healthfully. Today 49 of the 50 United States have at

least one city that has elected to facilitate programs that support Let's Move initiatives (www.letsmove.gov).

Compared to adolescents with a healthy weight, obese adolescents experience increased levels of heart disease, high blood pressure, and Type-2 diabetes (Dehghan et al., 2005; Miller, Rosenbloom & Silverstein, 2004). The American Obesity Association (AOA, 2005) contended that life expectancy decreases for obese adolescents when compared to their healthy weight counterparts. In addition to the medical complications, adolescent obesity also has serious psychological consequences such as poor self-esteem, negative body image, and increased risk of depression (Goldfield, G. S., Moore, C., Henderson, K., Buchholz, A., Obeid, N., & Flament, M. F., 2010; Gortmaker, Must, Perrin, Sobol, & Dietz, 1993; Puhl & Heuer, 2009; Wechsler et al., 2004). One of the immediate consequences of obesity can be social discrimination. In addition, obese people frequently experience negative bias from others (Andreyava, Puhl, & Brownell, 2008; Eisenburg, Neumark-Sztainer, Story, 2003). Weight bias is associated with negative weight related attitudes and beliefs that produce stigma, rejection, and prejudice towards people because of their weight status (Bromfield, 2009). The stigma associated with being overweight or obese is often connected to social consequences such as teasing, bullying, and isolation (Puhl & Heuer, 2009). Brownell and Puhl (2003) reported that prejudice toward obese or overweight persons exists. They conducted a study in which professionals such as doctors, nurses, and teachers completed a survey regarding obesity. Twenty eight percent of the teachers admitted that obesity is the worst condition that a student might face.

Adolescents are a unique population because they are not yet adults but have established routines and characteristics that may influence their adulthood. Adolescents may be overwhelmed with the transitions, roles, and changes they must assume while growing up through family, school, and community interactions (National Research Council, 2002). As a result, this target population can best benefit from learning about the effects and health risks associated with obesity. Figure 1-2 illustrates the prevalence of obesity rates among Americans over the past three decades. In 2010 the Centers for Disease Control and Prevention reported that all 50 states across the United States had at least a 20% prevalence of obesity, with the rate in New Jersey between 20-25% of all residents.

Obesity Trends* Among U.S. Adults BRFSS, 1990, 2000, 2010



Source: Behavioral Risk Factor Surveillance System, CDC.

Figure 1-2 The Prevalence of Obesity In America Over Three Decades

School category can influence BMI. Public school children are more likely to be overweight than their private school counterparts (Li & Hooker, 2010). Li and Hooker (2010) reported that the affect of school category on a child's BMI is much higher when the child qualifies for the National School Lunch Program and School Breakfast Program. Such data indicates there is a correlation between socioeconomic status and obesity.

Researchers have also found victimization based on weight to be more significant among adolescents than other age groups, as they experience greater levels of peer rejection and teasing (Gray, Kahhan & Janicke, 2009; Puhl & Heuer, 2009). Overweight boys and obese girls are also more likely than healthy weight students to be targets of verbal bullying, as demonstrated in a study of 7,000 adolescents conducted in the United States (Wang, Iannotti & Luk, 2010). Peers may perceive obese adolescents to be unmotivated, pitiful, and condemn them for being fat (Robinson, 2006). Several studies continue to identify overweight adolescents as targets for low self esteem, peer victimization, social marginalization, and weight-based stigmatization (Adams & Bukowski, 2008; Gray et al., 2009; Latner & Stunkard, 2003; Robinson, 2006). Overweight adolescents' social experiences can be influenced at school (Judge & Jahns, 2007).

Single-handedly, schools are unable to prevent the epidemic of adolescent obesity, but they can embark on implementing strong school based policies, procedures, and programs to protect and support adolescents living with obesity (Wechsler et al., 2004). For example, a school in north Philadelphia teamed up with a local non-profit group, The Food Trust, to implement cost effective and healthy standards for a nutrition

“makeover” (Ahuja & Salahi, 2010). The group’s solutions started in the classroom by infusing nutrition-based math topics into problem sets. Next, they replaced high caloric drinks and foods in vending machines with water, juice, milk, and snacks with fewer than 200 calories. Finally, the school pledged to devote whole days to nutritional eating; for example, during “banana day” 400 pieces of bananas were sold at 25 cents each.

In 2007, Mississippi enacted the Mississippi Healthy Students Act, which mandates 150 minutes weekly of health education instruction and an additional 150 minutes weekly of activity based instruction for students in grades K-8 (Robert Wood Johnson Foundation, 2011). In 2010, the Aurora school district in Colorado introduced the Go, Slow, Whoa program, which color codes food choices in the cafeteria, giving students the opportunity to make healthy food choices (Jones, 2011). As students select food, each option is labeled with either a green “Go” for foods high in fiber, a yellow “Slow” for foods which may have nutrients but contains fat and sugar, or a red “Whoa” for foods that are high in fat or sugar. The Go, Slow, Whoa program invites parents to visit the cafeteria to learn how the program works. Collaborative efforts support healthy food choices to be made outside of the school environment. The schools and programs mentioned above are making an effort to acknowledge student health, specifically weight control in relation to diet and exercise.

Problem Statement

According to the Centers for Disease Control and Prevention (2010) obesity has been steadily increasing among adolescents in the United States. More than 12.5 million children and teenagers are living with obesity (CDC, 2011). While it is important to seek healthier life styles and eating habits for those living with obesity, it is equally important

that schools maintain unambiguous policies to protect students from weight related teasing, bias, and discrimination. President Clinton signed the Goals 2000: Education America Act, which states that all schools must have an environment conducive to learning. Since obesity is a visible health problem, it provides the opportunity for others to assess weight status and comment on it (Warschburger, 2005). Federal laws are in place to protect people from bias and discrimination on the basis of gender, sexual orientation, religion, age, race, and/or culture. In contrast, there are no laws to protect obese adolescents from discrimination based on weight (Puhl & Heuer, 2010). Research shows that students experience weight based stigmatization and bias in school, which is an enormous and significant part of life (Latner & Stunkard, 2003; Puhl, Andreyeva & Brownell, 2008; Warschburger, 2005).

Being overweight in school has a tremendous impact on children's social outcomes (Judge & Jahns, 2007). Given that identity formation is a major developmental task of adolescence and body image and self-esteem tend to be intertwined, adolescents may be especially sensitive to weight-related comments (Neumark-Sztainer, Falkner, Story, Perry, Hannan & Mulert, 2002). Furthermore, research suggests less intentional weight comments and teasing behaviors from family members and peers were still described as hurtful (Neumark-Sztainer, Story & Faibisch, 1998). Weight based teasing by peers and family members is common experience for obese adolescents and has continued to increase over the past decade (Andreyeva et al., 2008). While the number of adolescents living with obesity is on the rise, consequently so is the opportunity for this particular group of students to be targeted for bias and discrimination. Some professionals are

concerned that “fatism” has become the new racism (Jalongo, 1999; O’Brien, Puhl, Latner, Mir, & Hunter, 2010; www.fatism.org).

Purpose of Research

The purpose of this research study is to understand and explore the lived social, emotional, and academic experiences of obese adolescents attending either a middle school or high school in a Southern New Jersey School District, a suburban district serving over 4,000 students. As 1 in 3 adolescents are overweight or obese in the United States, it is realistic to assume that approximately 1200 students in this school district are overweight or obese. Participants’ lived experiences will include details on academic achievement, relationships, and self-perception. For the purposes of this research investigation, measuring each participant’s BMI, during phase 2, will identify him or her as an obese adolescent.

This mixed methods investigation will use both quantitative and qualitative research methods to understand the attitudes of obesity among adolescent students. Quantitative methods, including surveys with fixed-choice items, afford researchers the opportunity to sample a large population at one time with a rapid turnaround rate (Creswell, 2009). The data generated from survey research will help school professionals to support and understand the overall scope of the epidemic of obesity and the general attitudes of all students toward obese students. Qualitative methods are ideal for acquiring data that reveal perceptions, outlooks, and experiences from the participants. Interview methods will provide the stories that help us better understand the impact obesity has on adolescents in more detail.

A fixed choice survey will be distributed to approximately 1800 students to gain an understanding of their perceptions on obesity. In addition, semi-structured focus groups and individual interviews with open-ended questions will be scheduled with a purposeful sample of students. These students will be identified through their acceptance and interest in participating in the study to better understand their experiences and challenges while living with obesity. Through the collection, coding, analysis, interpretation, and sharing of data, students, staff, parents, and community members will be able to respond more thoughtfully and more tactfully in specific situations involving obese students (Van Manen, 1990). Although many studies have been performed on the psychological and physical concerns of living with obesity, few researchers have embarked on the task of collecting data on the social and emotional consequences in an academic setting for adolescents in this age group. Furthermore, this study will produce data that contributes to school community awareness of the lived social, emotional, and academic experiences of obese adolescents. Collectively, the data could be used to assist policymakers in facilitating school wide programs to protect obese students from becoming the victims of discrimination, bias, and/or bullies.

The data collected throughout the study will be shared with the Southern New Jersey School District's Board of Education and Administrators to suggest adaptations and modifications to current curriculums, policies, professional development opportunities, and support groups that work collectively to maintain and sustain a positive school culture for all students. Additionally, the data collected throughout the study will be presented in newsletter form to the entire student body, parents, staff, and

community members to help them understand the impact that living with obesity has on these students.

Central Research Question

I examined four research questions. The questions were designed to enable me to understand the experiences of obese students, identify the attitudes shared by their peers on obesity, and determine what these experiences mean to students. The purpose of this research study is to understand and explore the lived social, emotional, and academic experiences of obese adolescent students.

1. What are the perceptions, attitudes, and self described experiences of obese adolescents as they reflect on their lives academically, emotionally, and socially?
2. What do obese students believe would be helpful to receive from the school for support to help them counteract weight bias, bullying, and/or help in reducing body weight?
3. What are the self-reported academic, emotional, and social challenges for adolescents who are obese?
4. What are the general attitudes of students, both obese and non-obese, toward obese classmates?

Definition of Terms

The terms listed below are central to the research study. It is imperative that definitions be provided to establish a foundation of understanding throughout the study. It is also worthy to note throughout the study overweight and obese are used interchangeably. While in health and medical context there is a distinguished difference

between overweight and obese (with obesity defined as a higher level of excess body fat), the precise use of overweight and obese is not often used in published literature on adolescent obesity (Puhl & Latner, 2007).

Body Mass Index (BMI): Body mass index is the ratio of a person's weight to height squared (kg/m^2), and it is used to estimate a person's risk of related health problems. BMI measures a specific excess body weight for a particular person's height and age (Nihiser et al., 2007).

Overweight: The Centers for Disease Control and Prevention (2010) defines overweight individuals as at or above the 85th percentile of Body Mass Index (BMI).

Obese: The Centers for Disease Control and Prevention (2010) defines obese individuals as at or above the 95th percentile of Body Mass Index (BMI).

Obesity: Obesity is the condition of excess body fat, which can often lead to health risks (Nihiser et al., 2007)

Fatism: Discrimination or prejudice based on weight (www.fatism.org).

Peer Victimization: is the experience children endure as a result of aggressive behavior of other children who are not siblings and age is not a factor (Hawker & Boulton, 2000).

Social Marginalization: Can be described as the actions adolescents take when they perceive some of their peers as undesirable and different from themselves with efforts to exclude them from activities (Robinson, 2006).

Weight-based Stigmatization: Negative weight related attitudes and beliefs toward overweight and obese adolescents that are developed through stereotypes, bias, rejection, and prejudice (Gray, et al.; 2009).

Conceptual Framework

Obesity has become a phenomenon directly influenced by a multitude of contributors. Although contributors may differ, one enduring consequence is that individuals living with obesity are exposed to bias and discrimination. As a result, three conceptual frameworks guide this research study: the Transformative Design, Maslow's Hierarchy of Needs Theory, and Bronfenbrenner's Ecological Systems Theory. The Transformative Design (Mertens, 2010) gives a voice to an underrepresented group to improve social justice. Maslow's Hierarchy of Needs Theory (1954) displays the nature of human needs and motivation to seek fulfillment and change through a hierarchy of personal growth. Bronfenbrenner's Ecological Systems Theory (1979), places perspective on the role the natural environment has on individuals. Figure 1-3 illustrates how together, these frameworks and theories influenced this research investigation.

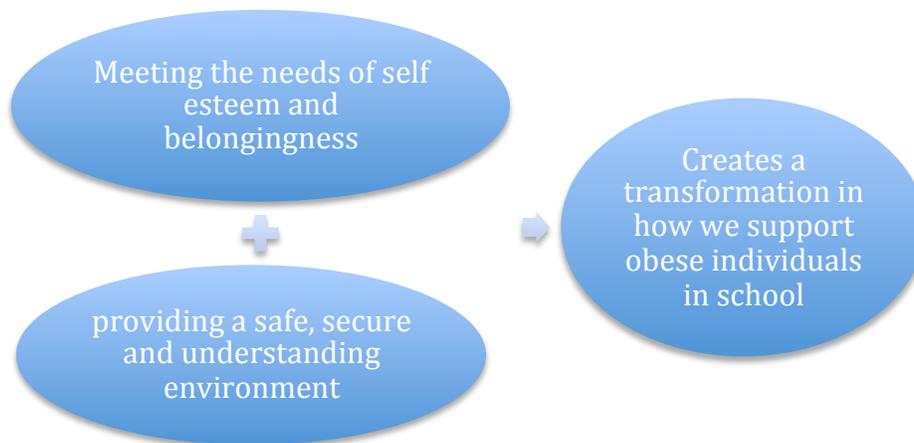


Figure 1-3 The Influence of Framework and Theory on This Research Project

Transformative Framework

The transformative theoretical framework drives this study. A transformative-based design supports the advancement of marginalized populations (Creswell & Plano Clark, 2011). It also supports change initiatives that strive to create and sustain social justice and equality for the marginalized group being studied (Mertens, 2010). Bias, discrimination, and stigmatization strengthen the foundation for social inequity and injustice by providing a lens through which people have chosen to view a marginalized group of individuals (Mertens, 2010).

The transformative design has guided this investigation and supported the goal of being responsive to the needs of obese adolescents while exploring their perceptions and lived experiences to recommend specific changes as a result of the research to advance social justice for them (Creswell & Plano Clark, 2011). This investigation is motivated by the awareness of the increase in the obese population in schools. Furthermore, I have advocated for particular changes as a result of the research to improve the social and academic environments for obese students in school. The transformative design produces credible results that can be used as a platform for community members, stakeholders, and policy makers (Creswell & Plano Clark, 2011). Creswell (2009) suggest the rationale of selecting this strategy of inquiry is to use results to bring about change for a marginalized group. A challenge of the transformative design can be the ability of the researcher to develop and maintain trust with participants (Creswell & Plano Clark, 2011).

Maslow's Hierarchy of Needs Theory

Figure 1-4 illustrates Maslow's theory of needs, which is divided into five tiers. First, he recognizes the three basic human needs of food, water, and shelter. The next tier

includes safety needs, followed by belongingness (tier three), and esteem (tier four). Lastly, self-actualization can be met when an individual has reached full potential. Since Maslow's theory is simple, easy to describe, and motivates personal growth, it is often applied in organizational settings (Mustafa, 1992). Maslow uses a pyramid as a visual to express his claim on how individuals move up as their needs are met. This model can be applied to better understand how educational institutions can create environments conducive to students' needs (Mustafa, 1992).

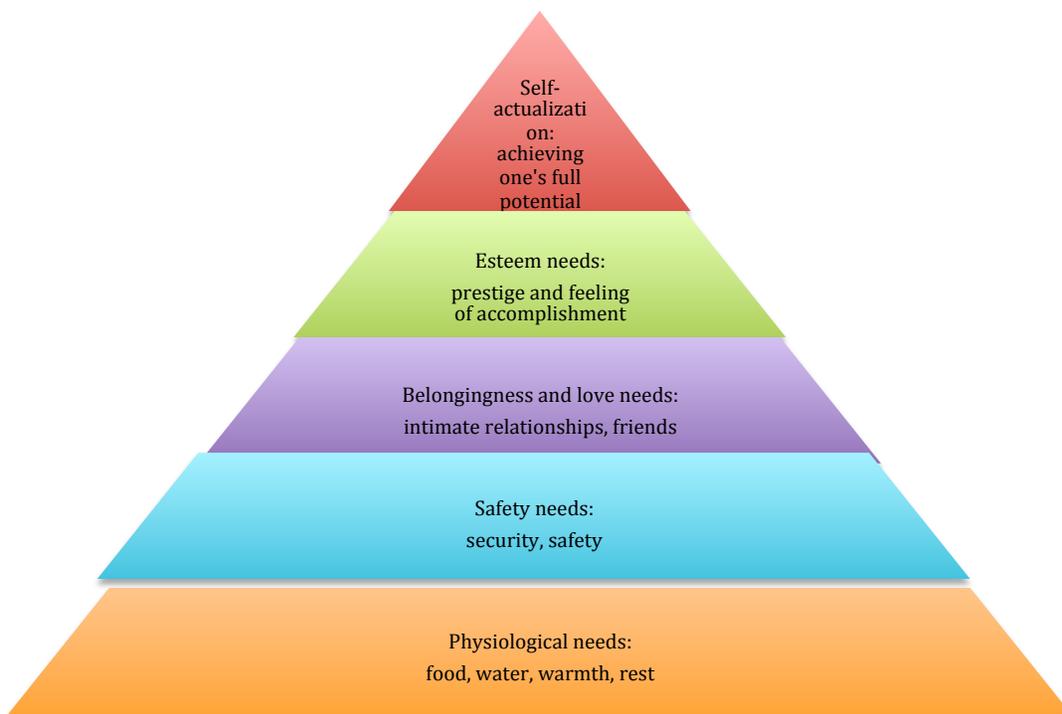


Figure 1-4 Maslow's Hierarchy of Needs

Bronfenbrenner's Ecological Systems Theory

Bronfenbrenner's Ecological Systems Theory focuses on the effects of environmental links and interactions on a child's development. Bronfenbrenner (1979) compares Ecological Systems Theory to a set of nested structures, like a set of Russian dolls (See figure 1-5). Bronfenbrenner has evolved the theory to include five systems of interconnectedness responsible for development. The first system, microsystem, is the most immediate and closest to the child. It contains structures in direct contact; examples include home, school, parents, and teachers (Berk, 2000; Bronfenbrenner, 1979). Bronfenbrenner (1979) adds bi-directional influences to the microsystem, which are influences to and from the child that also affect this level of environment. The second system, mesosystem, is the setting that provides communication and connectedness between structures in the microsystem; examples include discourse between parents and teachers (Berk, 2000; Bronfenbrenner, 1979). In the third system, exosystem, Bronfenbrenner recognizes the effect of environments in which the child is not in direct control; examples include society, peer groups, and parent work schedule (Bronfenbrenner, 1979). The fourth system, macrosystem, is distant from the child, yet is made up of influences that directly have an effect on other systems in which the child is in closer contact; examples include global issues and beliefs (Berk, 2000). The fifth system, chronosystem, includes the way in which the dimension of time affects a child's environment; an example may include the passing of time and how it relates to the maturity children have gained influencing reactions to their environment (Berk, 2000). This investigation uses Bronfenbrenner's framework to explore the impact that living with obesity has on adolescents.

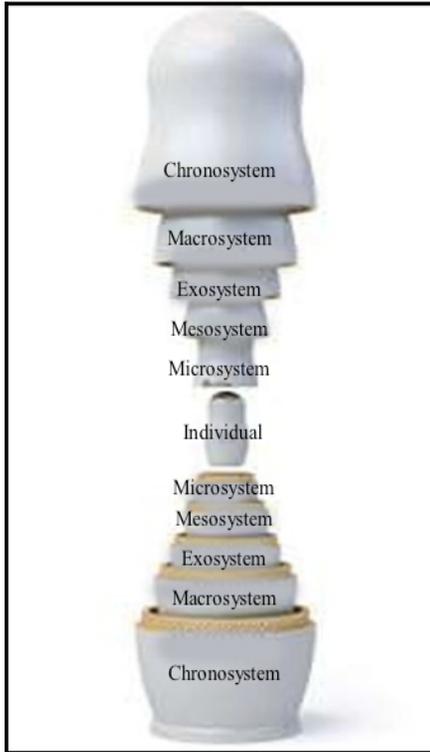


Figure 1-5 Bronfenbrenner's Ecological Systems Theory

Significance of Study

The primary goal of this study is to discover the lived experience of obese male and female adolescents. The results of the study will assist educational institutions to develop and implement policies to prevent weight-based discrimination, bias, and bullying toward this population of students. These results may have many implications for overweight or obese students, school policy makers, teachers, boards of education, counselors, and administrators. Additionally, outcomes of this study may be used to provide professional development to staff and focus groups to all students to discuss obesity and reduce the stigmatization associated with being overweight or obese. Society often condemns obese people and attributes culpability to lack of will power, exercise,

self-discipline, and the size of their appetites (Puhl & Brownell, 2001; Puhl & Heuer, 2009). Although lifestyle choices significantly impact weight, so do genetics, health conditions, economics, and the environment (Crothers, Kehle, Bray & Theodore, 2009). I suspect if policy makers, community leaders, parents, peers, and school staff are made aware of the lived experience of overweight students, policies could be implemented to foster a healthier school environment surrounding the issue of obesity. School boards strive to address the needs of specific student populations through requirements of annual yearly progress (AYP) and the standards of the No Child Left Behind (NCLB) act. Recognizing obese students as a diverse population among school districts may lead to policies that promote and sustain physical, emotional, and social activities, creating a school culture free from discriminatory actions based on weight.

Limitations and Delimitations

This mixed methods research design provides a thorough analysis of both the qualitative and quantitative data collected. The study will provide a view into the lived experiences of obese adolescents. Although the sample size is small, it was the result of the amount of returned interest forms and students whose body measurements met the criteria. The small number allowed the researcher to spend quality time with all participants. The participants were all selected from a suburban school district in southern New Jersey. Data collected is also limited to middle school and high school experience. Another limitation of the study is the time available for survey data collection. Survey distribution and interviews were scheduled to reduce the disruption to academic instruction. School administrators and researcher collaborated to lessen the impact of lost academic time while striving to collect rich data. Finally, the study did not include data

collected from parents, although I recognize the importance of their influence on their child's self-perception and lived experience.

Organization of the Study

This research study is organized into five chapters. In chapter one, background information is introduced on the prevalence and problem of obesity among adolescents in the United States. In addition, this chapter presents the problem statement, purpose of the research, research questions, definition of terms, significance of the study, and the general limitations and delimitations.

Chapter two provides a brief review of the literature on topics related to obesity and confirms gaps in the literature. Chapter three focuses on the methodology for the investigation that includes rationale and assumptions of a mixed methods research design, strategy of inquiry, participant selection, instrumentation, methods for data collection, data analysis, data quality, and rigor. Lastly, chapter three also addresses the researcher's role in the study. Chapter four provides an overview of the research findings. Finally, chapter five addresses conclusions and implications of this study.

Chapter 2

Literature Review

As described in Chapter One, obesity is increasing among the adolescent population. Through the examination of this literature, I identify and discuss the factors that may lead to obesity, specifically those that have impact on the social, emotional, and academic well-being of obese adolescents. This chapter is divided into two distinct sections. The first part addresses the prevalence of obesity, factors that may lead to obesity, health risks associated with obesity, and the active roles and influences of ecological systems such as home and school on adolescents living with obesity. The second part of the chapter addresses the social, emotional, and academic risk associated with obesity.

Obesity

Obesity is the most widespread nutritional disease among adolescents in the United States (Paxton, Valois, & Drane, 2004). Obesity has been found to leave a lasting impact on a child's health, social development, and emotional development (Robinson, 2006). Data collected from the National Health and Nutrition Examination Survey (NHANES) suggest obesity rates among children and adolescents has nearly tripled over the past three decades (Ogden & Carroll, 2010). The prevalence of obesity among adolescents in the United States continues to rise (See figure 2-1). Being overweight throughout the adolescent years has been shown to significantly increase the threat of obesity in adulthood (Paxton et al., 2004). Since obesity is a noticeable health condition, others can gawk, comment, show bias, or discrimination against the obese individual and fault the individual for his or her weight status (Warschburger, 2005). Some studies have shown

that obese individuals are thought to be lazy and unintelligent (Puhl & Brownell, 2001; Puhl & Heuer, 2009;). Educational settings are not protected from becoming places of discrimination, bias, and victimization (Puhl & Brownell, 2001).

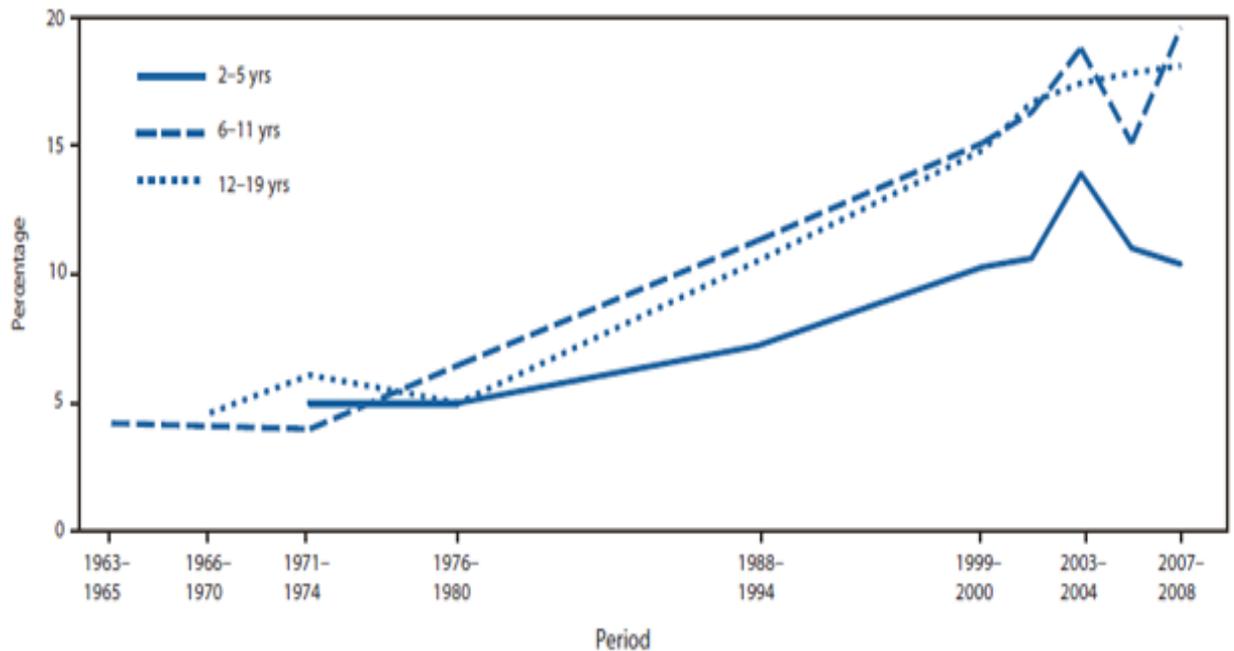


Figure 2-1: Prevalence of obesity among children and adolescents, by age group --- United States, 1963—2008

Note. “Prevalence of obesity among Children and Adolescents: United States, Trends 1963-1965 through 2007-2008” by Ogden, C. & Carroll, M. (2010). National Center For Health Statistics.

Leading Causes of Obesity

There are a variety of potential causes of the onset of obesity. Some professionals assert that a combination of genetics, environment, and behavior are all factors that contribute independently or collectively to obesity (Anderson & Butcher, 2006; Crothers et al., 2009; Dehghan et al., 2005; Kimm, 2003; Stice, Presnell, Shaw & Rohde, 2005).

Genetics

The literature reveals a strong correlation between genetics and obesity. Parental obesity doubles the risk of childhood obesity (Kimm, 2003; Stice et al., 2005). More specifically, the probability associated with maternal obesity is slightly higher than paternal obesity (Kimm, 2003). There have also been several newborn medical conditions that have been linked to the onset of obesity in the future. Small-for-gestational age babies are candidates for poor health outcomes later in life associated with insulin resistance, including Type-2 diabetes, obesity, and cardiovascular disease (Miller et al., 2004). The “thrifty phenotype” hypothesis of obesity suggests that unhealthy nutrition in fetal life is harmful for the development and function of B-cells and insulin-sensitive tissues, consequentially leading to metabolic syndrome later in life (Hales & Barker, 2001). Metabolic syndrome is a diagnosis of a combination of health conditions such as increased waist circumference, high blood pressure, high blood sugar, or high triglyceride that in combination may increase chances of cardiovascular disease (Cook, Weitzman, Auginger, Nguyen, & Dietz, 2003). Through research, Miller et al., (2004) suggests nutritional variations prematurely in life, such as overfeeding and the early introduction of high carbohydrate foods, may lead to obesity. Genes manage our bodies through the process of accumulating and using energy from the calories consumed in foods (CDC, 2011). Consequently genetics can be the factor distinguishing energy stored as fat (CDC, 2011).

Research suggests genetic factors and medical disorders can contribute to gaining and maintaining weight. In addition, genetic disorders, such as Turner Syndrome and Prader-Willi Syndrome make a child gorge because he/she is incapable of feeling full.

Medical disorders such as hypothyroidism and central nervous disorders can also onset obesity (Darwin, 2008). For adolescents, obesity triggers an onset of many adult related health concerns such as heart disease, diabetes, and depression.

Ecology and Behavior

There is a relationship between the environment and obesity (Finkelstein, Ruhm, Kosa, 2005; Judge & Jahns, 2007; Swinburn & Egger, 2002;). Physical activity is critical in the successful prevention and treatment of adolescent obesity (Judge & Jahns, 2007). The number of students who walk to school has decreased over the past thirty-five years (Swinburn & Egger, 2002; The National Center for Safe Routes to School, 2011). In 1969, 48% of students in grades K-8 walked or rode their bikes to school, but by 2009 only 13% continued to walk or bicycle (The National Center for Safe Routes to School, 2011).

Swinburn and Egger (2002) also note that the enrollment and participation of female adolescents in recreational sports is declining. High crime rate communities hinder outdoor recreational physical activity, increasing adolescents' inability to spend time outdoors (DeMattia & Denney, 2008). These same communities are affected by the easy availability and low cost of high caloric fast foods and beverages (Finkelstein et al., 2005). Researchers have acknowledged the unfeasibility of regulating adolescent behaviors out of school, but they have asserted that schools can reduce obesity rates by implementing policies that support physical activity and healthy nutrition.

Creating a healthy and supportive environment requires the assistance and active participation of family, school, and community combined. Families play an integral part of sustaining positive environments for adolescents living with obesity. Research

indicates that creating a routine family mealtime and maintaining a positive atmosphere at meals enhances psychological well being among overweight youth (Fulkerson, Strauss, Neumark-Sztainer, Story & Boutelle, 2007). Adolescents spend a significant portion of their day in school; therefore schools must analyze the role they play in contributing to or assisting in the prevention of the obesity epidemic.

Schools need to implement unambiguous policies to prevent weight based teasing and weight based discrimination (Neumark-Sztainer et al., 2002). School staff admitted that prevention programs in schools together with parental commitment strengthen a support system (Bucher Della Torre, Akre, & Suris, 2010). In addition to creating, sustaining, and maintaining a positive school culture, school officials ought to investigate the nutritional value of all foods available to students. Some researchers suggest schools should work towards providing healthy food options at appealing prices (Bucher Della Torre et al., 2010). Another concern is that students who receive a balanced free school lunch have the opportunity to purchase high-fat foods since many schools offer snack bars, fast food concessions, and vending machines (Miller et al., 2004).

There is no solitary cause for adolescent obesity, consequently influences occur at various levels (Dehghan et al., 2005; Lawrence et al., 2010). A partnership with politicians, school staff, parents, community food service, and local businesses would be advantageous toward creating a network of supporters with a shared common goal to decrease obesity among our youth population. Communities are an important influence to the success of adolescents (Dean & Huitt, 1999). Involving all stakeholders to participate in the sharing of ideas increases a program's acceptability, feasibility, and sustainability (Bucher Della Torre et al., 2010).

Health Risks

Adolescent obesity is an outstanding national concern affecting the health and quality of life of millions of children (Friedlander, Larkin, Rosen, Palermo & Redline, 2003). Overweight and obese adolescents are at risk for long-term health risks. Obesity has been linked to many health concerns such as, but not limited to, Type-2 diabetes and cardiovascular disease (Gray et al., 2009; Judge & Jahns, 2007). The diagnosis of Type-2 diabetes among obese children continues to increase (American Diabetes Association, 2000). In addition, Type-2 diabetes has been found to be associated with cardiovascular disease (Gray et al., 2009; Judge & Jahns, 2007). More than half of obese students suffer from cardiovascular health issues such as high blood pressure, high lipid levels, and irregular glucose levels (Gray et al., 2009). Obesity significantly impacts the heart and all of its main arteries (Daniels, 2006). Moreover, obese adolescents are at a higher risk for strokes and heart attacks when compared to healthy weight adolescents (Daniels, 2006).

Adolescent obesity can also be associated with respiratory conditions such as obstructive sleep apnea and asthma (Daniels, 2006; Rhodes, Shimoda, Waid, O'Neil, Oexmann, Collop, & Willi, 1995). Sleep apnea is a disorder that affects the amount of oxygen obtained during sleep. The lack of oxygen causes tiredness and behavioral difficulties throughout the day (Daniels, 2006). Adolescent obesity is an outstanding national concern affecting the health and quality of life of millions of children (Friedlander et al., 2003).

Social and Emotional Risks

The psychological and social problems that obese adolescents must endure can sometimes be greater than the health consequences of obesity (Judge & Jahns, 2007).

Living with obesity does not have to result in depression for an adolescent. Depression is not an involuntary outcome of obesity: instead the experiences and processes that the obese adolescent may endure, such as victimization, set the pathway to depression (Adams & Bukowski, 2008). Neumark-Sztainer, Story & Faibisch (1998) interviewed overweight girls to explore their experience with weight-based stigmatization. They found nearly all girls were able to recount an experience with hurtful direct and indirect comments and peer victimization. Participants identified peers, family members, and even strangers as culprits. Although it is expected that peers are often responsible for the stigmatization toward obese adolescents, parents and teachers have also been found to practice weight bias against obese students (Puhl & Latner, 2007).

Weight-based stigmatization can be described as negative weight related attitudes and beliefs toward overweight and obese adolescents that are developed through stereotypes, bias, rejection, and prejudice (Gray et al., 2009). According to the National Education Association (1994) obese students' experiences in school have been described as ongoing prejudice, unnoticed discrimination, and constant harassment from nursery school through college. Research shows that there is bias against and consequent discrimination of obese adolescents in education (Latner & Stunkard, 2003; Puhl et al., 2008; Warschburger, 2005). Victimization based on weight is noteworthy among adolescents and through multiple grade levels (Gray et al., 2009). Adolescents living with obesity are often perceived as being unmotivated, unattractive, less intelligent, pitiful, and fat (Puhl & Brownell, 2001; Puhl & Heur, 2009; Robinson, 2006). Consequently, these perceptions can induce negative social interactions and isolation.

Weight based teasing and stigmatization undoubtedly influence well-being, and even slight parental comments made by parents without intended callous may compromise the happiness of the obese child (Fulkerson et al., 2007; Latner & Stunkard, 2003). Kraig and Keel (2001) used illustrations to elicit the perceptions of children toward other children and found that they hold added negative views of children who are overweight. Even overweight children themselves are as likely as the average or thin child to have a negative opinion towards peers who are overweight. Children as young as 7 have described their overweight peers to be least liked and not sought after as playmates within the classroom (Strauss, Smith, Frame, & Forehand, 1985).

Weight based teasing has been coupled to body dissatisfaction, low self-esteem, depressive symptoms, suicidal thoughts, and suicide attempts in adolescents (Adams & Bukowski, 2008; Eisenburg, et al., 2003; Whetone, Morrissey, & Cummings, 2007). Overweight girls are more likely to exhibit adverse internal behaviors such as loneliness and sadness (Judge & Jahns, 2007). A national longitudinal study of adolescent health sampled 12,814 boys and girls, and found girls' perceptions of being overweight influenced both self-esteem and depressive symptoms (Goldfield et al., 2010; Vogt Yuan, 2010). Additional research indicated adolescents who exhibit poor self-weight perceptions reported dissatisfaction with life (Esch & Zullig, 2008).

Obese students often experience ostracism, discouragement, and sometimes violence (NEA, 1994). Educational settings are not protected from becoming places of discrimination, bias, and victimization (Puhl & Brownell, 2001). Instead, schools continue to be a breeding ground for weight-based stigmatization (Gray et al., 2009). Teachers admittedly denounced overweight students as untidy, overly sensitive, inferior

academically, and more likely to have family issues when compared to healthy weight students (Neumark-Sztainer, Story & Harris, 1999). Moreover, teachers have been found to have inferior expectations for obese students compared to their thinner counterparts across a variety of aptitudes (O'Brien, Hunter & Banks, 2007). Prejudice against obese people continues to increase (O'Brien, Puhl, Latner, Mir, & Hunter, 2010).

Research studies continue to identify obese adolescents as targets for low self esteem (Adams & Bukowski, 2008; Gray et al., 2009; Latner & Stunkard, 2003; Robinson, 2006). Obese adolescents often endure psychological and social agony, which can often be more detrimental than the health consequences (Judge & Jahns, 2007). Obese students repeatedly share negative school experiences, which include isolation, name calling, and physical altercations (NEA, 2004; Gray et al., 2009). Weight based teasing affects youths emotionally and psychosocially, which may influence body image, self-esteem, and anxiety (Eisenberg, Neumark-Sztainer, Haines, & Wall, 2006; Gray et al., 2009).

While several research studies have documented numerous social risks for adolescents living with obesity, one study suggests that it is the social risks that may lead to obesity not vice versa. Stice, Presnell, Shaw and Rohde (2005) surveyed and conducted closed interviews with 496 adolescent girls and found that depressive symptoms can be held accountable for the onset of obesity. The study implies that depressed individuals may increase food consumption to ease depression. Furthermore, any combination of the onset of obesity, such experiences and perceptions has the potential to influence academic achievement.

Academic Risks

Obese students have expressed negative school experiences as a result of verbal, relational bullying, and physical bullying (Gray et al., 2009). Name-calling, social separation, and forms of physical bullying such as pushing and hitting can have an indirect affect on academic achievement (Gray et al., 2009; Robinson, 2006). If a student is consumed with anxiety associated with social interactions, he or she may not be able to function to his or her fullest academic potential.

At the middle and high school levels, researchers have found that students at risk for obesity received lower grades, and students who were obese by age 16 finish less years of schooling than do their non-obese peers (Crosnoe & Muller, 2004; Sabia, 2007). In addition to what happens in school, there are also factors outside of school that can affect learning (Gray et al., 2009; Perez-Chada, Drake, Perez-LLoret & Videla, 2009; Robinson, 2006). In a sample of Argentinian students, researchers found that BMI and sleeplessness disorders such as obstructive sleep apnea are predictors of poor academic performance (Perez-Chada et al., 2009).

Obese students attend school less frequently than their healthy weight peers (Geier, Foster, Womble, McLaughlin, Borradaile, Nachmani, Sherman, Kumanyika & Shults, 2007; Shore, Sachs, Lidicker, Brett, Wright & Libonati, 2008). Shore et al., (2008) also suggest school absenteeism directly influences academic achievement, relationships with staff, and overall enjoyment with school. In contrast, an analysis of absenteeism in the Philadelphia school district determined overweight and obesity do not strongly influence attendance, except for extremely obese students (Rappaport, Daskalakis, & Andrel, 2011). Furthermore, in a study conducted by MacCann and Roberts (2012) of 383 eighth

grade obese students drawn from regions across the United States, obese students received lower grades; however, they did not find statistically significant differences in intelligence or achievement test scores. As a result, they concluded that the reality of lower grades might be a result of peer and teacher prejudice towards overweight and obese students rather than a deficiency in skills and capability among these students. Likewise, while surveying a national representative sample of U.S. adolescents, investigators found a correlation between self-perception of overweight status and academic achievement (Florin, Shults & Stettler, 2011). The authors reported that the perception of obesity is more influential than the medical definition of obesity in predicting weaker self reported academic achievement by students (Florin et al., 2011). Academic achievement is an important aspect of future outcomes, such as employment. Therefore school officials may need to explore policies, procedures, and programs that support adolescent well-being, self-esteem, and overall health to systemically advance academic achievement.

Conclusion

Obesity has been named the second leading cause of preventable death in the United States (Mokdad, Bowman, Ford, Vinicor, Marks, & Koplan, 2001). If American youth continue the obese weight trend, obesity will take the lead as the primary cause of death in the United States (Miller et al., 2004). Lawrence et al., (2010) argue the consequences of childhood overweight and obesity are systemic, affecting individual, families, communities, and the public. Since weight stigmatization has been found to affect adolescents' social, emotional, and academic success, further research needs to focus on the experiences of obese adolescents in the educational setting. In an effort to

research the ability of information to reduce obesity prejudice, O'Brien et al., (2010), found that anti-fat prejudice can be decreased or increased depending on the information provided about obesity. The results of the study suggests that health educators should provide information on the “uncontrollable” such as genetic and environmental causes in addition to information on the “controllable” such as treatments including diet and exercise.

Obesity is a global health epidemic. Within the next two decades, health concerns induced by inactivity, diet, and obesity are expected to increase by 37 percent in the United States, 76 % in China, and over 100 % in India (Yach, Struckler, & Brownell, 2006). Educating today's youth on the dangers of obesity can support the battle with this epidemic. Teaching our children healthy eating habits and proper exercise from an early age can assist in sustaining a healthier future for the United States. Individuals who have been identified as obese throughout childhood and adolescent years are significantly more likely to become obese in adulthood, highlighting the need for primary prevention early in life. Measures of prevention are worth the effort to protect our youth from this growing epidemic. Creating a healthy and supportive environment that will sustain change requires the collaboration and active participation between family, school, and community.

Although I have found many studies that report the risks of living with obesity, the existing information reveals several gaps in research. There is limited research that uses qualitative methods to explore the attitudes, opinions, and recommendations of adolescents' as to how they believe support from their environment can reduce the risks and consequences of living with obesity. Despite the numerous studies that have

associated weight to peer victimization and bias, relatively few discuss descriptors of supportive environments and coping strategies that were used to build resilience. The data collected through this research will reveal what obese students are experiencing and how they are coping. In addition little research has been done on the well-adjusted happy obese individual who has developed coping skills and resilience against stigmatization and bias (Bromfield, 2009).

Puhl and Heur (2009) recommend further research in the educational setting on the topic of obesity. Since there is no single cause of obesity and the epidemic continues to rise, future research needs to take a more qualitative approach and initiate investigations that will reveal successful global, national and local initiatives, programs, and support systems that have been effective in the fight against the struggles related to living with obesity. Moreover, through the review of literature, findings of the study, and future findings, I intend to identify strategies and/or procedures that will improve the school climate for obese students. The data collected throughout this research study will add to the current research and be shared with the board of education of the Southern NJ school district to encourage policy formation that protects and supports obese students.

Chapter 3

Methodology

This chapter provides an overview of the research method used, including the strategy of inquiry, participant criteria selection and process, and instrumentation as well as a discussion of how data was collected and analyzed. Finally, I discuss my role as researcher.

Purpose Statement

The purpose of this research study is to understand and explore the lived social, emotional, and academic experiences of obese adolescents attending either a middle school or high school in southern New Jersey. Participants' lived experience included details on academic achievement, relationships, and self-perception. This mixed methods investigation used both quantitative and qualitative research methods to explore attitudes about obesity among adolescent students. A written survey was distributed to approximately 1800 middle and high-school students, both obese and non-obese, to gain understanding of their perceptions on obesity. In addition semi-structured focus groups and individual interviews were scheduled with students living with obesity to better understand their experiences and challenges.

Through the analysis, dissemination, and sharing of the study outcomes, students, staff, parents, and community members will be able to respond more thoughtfully and more tactfully in specific situations involving obese students (Van Manen, 1990). Although many studies have been conducted on the psychological and physical concerns of living with obesity, little research has been performed in educational settings on the social and emotional consequences for middle school and high school aged adolescents.

Furthermore, this study will increase awareness among all students, teachers, and school administrators on the impact of remarks and behaviors toward obese adolescents.

Collectively, the data could be used to assist policymakers in facilitating school wide programs to protect obese students from becoming the victims of discrimination, bias, and/or bullies. Triangulation uses multiple research methods to increase validity (Creswell, 2007). This study used a survey to collect quantitative data and both focus groups and one on one interviews to collect qualitative data. The results and implications will be shared with the southern New Jersey School District's Board of Education and Administrators to suggest adaptations and modifications to current curriculums, policies, professional development opportunities, and support groups that work collaboratively to maintain and sustain a positive school culture for all students. Additionally, the data collected throughout the study will be shared in a newsletter with the student body, staff, and community members to help them better understand the significant impact that living with obesity has on obese students. The newsletter will be created and distributed to the school community among whom this study was conducted within three months after completion of the study.

Research Questions

This study examined four research questions connected with the experiences of obese adolescents. The questions were designed to explore the experiences of obese students, identify the attitudes shared by their peers on obesity, and determine what these experiences mean to students.

1. What are the perceptions, attitudes, and self described experiences of obese adolescents as they reflect on their lives academically, emotionally, and socially?

2. What do obese students believe would be helpful to receive from the school for support to help them counteract weight bias, bullying, and/or help in reducing body weight?
3. What are the self-reported academic, emotional, and social challenges for adolescents who are obese?
4. What are the attitudes, beliefs, and perceptions of students, both obese and non-obese toward obese classmates?

Rationale and Assumptions of a Mixed Methods Research Design

Mixed methods research unites quantitative and qualitative research to deepen the understanding of an issue (Creswell, 2009). Creswell and Plano Clark (2011) assert that the combination of quantitative and qualitative strategies together strengthen a study than either method alone. A mixed methods research design allowed the researcher to sequentially use both quantitative and qualitative approaches to collect and analyze data (Creswell, 2007).

Mixed methods research can be defined as a form of inquiry that actively invites us to participate in dialogue about multiple ways of seeing, hearing, and multiple ways of making sense of the social world (Greene, 2007). The results of the quantitative phase and qualitative phase were triangulated, which includes comparing both data sets to increase validity, during the interpretation phase (Creswell, 2009). Triangulation is encouraged in qualitative research. It can be used to produce a more accurate and valid examination of a result when each tool of measurement communicates the same results (Bogdan & Biklin, 2007).

The transformative design strategy was used to guide this mixed methods research investigation. The transformative design strategy focuses on improving the

quality of life of marginalized or under represented populations (Creswell & Plano Clark, 2011). Obese students are an under represented group within this southern New Jersey school district. The transformative theoretical framework drives this study because it supports change initiatives that strive to create and sustain social justice and equality for overweight and obese students (Mertens, 2010).

The transformative design guides this investigation and supports the goal of being responsive to the needs of obese adolescents while exploring their perceptions and lived experiences to recommend specific changes as a result of the research, to advance social justice for overweight or obese students (Creswell & Plano Clark, 2011). The transformative design produces credible results that can be used as a platform for community members, stakeholders, and policy makers (Creswell & Plano Clark, 2011).

Sequential timing was used to collect data. This occurs when there are two separate data collection phases, one preceding the next (Creswell, 2009). The collection of quantitative data and analysis occurred during phase one, followed by the collection and analysis of qualitative data in phase two. A written fixed choice survey was distributed during the first phase of the research to collect, analyze, and generalize data regarding the attitudes of students in general toward obese students. The survey was paper and pencil. Students completed the survey anonymously during homeroom in the middle school and during advisory period in the high school. In addition to the survey, students were also given a letter to take home to parents. The Letter of Informed Consent introduced the study and asked parents to grant permission if they believed their child was obese or overweight to participate in the focus group. Parents who granted permission and students who agreed to participate in the focus group returned the bottom

tear off portion of the form. The school nurse measured and weighed each interested participant to calculate BMI and determine overweight or obese criteria.

Phase two included a combination of focus group and one on one interviews. A semi-structured focus group of 5 overweight/obese male middle school students and individual interviews with 2 overweight/obese female middle school students. Interviews were conducted using open-ended questions to better understand the lived experiences of obese students attending the southern New Jersey school district. Interview and focus group participants also completed a demographic questionnaire to gather information such as age, gender, and ethnicity. Greene (2007) states the primary purpose of conducting a mixed methods study is to better understand the complexity of a social phenomenon (p 20). Combining both qualitative and quantitative methods enhanced rigor, and trustworthiness as well as engage multiple perspectives. Figure 3-1 illustrates each phase of the research.

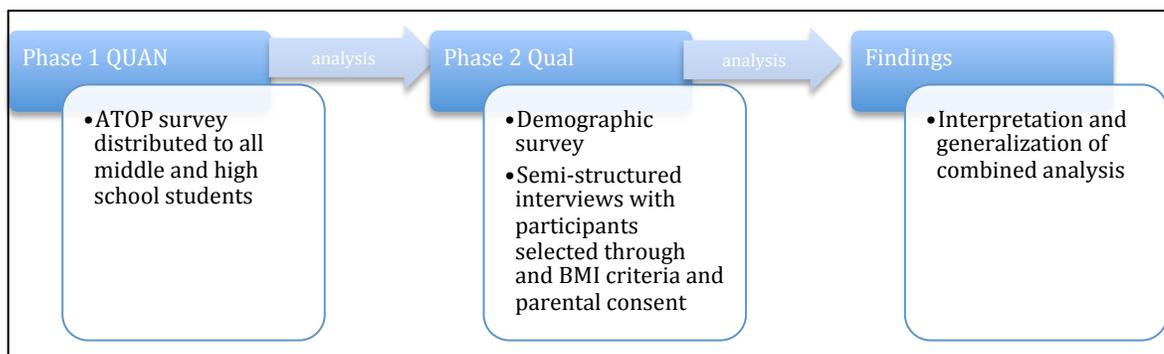


Figure 3-1- Research Phases

Adapted from Creswell, J.W. (2009). Research design: Qualitative, quantitative, and mixed methods approaches. Sage Publications: Thousand Oaks, California.

Quantitative Research

Survey design is a quantitative method used to collect data on the attitudes, perceptions, and/or opinions of a population by investigating a sample of that population (Creswell, 2009). In addition, survey research can be used as a rapid way to collect data from a large amount of participants in a short amount of time (Alreck & Settle, 2004). For this investigation, a survey was used as a tool for gathering information and exploring the perceptions of obesity. Attitudes Toward Obese Persons (ATOP), the fixed choice survey provided quantitative data on the attitudes of obesity among all middle school and high school students at the southern New Jersey suburban school district. All students, obese and non-obese students were given the opportunity to complete an ATOP survey. Surveys are advantageous because they provide the opportunity to collect data from a substantial population at the same time with a prompt turnaround rate (Creswell, 2009). Quantitative methods provided the researcher with data that shows what the attitudes, beliefs, and perceptions of middle and high school students located at the Southern New Jersey school district are toward obesity and overweight or obese peers.

Qualitative Research

Qualitative research aims to explore and understand the link individuals or groups may have to a social problem (Creswell, 2009). This research approach results in data collection in the natural environment, data analysis that is used by the researcher to uncover themes, and interpretations of data to create a better understanding of the problem being studied (Creswell, 2009). Qualitative methods are effective for acquiring data that reveals perceptions, outlooks, and experiences from the participants. Qualitative research embodies four basic assumptions. First, that the collection of data happens in the

natural environment; Next the researcher is also thought be to the most important means for data collection; Then qualitative researchers tend to collect data using multiple methods, which may include interviews and observations; Finally, qualitative researchers maintain focus on learning, understanding, and interpreting the meaning participants' maintain on the issue being studied (Creswell, 2007). Focus groups are a form of data collection, which gets the most out of participant interaction, encouraging participants to talk to one another, share ideas, and comment on experiences and points of view (Kitzinger, 1995; Morgan, 1996). Focus groups also provide the setting to collect data from multiple participants at one time, unlike an individual interview (Morgan, 1996).

Participants

The participants in this research study were all enrolled at a southern New Jersey school district. According to the New Jersey Department of Education District Factor Group, the district is rated "FG", the fourth highest of eight groupings, which measure socioeconomic status. Study participants attend two of the four schools located in the district, Middle School or High School. The survey research sample included more than 1400 students.

In order to obtain rich and thick information about the attitudes toward obese students and the lived experience of obese students, I chose purposeful sampling. This means that I selected individuals for the study because they purposefully informed my understanding and added new information to the issue being studied (Creswell, 2007). As the researcher, I made the decision to offer all middle school and high school students the opportunity to complete the survey, and the type of sampling that was used to select participants.

Middle school students were included in the study because they provide a current perspective on early adolescent experience. High school students were included in the study because they provide a current perspective on later adolescent experience. Criterion sampling ensured that all selected participants met the required criteria to participate in the study (Creswell, 2007). Establishing criteria promises a selection of participants who will provide information relevant to the purpose of the study.

During research phase one, the quantitative phase, the only criterion was current enrollment in the middle school or high school in the southern New Jersey school district. Phase one consisted of ATOP survey distribution, ATOP survey collection and Letter of Consent form distribution and collection. This was completed on the same day with the exception of consent letters. The students had a three-week period to return consent forms. During research phase two, the qualitative phase, three essential participation criteria were met; current enrollment in the middle school or high school in the southern New Jersey school district, returned consent form with parental approval to participate, and identification as obese through the measurement of BMI by the school nurse.

Approvals

Following the research purpose and design, I needed to gain approval from various groups. I began seeking approval by submitting a research proposal to the superintendent of the southern New Jersey school district. He granted initial consent and agreed to present the research study and design to the Board of Education during their March 2011 meeting for board approval. Next, I sought approval from the Institutional Review Board (IRB) at Rowan University. The IRB application was submitted March 2011 and approved May 2011. An extension was granted November 2012. Subsequent to

approval of the research proposal, I contacted both Middle School and High School building administrators to discuss procedures and timelines for the distribution of the Letter of Informed Consent (appendix A) and ATOP Survey (appendix B),

Instrumentation

Data collection required the use of four separate protocols. First, a written survey, ATOP was distributed to the entire middle school and high school student body (appendix B). ATOP was developed by Allison, Basile, & Yuker (1991). A request was sent to the author of ATOP to use the survey for this research project and permission was granted on March 4, 2011. Second, all students received a Letter of Informed Consent (appendix A). Any overweight or obese students who were interested in participating in the focus group had a parent sign and the tear off bottom was returned to school. Students who returned the bottom portion were measured and weighed by the school nurse. Students who met the criteria were selected and invited to participate in gender separate focus groups and individual interviews. Each participant completed a demographic questionnaire prior to the focus group/interview (appendix C). An interview protocol was adapted from Neumak-Sztainer, Story, and Faibisch (1998) to inform the research questions and elicit data from participants (appendix D). The original interview protocol was developed to explore experiences with African American and Caucasian girls. I adapted the questions to meet the needs of both genders and omitted the theme of race. A request was sent to the author to use and adapt the interview protocol to meet the needs of the research study and permission was granted on March 4, 2011. Focus group and interviews were semi-structured and tape-recorded to ensure accuracy during

transcriptions. Transcriptions were coded and bracketed as a means of identifying themes for further analysis.

Attitudes Toward Obese Persons (ATOP)

Created by Allison et al., ATOP is a 20-item 6-choice Likert-type scale (1991). Participants rate each item on a scale from -3 (strongly disagree) to +3 (strongly agree). Lower scores show increasingly negative attitudes, and higher scores show increasingly positive attitudes toward obese people. Allison and colleagues established that the ATOP has a reliability range of .80 to .84 using the coefficient alpha. This scale was specifically used to elicit information on the fourth research question, what are the attitudes, beliefs, and perceptions of students, both obese and non-obese toward obese classmates?

Focus Group and Interview Protocol

The focus group and interview protocol instrument includes 10 central questions, with 8 out of the 10 having sub-questions. The design was adapted from Neumak-Sztainer et al., (1998) and the goal was to elicit the meaning and understanding of the experiences related to obese adolescents. Specifically, the interview protocol questions were used to answer the first three research questions, which focus on the perceptions, beliefs, and experiences of overweight and obese students as related to their academic, social, and emotional lives.

Sessions were semi structured. A semi-structured interview is unrestricted, which welcomes participant responses to bring about new ideas during the interview (Glense, 2006). Semi structured interviews feature open-ended questions that promote discussion of the research topic while giving participants freedom to explore an idea in more detail (Britten, 1995). This type of interview allowed me to be prepared to explore new ideas as

unexpected information developed during the interview process (Glense, 2006).

Interview questions were memorized to reduce time lost during transitions from each question (Creswell, 2007). I was the sole researcher to conduct all of the interviews. Finally, interviews were tape-recorded to ensure accuracy of all responses during transcriptions. I also maintained a notebook for note taking during the focus group and interviews to reference for accuracy during the process of transcribing. Table 1 shows the relationship between the research questions, interview protocol questions, and ATOP questions.

Demographic Questionnaire

The demographics questionnaire included 8 items, which were name, age, ethnicity, gender, grade level, number of siblings, household size, and weight. Only the students participating in phase two of the research study completed this questionnaire prior to the start of the interview.

Table 1*Correlations between research questions, interview protocol and ATOP survey*

Research Questions	Interview Protocol Question	ATOP Survey Questions
1. What are the perceptions, attitudes and self described experiences of obese adolescents as they reflect on their lives academically, emotionally and socially?	IPQ 2,3,7,8,10	
2. What do obese students believe would be helpful to receive from the school for support to help them counteract weight bias, bullying and/or help in reducing body weight?	IPQ 5,6	
3. What are the self-reported academic, emotional and social challenges for adolescents who are obese?	IPQ 1-4,7,9	
4. What are the attitudes, beliefs and perceptions of students, both obese and non-obese, toward obese classmates?		ATOP Q1-20

Data Collection

On December 17, 2012 I placed an envelope containing the ATOP survey and Letter of Consent form in each middle school homeroom teacher's mailbox for distribution that morning. The package also consisted of directions to complete survey and instructions on how to return surveys. Surveys were completed in homeroom. Students were asked not to write their names on the survey, keeping all responses

anonymous. Middle school surveys were printed on pink paper allowing me the opportunity to distinguish middle school respondents from high school respondents. In addition, a letter of consent was provided to all students. All letter of consent forms were due back January 9, 2013.

On December 18, 2012 I placed an envelope containing the ATOP survey and letter of consent form in each high school teacher's mailbox that was scheduled for an advisory period, for distribution that morning. The package also consisted of directions to complete survey and instructions on how to return surveys. Surveys were completed during advisory period. Students were asked not to write their names on the survey, keeping all responses anonymous. High school surveys were printed on yellow paper allowing me the opportunity to distinguish high school respondents from middle school respondents. In addition, a letter of consent was provided to all students. All letter of consent forms were due back January 9, 2013.

At each school building, during morning announcements the secretary reminded all teachers to distribute surveys. Afternoon announcements included a reminder to return all folders to the main office. Email reminders were also sent to staff. I visited the main office of each school the following day to collect folders. At the middle school, forty-two folders were distributed and thirty-eight were returned. At the high school, fifty folders were distributed and forty-five returned. I followed up with secretaries for a week to check if additional folders were returned.

On January 11, 2013 I visited the main office of each school to collect all letter of consent forms returned. The forms returned granted permission for students who wished

to participate in phase two. At the high school 6 forms were returned. At the middle school 31 were returned. The secretaries at each building sent out daily reminders and emails to return forms. The next step was to verify that students who returned the consent form met the weight requirements. I worked with the school nurse from each building. I provided each with a list of students who returned the letter of consent. Both nurses weighed and measured each student. The Nurses and I worked together to input the data into the Center for Disease Control (CDC) online BMI calculator. The CDC's calculator requires date of birth, weight, and height to calculate BMI. At the high school, two female students met the criteria. At the middle school, eight male and four females met the criteria.

Researchers suggest focus groups aiming for homogeneity among participants can benefit discussions of shared experiences (Kitzinger, 1995; Morgan, 1996; Smithson, 2000). To gather quality data, I planned for 3 separate focus groups; two female high school students, eight male middle school students, and four female middle school students. The ideal focus group size should be between 4 and 10 participants (Kitzinger, 1995; Morgan, 1996). On February 14, 2013 all of the 14 students were invited to attend 1 of 3 scheduled focus groups. Focus groups are used as a data collection method useful for exploring participant's experiences using the group's interaction as a way to encourage participation (Kitzinger, 1995). At the high school, neither of the 2 female students attended the scheduled group. A 2nd date was scheduled and again, neither attended. At the middle school, 5 of the 8 male students attended the focus group. The meeting was held in a conference room and lasted an hour. I scheduled an alternate date for those who did not attend, but neither attended the 2nd date. At the middle school, 1 of

the 4 girls invited, attended the focus group meeting. Unexpectedly, what was planned to be a focus group became a one on one interview. I scheduled an alternate date for those who did not attend and again 1 girl attended, creating another one on one interview.

Although focus groups and individual interviews are both qualitative techniques each share separate benefits. Focus groups provide an environment for participants who may be reluctant to share their stories alone to engage in interaction with others sharing similar experiences and points of view (Kitzinger, 1995; Morgan, 1996). In contrast, individual interviews provide an opportunity for participants to share in depth experiences that may be too emotional to share in a group setting (Morgan, 1996). Together the focus group and individual interviews provided valuable qualitative data.

Data Analysis

Quantitative Data

Following data collection, I determined significance, classification and categorization of all data. To manage the large number of ATOP surveys collected, I placed each survey in one of two binders. Pink surveys went into the middle school binder and yellow surveys went into the high school binder. Each survey was also numbered, which helped to keep track of all surveys collected. I entered the data into the Statistical Package for Social Science Software (SPSS). Using SPSS Statistics 19 software, ATOP totals for each survey were identified, as were the minimum and maximum scores of each survey question. Additionally, SPSS was used to compare middle school and high school attitudes toward obesity. The data entered into SPSS was shared for confirmability with the chairperson overseeing my research project and a

fellow professional colleague who also used the ATOP for a research study.

Confirmability is the process by which data can be confirmed by an additional person (Toma, 2006). Several hard copies of surveys were selected and reviewed to confirm they matched the data entered into SPSS.

Qualitative Data

Bogdan and Biklen (2007) suggest reading through all transcribed interviews several times before establishing themes or codes. Transcriptions were read through three times to identify reoccurring themes. I also reviewed all notes taken during the interviews. My first step in analysis was to “tag” data, create meaning and begin construction of code mapping (Anfara, Brown & Mangione, 2002). A valuable technique of data review is code mapping, described by Ryan and Bernard (2003) as extracting the key words in context and counting how many times they appear to create word lists that help to establish themes. Another way to look for themes is through repetition. Ryan and Bernard (2003) refer to repetition as topics that continuously occur over again within the data. These topics are evidence of an emerging theme within the data. For my project, repetitions in data allowed me to make connections with individual responses. I “pawed” through transcriptions to locate words and phrases that were repetitious. Pawing involved handling text multiple times and marking it up with different color highlighters (Ryan & Bernard, 2003).

To continue the validity of emerging themes transcriptions were reviewed to connect quotes and expressions. Ryan and Bernard (2003) describe this technique as cutting and sorting. I identified and cut out quotes and repetitious words, glued them on to an index card, made reference to which they came from, spread them out on the floor,

and began to sort them into piles. Making a pile of key words and quotes created a visual aide for comparisons, themes, and repetitions. All coding schemes were logged in a codebook as a means of methodological organization (Glesne, 2006). According to Creswell (2009) a codebook during qualitative analysis can be useful while sorting and arranging information.

Data Quality and Rigor

Throughout the study I maintained trustworthiness and authenticity of data collected. In order to present valid, credible, and transferable information, the collection and analysis of data needs to be grounded in trustworthiness (Toma, 2006). Findings throughout the research stages were analyzed to make meaning of the lived social, emotional, and academic experiences of obese adolescent students and advocate for change. The findings from phase one ATOP survey and phase two focus groups and individual interviews provided data to triangulate. Toma (2006) suggest using multiple sources of data to create inferences makes a research study more credible. This mixed method design provided a means of examining and associating data sequentially in a way that could not be achieved by either source of quantitative or qualitative alone, which brought strength to the research project.

Qualitative data obtained through the one on one interview transcriptions were checked for accuracy by the participants through member checking (Glesne, 2006). The information was shared with each participant to confirm the accuracy. Peer debriefing was also used as a method to ensure trustworthiness. Creswell (2009) asserts peer debriefing involves finding an individual who will evaluate the qualitative data assuring that the data has been assessed by someone other than the researcher. The Guidance

Counselor at the Southern New Jersey Middle School served as such person. This measure confirms validity and rigor.

My Role as Researcher

As a teacher of the southern New Jersey school district I have first hand experience with how the epidemic of obesity has affected the students at the middle school. Glesne (2006) asserts that qualitative researchers often take on a role during their study. During this project I have taken on the role of advocate, a person who stands up for a cause (Glense, 2006).

I have personally been involved with situations concerning obese students. During the 2010-2011 academic school year, I performed homebound instruction on an obese female student who suffered from a variety of medical conditions including severe asthma and as a result missed many days of school. Moreover, on the first day of school during the 2011-2012 academic year, I witnessed an obese male student crying in the hallway, refusing to enter the classroom because he did not fit into the class desk. Both incidences triggered an inquiry to learn more about the obese adolescent population and more importantly to acquire and share data with the students, administrators, staff, and BOE members that will promote a healthier school environment that is sensitive to the issues of adolescent obesity and the needs of this particular population.

Chapter 4

Findings

This research study investigated middle and high school students' attitudes toward obese students and explored the lived social, emotional, and academic experiences of obese adolescents. The quantitative data were analyzed using descriptive statistics. Thematic analysis was used to present and discuss findings from the qualitative data. This chapter is presented in four major sections: (1) A description of the sample participants and quantitative data collection procedures; (2) Results of a quantitative data analysis, including a discussion of the fourth research question; (3) A description of sample participants and qualitative data collection procedures; and (4) Results of a qualitative data analysis, including a discussion of the first three research questions.

Participants and Quantitative Data Collection Procedures

The total population invited to participate was 2,033 middle and high school students from two schools in southern New Jersey. The middle school population totaled 947 students. Of the total middle school population, 78 students were absent on the day the survey was completed and 9 students were found ineligible to complete the survey based on their special needs classroom placement (in these cases the school Principal and special education teacher believed that the nine students' IQ's, mental health, and or physical health would prevent them from comprehending the procedures to complete the ATOP, which is why they were not included). After removing the ineligible students from the survey pool, the survey was distributed to 860 middle school students. Seven hundred eighty nine completed ATOP surveys were returned from the middle school and are included in this study.

The high school population totaled 1,284 students. Of the total high school population, 1,086 students were registered for an advisory period in which the surveys were distributed. Sixty-three students were absent on the day the survey was completed. The survey was distributed to 1,023 high school students. Six hundred fifty-nine completed ATOP surveys were returned from the high school and are included in this study. Table 2 provides a summary of the participant totals.

Table 2

Participant Totals in Frequencies

	High School	Middle School
Total Population	1,284	947
Number Absent	63	78
Number of Ineligible Students	198	9
Number of Eligible Students	1,023	860
Number of Participants Included in this Study	659 (51%)	789 (83%)

A total of 1,448 out of a possible 1,883 students from both the middle and high school completed the survey, yielding a 77% response rate. All data collection was anonymous; surveys did not contain any identifiers for individual students. If more than 25% of a survey was incomplete, the survey was deemed as having sufficient missing data to compromise the overall data analysis and no score was calculated. This decision

was made by the chairperson of my dissertation and me, as the creators of the ATOP survey did not recommend a cut-off point for missing data at which a survey should not be included in the analysis.

Attitudes Toward Obese Persons

The ATOP is a 20-item 6-point Likert Scale survey that measures both positive and negative attitudes of an individual toward obesity. The data collected in this study produced a Cronbach Alpha of $r = .604$, indicating a moderate degree of reliability between the survey items for this sample. Alpha is a commonly used index of test reliability in research studies (Tavakol & Dennick, 2011). This result was lower than the original study of the ATOP instrument, which reported reliability between .80-.84, when using the coefficient alpha (Allison et al., 1991).

This scale measures the attitude toward obese persons by the frequency of responses for each item on the survey. Participants completed the ATOP rating each question -3 (strongly disagree) to a +3 (strongly agree). The ATOP total score for each participant has a possible range of 0-120. This study produced a range of 6-117. Table 3 shows the frequency of responses for the ATOP items for the total sample (N= 1,448). The highest frequency (mode) is in bold.

Table 3*Response Frequencies to Items on the ATOP for the total sample (N=1,448)*

<i>Items on ATOP</i>	SD	MD	SLD	SLA	MA	SA	I
1. Obese students are happy as non-obese students.	193	249	306	279	254	166	1
2. Most obese students feel that they are not as good as other people.	95	148	193	405	365	241	1
3. Most obese students are more self-conscious than other people	94	82	178	306	380	401	7
4. Obese students cannot be as successful as other people.	955	214	95	93	40	49	2
5. Most non-obese people would not want to marry anyone who is obese.	288	246	272	304	197	138	3
6. Severely obese students are usually untidy.	282	268	316	308	169	95	10
7. Obese students are usually sociable.	94	174	287	367	335	190	1
8. Most obese students are not dissatisfied with themselves.	141	252	348	375	205	120	7
9. Obese students are just as self-confident as other people.	139	236	274	299	260	240	0
10. Most people feel uncomfortable when they associate with obese students.	468	279	227	243	127	99	5
11. Obese students are often less aggressive than non-obese students.	244	236	387	268	181	119	13
12. Most obese students have different personalities than non-obese students.	276	210	215	274	246	220	7
13. Very few obese students are ashamed of their weight.	228	346	249	231	206	185	3
14. Most obese students resent normal weight students.	270	266	305	325	173	95	14
15. Obese students are more emotional than non-obese students.	177	215	257	310	275	210	4
16. Obese students should not expect to lead normal lives.	770	244	156	135	65	71	7
17. Obese students are just as healthy as non-obese students.	540	307	265	135	93	104	4
18. Obese students are just as attractive as non-obese students.	201	253	273	245	238	227	11
19. Obese students tend to have family problems.	290	259	305	305	169	111	9
20. One of the worst things that could happen to a person would be for him/her to become obese.	405	187	180	214	186	269	7

*Note. Highest achieved scores for each item are in bold. SD= Strongly Disagree; MD= Moderately Disagree; SLA= Slightly Agree; MA Moderately Agree; SA= Strongly Agree, I= Item Incomplete

Scoring

The scoring of the ATOP was entered into SPSS following the instructions by Allison et al. (1991) to multiply the response to the following questions by -1, as these items were written in a negative perspective and needed to be made positive for uniform analysis with the positive-perspective items: Question 2 through 6, questions 10 through 12, questions 14 through 16, and questions 19 through 20. The value of each item was added together. To ensure all scores equal a positive number, the sum was then added to 60 to find the total value (Appendix E). Each survey was numbered for tracking and a professional colleague rechecked scores for accuracy. Possible total scores for each ATOP survey range between 0-120, with lower scores representing more negative attitudes and higher scores representing more positive attitudes (Allison et al., 1991). A score of 60 is neutral, as it is halfway between the most negative and most positive possible rating.

The calculated score from all survey respondents ranged from 6-117. When considering all of the survey items collectively, the *mean* score for this study was 64.28 and the *mode* 65, indicating that students who completed the survey were overall slightly positive in their attitudes toward obesity and obese students (SD= 16.173; See Table 4).

Table 4

Summary of Overall ATOP Scores for all Students (middle and high school)

Overall Statistics	N	Min.	Max.	Mode	Mean
	1448	6	117	65	64.28

The formula to calculate an ATOP score places participants in one of two groups, positive attitudes towards obese persons or negative attitudes towards obese persons. ATOP scores of students were collapsed into two categories, positive attitudes toward obesity and negative attitudes toward obesity. In the following sections, the total sample is divided into two or more sub-samples and compared on this dichotomous score.

Attitudes of Middle School vs. High School Respondents

Table 5 shows a comparison of scores between the middle school and high school respondents. A visual inspection of these scores indicates few differences in attitudes between the two groups. This observation is verified by a Pearson Chi Square calculation, which showed no significant statistical difference between the two groups on the collapsed attitude score ($\chi^2=103.631$, $df= 96$, $p=.279$).

Table 5

ATOP Scores of Middle School and High School Respondents

	N	Minimum	Maximum	Median	Mean
High School	659	6	117	64	63.75
Middle School	789	14	114	65	64.72

Gender Differences in Attitudes

Table 6, shows a comparison of ATOP scores by gender of survey respondents. Visual inspection indicates little difference between female and males in their mean and

median responses. A Pearson Chi Square was performed to test the difference between the two groups. The analysis showed no significant statistical difference between male and female participants' attitudes toward obese persons ($\chi^2=161.262$, $df=192$, $p=.948$). Both male and female students share a slightly positive attitude toward obese persons. Although the overall total scores for each group are similar, sentence stem 2- *most obese students feel that they are not as good as other people*, revealed a significant difference between male and female students, using the Pearson Chi Square analysis ($\chi^2=35.127$, $df=10$, $p=00$). Female students overwhelmingly strongly and moderately agreed.

Table 6

ATOP Scores of Male and Female Respondents

	N	Minimum	Maximum	Median	Mean
Male	703	6	117	64	64.01
Female	710	20	108	65	64.84

Results of Analysis of Attitudes, Beliefs, and Perceptions Toward Obese Students

Research question four “*What are the attitudes, beliefs and perceptions of students, both obese and non-obese, toward obese classmates*” was analyzed using the frequency responses for the ATOP. The mean score for the ATOP for this study was 64.28, indicating that, overall, students have a slightly positive attitude toward obesity and obese students. More than 65% of the middle school and high school students of the Southern New Jersey school district believe that obese students can be as successful as

normal weight counterparts. In addition more than 30% of the participants also agreed they are comfortable associating with an obese person.

Table 7

Most Frequent Response and Percentages of ATOP Statement of Middle And High School Students.

ATOP Statement	Most Frequent Response	Percentage of Students Providing this Response
Obese students are as happy as non-obese students	Slightly disagreed	21%
Most obese students feel that they are not as good as other people	Slightly agreed	28%
Most obese students are more self-conscious than other people	Strongly agreed	28%
Obese students cannot be as successful as other people	Strongly disagreed.	66%
Most non-obese people would not want to marry anyone who is obese	Slightly agreed.	22%
Severely obese students are usually untidy	Slightly disagreed.	22%
Obese students are usually sociable	Slightly agreed.	25%
Most obese students are not dissatisfied with themselves	Slightly agreed	26%
Obese students are just as self-confident as other people	Slightly agreed	21%
Most people feel uncomfortable when they associate with obese students	Strongly disagreed	32%
Obese students are often less aggressive than non-obese students	Slightly disagreed	27%
Most obese students have different personalities than non-obese students	Strongly disagreed	19%
Very few obese students are ashamed of their weight	Moderately disagreed	24%
Most obese students resent normal weight students	Slightly agreed	22%
Obese students are more emotional than non-obese students	Slightly agreed	21%
Obese students should not expect to lead normal lives	Strongly disagreed	53%
Obese students are just as healthy as non-obese students	Strongly disagreed	37%
Obese students are just as attractive as non-obese students	Slightly disagreed	19%
Obese students tend to have family problems	Slightly disagreed Slightly agreed	21% 21%
One of the worst things that could happen to a person would be for him/her to become obese	Strongly disagreed	28%

Qualitative Data Collection Procedures

All students who received an ATOP survey were also given a letter of consent inviting them to participate in a focus group discussion if appropriate. In the letter I introduced myself, the purpose of the research project, and invited students who perceived themselves to be overweight or obese to participate in a focus group. The letter was designed with a detached bottom option for students to show interest and parents to grant permission (informed consent). I received 6 interest forms, with parental consent back from the high school and 31 from the middle school. Next, I met with both the high school nurse and the middle school nurse to share student names and request that each be measured for height, weight and BMI to identify whether they met the criteria of being overweight or obese in order to participate in the focus group. The high school nurse found 2 female students who met the criteria. The middle school nurse found 8 male and 4 female students who met the criteria. All students who met the criteria were invited to participate in one of three gender separate focus groups: 8 middle school boys; 4 middle school girls and 2 high school girls. Researchers suggest establishing focus groups that are as homogenous as possible including variables such as age and gender (Kitzinger, 1995; Morgan, 1996).

I sent invitations (Appendix F) to the homeroom teachers of each of the 14 students eligible for the focus group on February 14, 2013 and reminders were sent the morning of each scheduled group. Middle school boys were scheduled for February 19, 2013, middle school girls were scheduled for February 20, 2013, and high school girls were scheduled for February 28, 2013. The invitation included time, location, and a

reminder that students would be given a \$10 target gift card for their time and participation.

Five of the eight middle school boys attended the focus group. Four days before the scheduled date, I received an email from one of the boy's parents. The email described how he felt uncomfortable, self-conscious, and sad about his weight and was too embarrassed to attend the focus group. I responded through email and assured her that I understood and respected his decision not to attend.

One of the four middle school girls attended. Having just one participant changed the format of the scheduled focus group into a one on one interview. On the morning of February 21, 2013, I sent a 2nd invitation to the 2 boys and 3 girls who did not attend the first set of scheduled groups. On February 22, 2013 neither boy attended the 2nd scheduled group. On February 25, 2013 one girl attended, creating another one on one interview. On February 28, 2013 neither high school girl attended. A 2nd date was scheduled and students were invited again. On March 5, 2013, none of the high school students attended. Table 8 further illustrates the demographic statistics for each participant. Each participant's self-reported weight was lower than his or her weight recorded by the school nurse.

Table 8*Participant Demographics*

Participant	Gender	Age	Ethnicity	Grade level	Number of siblings	Total persons in household	Self-reported weight	Actual weight
Ted	Male	12	Asian	6th	1	4	100	130
Ray	Male	12	White	6th	1	4	185	197.5
Jason	Male	11	White	6th	0	5	125	132
Jack	Male	12	White	6th	0	4	156	168
Sam	Male	13	White	8th	1	4	139	140
Olivia	Female	12	African American	6th	3	6	120	125
Jessica	Female	13	Hispanic	8th	2	5	130	140

Middle School Boys

Eight middle school boys were invited to participate in a semi structured focus group on February 19, 2013. Of the 8 male students invited, 5 attended the focus group. The session lasted 45 minutes. To manage data and protect identities, each participant was assigned a pseudonym. Ted, Ray, Jason, Jack and Sam attended the focus group to share their lived experiences.

Ted

Ted is a 6th grade boy who self-reported his weight at 100 pounds. He measures 60 inches and weighs 130 pounds. His BMI is 25.5, placing him in the 97th percentile.

Ray

Ray is a 6th grade boy who self-reported his weight at 185 pounds. He measures 62 inches and weighs 197.5 pounds. His BMI is 36.1, placing him above the 99th percentile.

Jason

Jason is a 6th grade boy who self-reported his weight at 125 pounds. He measures 60.75 inches and weighs 132 pounds. His BMI is 25.1, placing him in the 96th percentile.

Jack

Jack is a 6th grade boy who self-reported his weight at 156 pounds. He measures 62 inches and weighs 168 pounds. His BMI is 30.8, placing him above the 99th percentile.

Sam

Sam is an 8th grade boy who self-reported his weight at 139 pounds. He measures 59.5 inches and weighs 140 pounds. His BMI is 27.8, placing him in the 97th percentile.

Emergent Themes

During the transcribing and coding process, emergent themes were uncovered through pawing, cutting, sorting, and code mapping (Ryan & Bernard, 2003). Cutting and sorting involved creating lists of a selection of repetitive words and phrases. Codes emerged from the repetition of ideas to establish themes. The emergent themes for the middle school male participants were identified as sports, school, and family. Presenting the findings and data collected from the participants by theme allowed me to compare and contrast their attitudes and experiences. Figure 4.1 illustrates the overlapping themes.

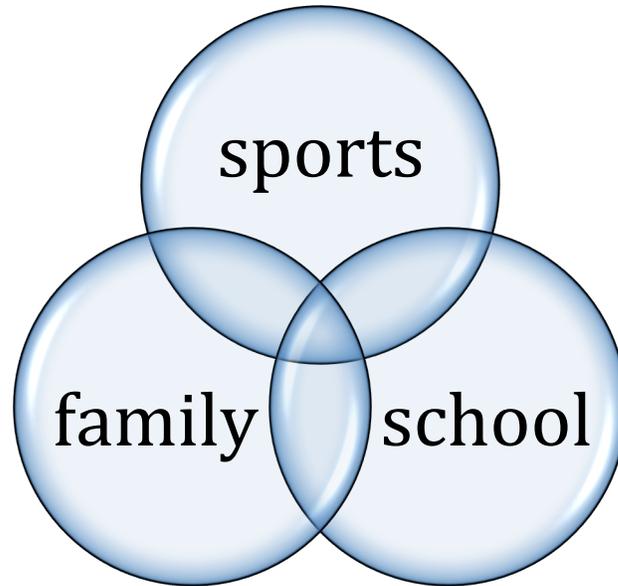


Figure 4-1 Middle School Male Participants Emergent Themes

Sports

The theme of sports emerged from the focus group. All five of the participants spoke in detail about the effect their weight has had on their participation in sports, both in a positive and negative way. All of the boys agreed that running during physical education class and sports, such as soccer and baseball, creates a major challenge for them. They all agreed that their weight makes them run slower and tire quickly. In contrast, three of the five participants described how their weight has contributed to the success of a particular position in a sport.

Jason stated:

I play baseball and hockey a lot and because I can't run as fast, I get stuck as

the goalie and catcher but I have learned to love those positions. When I play hockey I'm goalie and everyone always screams, "I can't score on you because you cover the whole net", that's really good for me.

Ray stated:

Baseball might be affected in my future because if I don't start losing weight I may not be able to keep up but right now I'm a catcher so when the pitcher throws the ball and the kids foul it off it usually hits me, no matter what it always hits me center mass or grazes my head because I'm covering a larger area.

Jack stated:

When I play football, everyone loves that I can take up the whole front line. I'm always picked first to play football.

School

The focus group participants discussed interactions at school between teachers and students, and among the students themselves. All five of the participants agreed that their teachers do not treat them differently because of their weight. When I asked protocol question 9, "Does your weight affect your relationship with your teachers?" Jason added, "That's so weird that you even asked that, of course it doesn't" and the other four boys nodded and agreed. While participants agreed their relationships with teachers are not affected by the status of their weight, they all admit to experiencing ridicule in the form of jokes by their peers.

Each of the participants mentioned "other kids" and sometimes "friends" say jokes about weight, referring to them as "fat jokes".

Ted admitted:

When people say a joke about me, it doesn't hurt my feelings. Sometimes I even laugh with them. I know they really don't mean it.

Ray and Jason both added:

When people say jokes about me I just ignore them.

While discussing how weight may affect school relationships and academics, Jason, Jack, and Sam all agreed that their weight contributes toward tiredness throughout the school day, which could affect academic achievement in the future. Each boy shared ideas of what the school could do to help support overweight students overcome some of the difficulties encountered which include tiredness, food selection, and lack of exercise. Each of the boys agreed the ideas could encourage all students to adopt healthier habits which can help overweight students reduce body mass.

Ted stated:

It would be nice to have recess so we could all have an opportunity to run for daily exercise. Indoor sports clubs, all year could also help us stay in shape.

Ray added:

Having recess would definitely help us run every day. We would get daily exercise and stay active for a part of the day.

Jason stated:

I agree recess could help because running will get our blood flowing which will not only help with exercise but the pumping blood will help us stay awake and not feel so tired. Also better lunches could help. Not only better for you but better tasting. If they tasted better maybe more kids would buy it instead of packing unhealthy snacks.

Jack excitedly discussed a program he saw on television:

It would be nice if we had Play 60 a program the NFL is trying to get schools to be a part of. It encourages kids to exercise and stay active for 60 minutes a day. Sometimes they have NFL players and coaches visit the schools to show them exercises.

Sam stated:

I definitely think recess can help with weight loss. The more students move around the healthier they can be. I also think more afterschool sports clubs can help stay healthy.

Family

The theme of family was mentioned frequently among the male focus group participants. All five male participants mentioned parents, siblings, and/or extended family members as having an affect, either a positive or negative.

Positive attitudes. Four out of the five male participants described the positive role their family plays on their exercise habits and efforts to achieve a healthy weight

Ted added:

My mom makes the whole family eat vegetables. They are part of all our meals. Chips and soda are limited. She makes us drink water.

Ray stated:

My mom always encourages sugar free drinks and eating healthy.

Jason added:

Our family bought a dog so now I have been exercising more with my dog outside. My dad also spends a lot of time playing sports with me.

Jack stated:

My uncle lives with us now and he encourages me to exercise.

Negative attitudes. Three out of the five male participants described the negative comments their family members have made about their weight status. Jack identified his cousins as family members who make fun of him and tease him about his weight.

Ray admitted:

My brother can be really mean sometimes. He likes to mean about my weight. He makes jokes to hurt my feelings.

Sam added:

When my dad makes jokes about my weight and tries to call me fat, I tell him to look at himself in a mirror.

Middle School Girls

Four middle school girls were invited to participate in a semi structured focus group on February 20, 2013. Of the 4 female students invited, 1 attended. Another date was scheduled and 1 more female student attended. The one on one interview sessions lasted 20 minutes. To manage data and protect identities, each participant was assigned a pseudonym. Olivia and Jessica shared their lived experiences.

Olivia

Olivia is a 6th grade girl who self-reported her weight at 120 pounds. She measures 61.5 inches and weighs 125pounds. Her BMI is 23.3, placing her in the 92nd percentile.

Jessica

Jessica is an 8th grade girl who self-reported her weight at 130 pounds. She measures 60 inches and weighs 140. Her BMI is 25.4, placing her in the 92nd percentile.

Emergent Themes

The transcriptions for the middle school female one on one interview were coded through the same processes as the male focus groups. Codes emerged from the repetition of ideas to establish themes. The emergent themes for the female participants were identified as friends, school, and family. Presenting the findings and data collected from the participants by theme allowed me to compare and contrast their attitudes and experiences. Figure 4.2 illustrates the overlapping themes.

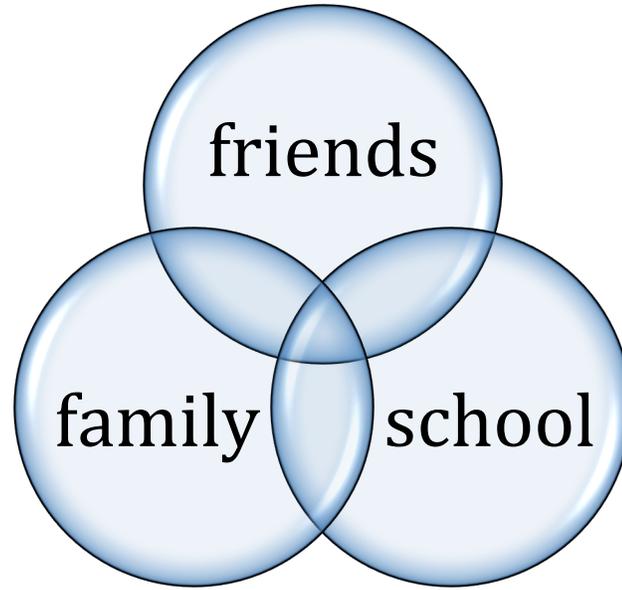


Figure 4-2 Middle School Female Participants Emergent Themes

Friends

The theme of friends and building friendships emerged from both one on one interviews with female participants. Both girls spoke in detail about the effect their weight has had on their ability to maintain friendships and spending time around peers. They both agreed that the topic of weight comes up when associating with friends.

Olivia:

I feel very self-conscious about my weight when I'm being compared to someone else. For example when all of the girls are in the locker room getting changed for gym I can't help but notice and I'm sure everyone around me does too that I am bigger than the other girls. When we are in groups together I can feel and see the difference between all of our weights. None of my friends have ever called me fat. I just feel fat when I am around them.

Jessica:

It is hard being the biggest girl in my group of friends. I can't always wear the same kind of clothes that are in style. Going swimming with all of my friends is also something I enjoy doing but it makes me feel awful about my body all the time. Most of my friends are able to wear a two-piece swimsuit. I always wear a one piece and a shirt

on top. We also don't get to shop for clothes together so I avoid going to the mall with friends.

School

Both female participants also discussed the idea of weight affecting interactions in school. The girls discussed situations at school that have made them feel self-conscious about their weight. They also mentioned interactions with teachers and peers. One of the girls described how she copes and what she does to stop "fat jokes" from classmates.

Olivia:

I probably think about my weight the most at school. Mostly everyone in school is judged by the way they look and weight is a big part of that. For example if you are bigger, kids will call you fat. If you are too skinny or small, people will call you wimpy or scrawny. Not only the other kids in school, but the teachers too. The teachers don't call us names but the gym teachers know which kids are better, slower or stronger. Even in class if something needs to be reached or moved they call on a bigger student.

Jessica:

I have spent most of my life bigger than the other girls at school and being called fat by the other kids. At first I would tell the teacher every time someone called me fat or made a joke that would hurt my feelings but since that never really changed anything I just started to learn how to ignore them. I am aware of my weight and have started to try and change it. I am eating better and staying active.

Olivia added:

I enjoy being part of the show choir but it really makes me feel uncomfortable during performances when we have to wear black and white and tuck our shirts in. I feel like I look the biggest.

Family

In addition to experiences at school both girls described situations at home that have hindered or attempted to help them lead healthier lives.

Olivia:

I have a big family and we spend a lot of time at home eating. We have family over for dinner a lot and my mom cooks really good. Food is important to us. No one else at home is overweight. My brothers all play sports and are very athletic. They encourage me to try and be active with them. No one at home has ever teased me about my weight. I think I am the only one who realizes how big I am.

Jessica:

My house is full of snacks and junk food. Nobody at home is interested in losing weight. My two younger sisters are always snacking on something. I try to watch what I eat but it is difficult at home. I wish my family could try to eat healthier.

Connections To The literature And Theoretical Framework

The insight gained from all seven of the student participants confirms the literature found on adolescent obesity, as it points to weight based stigmatization and low self-esteem as possible consequences of living with obesity (Andreyava et al., 2008; Eisenburg et al., 2003). Obesity is considered the fastest spreading nutritional disease among adolescents in the United States (Paxton et al., 2004). The increase of obesity is shared across all ages, races, and ethnic groups in both genders, with physical and emotional consequences (Puhl & Latner, 2007; Judge & Jahns, 2007). Warschburger (2005) found that overweight or obese individuals are discriminated against and experience bias as a result of their size. All of the student participants shared an experience in which they were in such a situation.

Weight-based stigmatization can be described as weight related attitudes and beliefs toward overweight and obese adolescents that are developed through stereotypes, bias, rejection, and prejudice (Gray et al., 2009). According to the National Education Association (1994) obese students' experiences in school has been described as ongoing prejudice, unnoticed discrimination, and constant harassment from nursery school through college. The ATOP results revealed 50% of the students polled disagreed with the statement that obese students are just as attractive as non-obese students. In addition 44% also agreed that most non-obese people would not want to marry someone who is obese.

The transformative theoretical framework guided this research investigation as a means to bring awareness of obesity to the Southern New Jersey school district. The goal is to share information from the data collected, with the district and local community to increase responsiveness towards the needs of overweight/obese adolescents. With the use of effective Transformative Leadership, obesity among adolescents attending school, could decrease greatly through the transformation of the current educational culture to that of a culture of academics and wellness.

Maslow's Hierarchy of Needs Theory was used to investigate how their needs were currently being met. Tiers of belongingness (tier 3) and esteem (tier 4) were especially significant during focus group and one on one interview sessions. Students shared information on how they believe their weight affects interactions at school and at home. The idea and need for 'food' are essential in the first tier of Maslow's pyramid, physiological needs. School and home environments are holding overweight and obese children and adolescents at the base of that pyramid instead of encouraging them to climb. All children should be made to understand the role of healthful eating and physical activity. Weight based stigmatization will prevent adolescents from feeling safe, loved, and accepted. Such feelings may decrease the ability of advancement to the next stage of development.

Lastly, Bronfenbrenner's Ecological Systems Theory was used to explore how the interconnectedness of the home, school, and community environments share in the responsibility of an overweight/obese adolescent's development. The theory recognizes the effect of each environment on development. Students shared their home experiences in detail including interactions with parents, siblings, and extended family members. In

addition, participants also discussed experiences at school include encounters with peers, friends and teachers. A fundamental factor in adolescents' health and well-being parallels their connections to their social environments. Specifically, research has shown that all family members, especially parents, are responsible for creating an environment conducive to healthful eating and daily activity (Gustafson & Rhodes, 2006; Videon & Manning, 2003). Furthermore, parents play a significant role in the development of individual health and happiness in their adolescent children. For example, stable family relationships and positive support systems are linked to superior fulfillment (Gilman & Heubner, 2006).

Chapter 5

Discussion And Conclusion

Chapter five offers a discussion of the study's findings, limitations, challenges regarding methodology, and implications including recommendations for future research in the area of overweight and obese adolescents. I will also reflect on my personal leadership experiences throughout the research process.

Summary of the Study Purpose

The purpose of this study was to explore the lived experiences of overweight and obese students attending middle school and high school at a Southern New Jersey School district. This study intended to understand the attitudes toward overweight and obesity among all middle school and high school students attending the district. Furthermore, this study sought to suggest policy and programs that could be put in place to create a culture in the district that protects all students and promotes healthy living.

Summary of the Study

The study used a mixed method design to gather both quantitative data and qualitative data. Quantitative data was collected through the ATOP survey, which is designed to measure the attitudes toward obese persons. The sample for the quantitative phase of the study included 1448 students from the Southern New Jersey school district. The response rate for data collection was 77% (N=1448) of the total number of eligible middle school and high school students (N= 1883). All students were given an interest form, through which overweight or obese students were invited to participate in a focus group after receiving parental consent. Six high school interest forms were returned. The students were weighed and measured, with 2 female students and no male students

meeting the criteria of being overweight/obese to participate. Thirty-one middle school interest forms were returned. The students were weighed and measured, with 12 students (8 boys and 4 girls) meeting the criteria of being overweight or obese in order to participate. Students were invited to attend scheduled separate-gender focus groups. Qualitative data was collected through a focus group of five male middle school students and a one on one interview with two female middle school students. Data collection took place from December 2012 through February 2013.

Study Findings

Research question one *“What are the perceptions, attitudes, and self-described experiences of obese adolescents as they reflect on their lives academically, emotionally, and socially”* The results of this study indicated that overweight and obese male students experience elevated levels of tiredness, which they believe could lead to lower levels of academic achievement in the future. The findings are consistent with information found on kidshealth.org, which states that obesity is unhealthy for adolescents’ body and mind. Kidshealth.org is a web-based resource for parents, kids and educators, which shares information on health and development for children. The site states extra body weight adds stress on the body’s legs and joints, which can cause feelings of discomfort and tiredness.

All participants, male and female, described experiences in which they were ridiculed as a result of their weight status. Each developed his or her own form of coping skills, which included, ignoring the ridicule, laughing along with it, or teasing back. In a study with 416 adolescents, researchers found obese boys are more likely to experience overt victimization, including teasing and hitting, while obese girls experienced relational

victimization, including being left out of social groups (Pearce, Boergers, & Prinstein, 2002). These researchers assert the inability to build close friendships for school age children denies them the social support they need, which may cause them to have a poor sense of security within future relationships (Pearce, et al., 2002). Lastly, female participants spoke in detail about the effect their weight had on their lives socially. Each described feelings of poor body image and self-consciousness when compared to their normal weight friends. It is not uncommon for female adolescents to be more affected by weight as it relates to their social lives. Girls may be more negatively impacted than boys as a result of the greater sociocultural significance on physical appearance for girls (Pliner, Chaiken, & Flett, 1990).

Research question two “*What do obese students believe would be helpful to receive from the school for support to help them counteract weight bias, bullying and/or help in reducing body weight*” The results of this study indicated that middle school students are aware of weight bias by peers and teachers. Female participants felt teachers often judge students’ physical ability based on their weight. Male participants suggested the implementation of school recess would help in maintaining an active environment in school. The National Association of Early Childhood Specialists in State Departments of Education found that 40% of elementary schools are attempting to reduce, have reduced, or have cancelled recess since 1989, when 90 % of schools had a form of recess. In this study, the participants all agreed recess, sports clubs, and healthy food choices are all actions the school districts could take to assist in reducing body weight. Anderson & Butcher (2005) assert the financial responsibilities and pressures of school budgets have increased the availability of junk food in middle schools and high schools. In addition,

they estimate that a 10 % increase in the availability of junk food initiates a typical increase in BMI of 1 % and the risk for adolescents with an overweight parent is doubled.

Research question three “*What are the self-reported academic, emotional, and social challenges for adolescents who are obese*” The results of this study indicated the home environment as a place that creates challenges for obese adolescents. The home is a critical factor in the development and battle of adolescent obesity. The study participants shared home experiences with both positive and negative effects. More than 50% of participants shared stories of family members encouraging healthy eating habits and daily exercise. In contrast, a participant also shared her experience with the poor meal and snack choices her parents serve. Overall, all study participants agreed their current weight status could be influenced by the actions at home. There is a higher risk of developing obesity in children with lower cognitive stimulation compared with those having the highest levels of cognitive stimulation (Strauss & Knight, 1990).

Research question four “*What are the general attitudes of students, both obese and non-obese, toward obese classmates*” The results of this study indicated that middle school and high school students of the Southern New Jersey school district have a slightly positive attitude toward obese students. The average ATOP score was 64.28 (SD: 16.17, range 6-117). Data collected showed 66% of the students reported they slightly disagreed with the survey stem: obese students cannot be as successful as other people. This data is similar to the results of the first data sets collected from the creators of the ATOP survey. In the first use of ATOP, undergraduates (M: 63.9, SD 16.7 & range 23-96), graduates (M: 64.8, SD: 14.8 & range 32-104), and National Association to Advance Fat Acceptance members (NAAFA) (M: 67.6, SD 18.6 & range 0-120) all shared a positive

attitude toward obese persons (Allison et al., 1991). The ATOP was also used in a study with school staff members. The results indicated positive attitudes from school staff members (Neumark-Sztainer et al., 1999). In addition, a study was conducted in three New Jersey school districts to explore certified staff members beliefs toward obese students using the ATOP (Pecoraro, 2012). This study shares a great significance with the current study as it surveyed teachers from the Southern New Jersey school district. Pecoraro (2012) found certified staff members have a slightly positive attitude toward obese students.

Furthermore, the ATOP was used to examine gender differences in attitudes toward obese persons in a study that included male and female participants (Puhl & Brownell, 2006). The data indicated there was no significant difference in the attitudes of males and females with attitudes toward obese persons, which is consistent with the current findings of this research. This study compared the calculated total scores of males and females from both the high school and middle school, and found that each group held a positive attitude toward obese persons. The average ATOP score for males was 64.01 with a range of 6-117. The average ATOP score for females was 64.84 with a range of 20-108. This study also compared the ATOP scores of high school and middle school students and found that each group held a positive attitude toward obese persons. The average ATOP score for high school students was 63.75 with a range of 6-117. The average ATOP score for middle school students was 64.72 with a range of 14-114.

Finally, this study found 2 ATOP survey stems in which male and female attitudes were significantly different. A Pearson Chi Square was performed to test the difference between the two groups on survey stem #2 *most obese people feel that they are*

not as good as other people. The analysis showed a significant statistical difference between male and female participants' ($\chi=35.127$, $df=10$, $p=.00$). The results show females strongly and moderately agreed with this belief. A Pearson Chi Square was performed to test the difference between the two groups on survey stem #3 *most obese people are more self-conscious than other people.* The analysis showed a significant statistical difference between male and female participants' ($\chi=22.889$, $df=10$, $p=.011$). The results show females strongly agreed with this belief.

The current findings provided additional information about the general attitudes of students, both obese and non-obese, toward obese classmates. Although many studies have found negative attitudes toward obese people, this is inconsistent with the current study which found students registered at the Southern New Jersey school district have positive attitudes towards obesity (Puhl & Brownell, 2006; Kraig & Keel, 2001; Latner & Stunkard, 2003).

Limitations

The most significant limitation of this study was the small number of focus group and interview participants. Although many interest forms were returned from the middle school, very few were returned from the high school. It is noteworthy to mention that the primary qualification for participation in the focus group was weight status. The school nurse used actual height and weight data, which eliminated students who returned the interest form but did not meet the overweight or obese requirement and reduced the potential sample size. The use of accurate height and weight is considered a strength of this study. Many studies use self-reported data, which may threaten the validity of the study, as weight is often under estimated and height over estimated by individuals when

self-reporting this data (Daniels, 2005). Indeed, when participants were asked to self-report weight and height in the demographics survey, they all under-reported their own weight.

Apart from weight and height measurements, data used in this study was self-reported. The participant's honesty, interpretation of the questions being asked, or willingness to provide information can impact the findings. In this study, it is possible that responses could have been minimized to reflect a socially acceptable response instead of the full scope of feelings of the participant. This notion is known as social desirability (Chung & Monroe, 2003). Social desirability signifies participant's reluctance to share true feelings but instead presents information of which he or she perceives as positive and culturally acceptable (Chung & Monroe, 2003).

Finally, although this study recognizes the important role parents play, it did not include data from parents. Despite the limitations, the findings from this study have important implications for the Southern New Jersey School district and the surrounding community.

Methodology Challenges

Following the approval of the IRB committee and a meeting with the Superintendent of the Southern New Jersey School district, the ATOP was distributed throughout the middle school and high school. Teachers were given a manila folder with surveys and instructions for distribution and implementation. Surveys at the middle school were completed on December 17, 2012 and at the high school December 18, 2012. On December 19, 2012 the Superintendent of schools contacted me about receiving an email with negative feedback from a parent regarding the announcement of the obesity

survey. The parent wrote: *the survey involved obesity and followed with a consent letter for future interviews to assist a teacher with her studies The survey caused a lot of verbal abuse, stares and gestures around the class during the survey which made children uncomfortable including my son.* The parent also contacted Dr. Leslie Spencer, my dissertation chair. I met with both the Superintendent and my Chair to discuss concerns. While reflecting on this incident, I decided any future research that involves distribution by others would have a script attached to it for assistants to follow. I do not know how the teacher began the conversation nor do I know what was said before the distribution of the survey. A script can be used to avoid any miscommunication.

Implications

Although the total scores of the ATOP revealed slightly positive attitudes towards overweight/obese students, specific survey stems showed negative attitudes. As a result, school districts have the obligation to ensure that overweight/obese students are being protected from discrimination and bias. In addition parents should become aware of the sensitive nature of weight as it relates to their children's' development at home and at school. Together home and school should collaborate to create environments sensitive and conducive to healthy living for adolescents. Researchers have found school districts, which implement programs and policies to protect overweight/obese students from becoming victims of bullying and bias, have an overall positive impact on student development (Puhl & Friedman, 2008).

School districts can implement programs that address obesity causes in their health classes. The program should address the health concerns, bias, and discrimination adolescents may endure when faced with obesity. Implementing such program will not

only help all students become aware of the issues surrounding obesity but it will also educate the teachers and increase their awareness and sensitivity to the nature of weight as it relates to their student population. Teachers are an influential part of the lives of their students. Creating awareness amongst staff members can create positive school environments (Grey et al., 2009).

Schools must also consider how much time is designated to physical activity throughout the school day. Classroom education is a sedentary activity in and of itself and very little physical activity is needed between classroom transitions. Teachers can provide short breaks to get students active and moving during classroom instruction. Implementing year round recreation sports programs can also increase physical activity among all students. School districts must recognize and take advantage of the opportunity they have to assist students in becoming healthy by participating in sports. Students can often be intimidated by trying out for competitive sport travel teams, but recreation school teams can create a welcoming environment to all students interested in trying a new sport. Implementing recess or a health club where students can exercise before or after school can improve overall student health.

Food services within school districts must begin to put health first and profit second. Providing students with healthy snack and drink choices needs to be the priority. Succumbing to soft drink manufactures and unhealthy vending machine options is not beneficial to student health. Calorie counts should be listed on all foods offered in the school lunchrooms so that students can become aware of the choices they have.

A future longitudinal research study should be conducted on the impact obesity has on adolescents over a long period of time such as 6th through 9th grade or 9th through

12th grade. Such study could use qualitative data to gain insight on changes school districts could make to improve the environment for overweight/obese students. Another study could also include parents and administrators, as they each are important aspects to the environment of all students. Parents could share data about the home environment, while administrators can share political views and policies hindering or advancing health within the school district. Finally, future research should include variables such as socioeconomic status and ethnicity. Collecting data on such variables could provide insight on environmental contributors and attitudes toward obesity.

Leadership

I began this research journey after witnessing the anxiety of a morbidly obese student on the first day of school. Robert was a 6th grader who weighed in at over 400 pounds. The school nurse could not accurately obtain his weight because her scale would not exceed 400 pounds. I approached Robert as he stood in the hallway crying. He refused to go into his homeroom class because he did not fit in the desk. His homeroom teacher and I arranged a table and chair for him to be comfortable at. I immediately spoke to our Vice Principal to inquire why a larger desk had not been in place. She assured me that the order was in place and the district was awaiting a 3-week delivery. I walked away from the conversation confused. Robert attended the elementary school in district so the middle school should have been aware of the circumstances and prepared for him on the first day of school.

My thought gravitated toward the type of leadership I would have utilized and the possible number of students who could also be feeling anxious about their weight. This was the beginning of a long journey resulting in this study and reflection on the type of

leadership skills I most relate to. As we strive for excellence in our teaching practice, examining specific social justice issues that affect distinct student populations is a way to reduce bias and discrimination. Social justice leadership should value, rather than ignore, diversity (Shields, 2004). Social justice leaders have compassion for all (Astin & Astin, 2000; Dantley & Tillman, 2006; Shields, 2004). The unique circumstances of overweight/obese students coupled with the social and emotional challenges they may face inspired this study. As a teacher leader, it is important for me to acknowledge a wide range of common lived experiences from all of my students. Dantley and Tillman (2006) assert social justice leaders investigate and work to resolve issues that create societal inequities. As a teacher leader, I can associate my leadership style with social justice leadership because it emphasizes leaders who focus on issues of equity, are activists for school reform, and create positive educational opportunities for all students to learn and all staff to work.

Educational leadership can be viewed as challenging for the reason that leaders are expected to establish environments in which all students feel safe and are achieving success. Transformative leadership is also deeply grounded on moral and ethical values in a social context (Shields, 2004). Astin and Astin (2000) assert that the goals of leadership should be to enhance equity, social justice, and quality of life. They also suggest the need to expand access, opportunity, and to encourage respect for difference and diversity. Therefore, transformative educational leaders should work to establish school environments in which teachers, students and parents collectively are held accountable and share the responsibility for advancing the “value ends” (Astin & Astin, 2000, p. 11).

As a teacher leader I believe it is important to use both transformative and transactional methods based on the specific situation. Transactional leaders set goals, explain anticipated results, and may provide feedback to all, with a reward as exchange (Burns, 2003). Transactional leadership reflects actions that are reciprocal in nature; expectations and goals are described, along with a well-defined description of what will be exchanged as a reward for meeting the expectations. A transactional method included in this study was the distribution of gift cards to focus group and interview participants. I knew that a monetary reward was needed to get students interested and motivated to speak of their experiences. The gift card was a way for me to say thank you and I appreciate your time. On the first day of school September 9, 2013, Jack found me outside and said “Mrs. Benavides I want to thank you for the gift card, it helped me buy a video game and I started exercising and lost 10 pounds.” His response was priceless.

Social change within the school system will involve transformational leadership. Transformational leaders motivate, stimulate and evaluate the potential of all while also envisioning each individual’s future growth (Burns, 2003). It is necessary to involve multiple stakeholders to reduce the epidemic of obesity. As educators we are responsible for creating an environment and culture to educate all children. Gold and Greenburg (1999) assert a child has five dimensions of health: physical, mental, emotional, social and spiritual. Similar to Maslow’s and Bronfenbrenner’s theory each dimension has the potential to affect the next. Therefore, tackling the adolescent obesity epidemic will need to include parents, staff, community leaders, and all students. Burns (2003) asserts that transformational leaders motivate others to reach *self-actualization needs* in Maslow’s hierarchy. Transformative and social justice leaders establish environments in which all

stakeholders feel inspired to participate. Treating obesity as a social justice issue will educate, inform, and hold all accountable to the sensitive nature of the condition.

References

- Adams, R. E., & Bukowski, W. M. (2008). Peer victimization as a predictor of depression and body mass index in obese and non-obese adolescents. *Journal of Child Psychology and Psychiatry, 49*(8), 858-866.
- Ahuja, G., & Salahi, L. (2010). School nutrition program takes up obesity fight. Retrieved October 28, 2011 from <http://abcnews.go.com/GMA/OnCall/school-nutrition-program-takes-obesity-fight/story?id=9802468>
- Allison, D. B., Basile, V. C., & Yaker, H. E. (1991). The measurement of attitudes toward and beliefs about obese persons. *International Journal of Eating Disorders, 10*(5), 599-607.
- Alreck, P. L., & Settle, R. B. (2004). *The survey research handbook*. Boston: McGraw-Hill/Irwin.
- American Diabetes Association. (2000). Type 2 diabetes in children and adolescents. *Diabetes Care, 23*(3), 381-389
- American Heart Association. (2011). Understanding childhood obesity. Retrieved from http://www.heart.org/idc/groups/heart-public/@wcm/@fc/documents/downloadable/ucm_428180.pdf
- American Obesity Association. (2005). *American obesity association fact sheet: Obesity in Youth*. Retrieved from <http://obesity.org/subs/fastfacts/obesityyouth.shtml>
- Anderson, P. M., & Butcher, K. F. (2006). Childhood Obesity: Trends and potential causes. *The Future of Children, 16*(1), 19-45. doi: 10.1353/foc.2006.0001
- Anderson, P. M., & Butcher, K. F. (2005). Reading, Writing and Raisinets: Are School Finances Contributing to Children's Obesity? NBER Working Paper 11177.

- Andreyeva, T., Puhl, R. M., & Brownell, K. D. (2008). Changes in Perceived Weight Discrimination Among Americans, 1995–1996 Through 2004–2006. *Obesity*, 16(5), 1129-1134. doi: 10.1038/oby.2008.35
- Anfara, V. A., Brown, K. M., & Mangione, T. L. (2002). Qualitative Analysis on Stage: Making the Research Process More Public. *Educational Researcher*, 31(7), 28-38.
- Astin, A. W., & Astin, H.S. (2000). Leadership reconsidered: Engaging higher education in social change Retrieved from <http://www.wkkf.org/pubs/cct/leadership/pub3368.pdf>
- Berk, L. E. (2000). *Child development*. Boston: Pearson/Allyn and Bacon.
- Bogdan, R., & Biklen, S. K. (2007). *Qualitative research for education: an introduction to theories and methods*. Boston, MA: Pearson A & B.
- Britten, N. (1995). Qualitative interviews in medical research. *British Medical Journal*. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2550292/pdf/bmj00602-0049.pdf>
- Bromfield, P. (2009). Childhood obesity: psychosocial outcomes and the role of weight bias and stigma. *Educational Psychology in Practice*, 25(3), 193-209. doi: 10.1080/02667360903151759
- Bronfenbrenner, U. (1979). *The ecology of human development: experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Brownell, K. D., Kersh, R., Ludwig, D. S., Post, R. C., Puhl, R. M., Schwartz, M. B., & Willett, W. C. (2010). Personal responsibility and obesity: a constructive approach to a controversial issue. *Health Affairs*, 29(3), 378-386. doi: 10.1377/hlthaff.2009.0739

- Brownell, K. D., & Puhl, R. (2003). Stigma and discrimination in weight management and obesity. *Permanente Journal*, 7. Retrieved from <http://xnet.kp.org/permanentejournal/sum03/stigma.html>
- Bucher Della Torre, S., Akre, C., & Suris, J. C. (2010). Obesity prevention opinions of school stakeholders: a qualitative study. *Journal of School Health*, 80(5), 233-239.
- Burns, J. M. (2003). *Transforming Leadership*. New York:Grove Press
- Centers for Disease Control and Prevention. (2010). *Healthy People 2010 leading Health indicators at a glance*. Retrieved from, http://www.cdc.gov/nchs/healthy_people/hp2010/hp2010_indicators.htm
- Centers for Disease Control (2010). Defining overweight and obesity. Retrieved October 28, 2011, from <http://www.cdc.gov/obesity/defining.html>.
- Centers for Disease Control (2011). Healthy weight: Assessing your weight: BMI: About BMI for children and teens. Retrieved on October 28, 2011, from <http://www.cdc.gov/healthyweight/assessing/bmi/>
- Chung, J., & Monroe G.S. (2003). Exploring social desirability bias. *Journal of business Ethics*, 44(4), 291-302.
- Cook, S., Weitzman, M., Auginger, P., Nguyen, M. & Dietz, W. H. (2003). Prevalence of a metabolic syndrome phenotype in adolescents. *Archives of Pediatrics & Adolescents Medicine*, 157(8), 821-827.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: choosing among five approaches*. London: SAGE.

- Creswell, J. W. (2009). *Research design: qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.
- Creswell, J. W., & Plano, C. V. (2011). *Designing and conducting mixed methods research*. Los Angeles: SAGE Publications.
- Crosnoe, R., & Muller, C. (2004). Body mass index, academic achievement, and school context: Examining the educational experiences of adolescents at risk of obesity. *Journal of Health and Social Behavior*, 45(4), 393-407.
- Crothers, L. M., Kehle, T. J., Bray, M. A., & Theodore, L. A. (2009). Correlates and suspected causes of obesity in children. *Psychology in the Schools*, 46(8), 787-796.
- Daniels, J. (2005). Weight and weight concerns: Are they associated with reported depressive symptoms in adolescent? *Journal of Pediatric Health Care*, 19 (1),33-41
- Daniels, S.R. (2006). The consequences of childhood overweight and obesity. *The Future of Children*, 16 (1), 47-67.
- Dantley, M.E., & Tillman, L. c. (2006). Social justice and moral transformative leadership. In C. Marshall & Olivia (Eds), *Leadership for Social Justice: Making Revolutions in Social Justice*. Pearson/Allyn and Bacon
- Darwin, A. (2008). Childhood obesity: is it abuse?. *Children's Voice*, 17(4), 24-27
- Dean, M., & Huitt, W. (1999). Educational Psychology Interactive: Neighborhood and Community. *VSU Faculty WWW*. Retrieved April 10, 2011, from <http://teach.valdosta.edu/whuitt/col/context/neighbor.html>

- Dehghan, M., Akhtar-danesh, N., & Merchant, A. T. (2005). Childhood obesity, prevalence and prevention. *Nutritional Journal*, 4(24). doi: 10.1186/1475-2891-4-24
- DeMattia, L., & Lee Denney, S. (2008). Childhood Obesity Prevention: Successful Community-Based Efforts. *The ANNALS of the American Academy of Political and Social Science*, 615(1), 83-99.
- Eisenberg, M., Neumark-Sztainer, D., Haines, J., & Wall, M. (2006). Weight-teasing and emotional well-being in young adults: Longitudinal findings from Project EAT. *Journal of Adolescent Health*, 38, 675-683.
- Eisenberg, M., Neumark-Sztainer, D., & Story, M. (2003). Association of weight-based teasing and emotional well being among adolescents. *Journal of Adolescent Health*, 32(2), 121.
- Esch, L., & Zullig, K. (2008). Middle school students' weight perception, dieting behaviors, and life satisfaction. *American Journal of Health Education*, 39(6), 345-352.
- Finkelstein, E. A., Ruhm, C. J., & Kosa, K. M. (2005). Economic Causes And Consequences Of Obesity. *Annual Review of Public Health*, 26(1), 239-257.
- Florin, T.A., Shults, J. & Stettler, N. (2011). Perception of overweight is associated with poor academic performance in US adolescents. *Journal of School Health*, 81(11), 663-670.
- Friedlander, S.L., Larkin, E.K., Rosen, C.L., Palermo, T.M., & Redline, S. (2003). Decreased quality of life associated with obesity in school aged children. *Arch Pediatrics Adolescent Medicine*. 157, 1206-1211.

- Fulkerson, J. A., Strauss, J., Neumark-Sztainer, D., Story, M., & Boutelle, K. (2007). Correlates of psychosocial well being among overweight adolescents: The role of the family. *Journal of Consulting and Clinical Psychology, 75*(1), 181-186.
- Gavin, M. L. (2013). *When being Overweight is a Health Problem*. Retrieved from http://kidshealth.org/teen/food_fitness/dieting/obesity.
- Geier, A.B., Foster, G.D., Womble, L.G., McLaughlin, J., Borradaile, K.E., Nachmani, J., Sherman, S., Kumanyika, S., & Shults, J. (2007). The relationship between relative weight and school attendance among elementary school children. *Obesity, 15*(8), 2157-2161.
- Gilman, R., & Huebner, E. S. (2006). Characteristics of adolescents who report very high Life satisfaction. *Journal of Youth and Adolescence, 35*, 311–319
- Glesne, C. (2006). *Becoming qualitative researchers: an introduction*. Boston: Pearson/Allyn & Bacon.
- Gold, R., & Greenberg, J. (1999). *Holt health*. Austin, TX: Holt, Rinehart and Winston.
- Goldfield, G. S., Moore, C., Henderson, K., Buchholz, A., Obeid, N., & Flament, M. F. (2010). Body dissatisfaction, dietary restraint, depression, and weight status in adolescent. *Journal of School Health, 80*(4), 186-192.
- Gortmaker, S. L., Must, A., Perrin, J. M., Sobol, A. M., & Dietz, W. H. (1993). Social and economic consequences of overweight in adolescence and young adulthood. *The New England Journal of Medicine, 329*(14), 1008-1012.
- Gray, W. N., Kahhan, N. A., & Janicke, D. M. (2009). Peer victimization and pediatric obesity: A review of the literature. *Psychology in the Schools, 46*(8), 720-727.
- Greene, J. C. (2007). *Mixed methods in social inquiry*. San Francisco, CA: Jossey-Bass.

- Griffiths, L. J., & Page, A. S. (2008). The Impact of Weight-related Victimization on Peer Relationships: The Female Adolescent Perspective. *Obesity, 16*, S39-S45. doi: 10.1038/oby.2008.449
- Gustafson, S., & Rhodes R. (2006). Parental correlates of physical activity in children and early adolescents, *Sports Medicine, 36*, 79-97.
- Hales, C. N., & Barker, D. J. (2001). The thrifty phenotype hypothesis. *British Medical Bulletin, 60*, 5-20.
- Hawker, D. J., & Boulton, M. J. (2000). Twenty Years' Research on Peer Victimization and Psychosocial Maladjustment: A Meta-analytic Review of Cross-sectional Studies. *Journal of Child Psychology and Psychiatry, 41*(4), 441-455. doi: 10.1111/1469-7610.00629
- Jalongo, M.R. (1999). Matters of size: obesity as a diversity issue in the field of early childhood. *Early Childhood Education Journal, 27*(2), 95-103.
- Jones, R. (2011). Promising anti-obesity programs in schools. Retrieved on October 28, 2011 from http://www.ednewscolorado.org/news/top_news/promising-anti-obesity-programs-in-schools/comment-page-1
- Judge, S., & Jahns, L. (2007). Association of overweight with academic performance and social behavioral problems: an update from the early childhood longitudinal study. *Journal of School Health, 77*(10), 672-678.
- Kraig, K. A., & Keel, P. K. (2001). Weight based stigmatization in children. *International Journal of Obesity, 25*, 1661-1666.
- Kimm, S. YA. (2003). Nature versus nurture in childhood obesity: a familiar old conundrum. *American Journal for Clinical Nutrition, 78*, 1051-1052

- Kitzinger, J (1995). *Introducing focus groups. British Medical Journal, 311, 299-302*
- Latner, J. D., & Stunkard, A. J. (2003). Getting Worse: The Stigmatization of Obese Children. *Obesity, 11(3), 452-456.* doi: 10.1038/oby.2003.61
- Latner, J. D., Simmonds, M., Rosewall, J. K., & Stunkard, A. J. (2007). Assessment of Obesity Stigmatization in Children and Adolescents: Modernizing a Standard Measure. *Obesity, 15(12), 3078-3085.* doi: 10.1038/oby.2007.366
- Lawrence, S., Hazlett, R., & Hightower, P. (2010). Understanding and acting on the growing childhood and adolescent weight crisis. *National Association of Social Workers, 35(2), 147-153.*
- Li, J., & Hooker, N. H. (2010). Childhood obesity and schools: evidence from the national survey of children's health. *Journal of School Health, 80(2), 96-103.*
- MacCann, C., & Roberts, R.D., (2012). Just as smart but not as successful: obese students obtain lower school grades but equivalent test scores to non obese students. *International Journal of Obesity,*
- Maslow, A. H. (1954). *Motivation and personality* ([1st ed.]). New York: Harper.
- Mertens, D. M. (2010). Transformative mixed methods research. *Qualitative Inquiry, 16,* 469-474.
- Miller, J., Rosenbloom, A., & Silverstein, J. (2004). Childhood obesity. *The Journal of Endocrinology and Metabolism, 89(9), 4211-4218.*
- Mokdad, A.H., Bowman, B.A., Ford, E.S., Vinicor, F., Marks, J.S., & Koplan, J.P. (2001). The continuing epidemics of obesity and diabetes in the United States. *The Journal of the American Medical Association, 286(10), 1195-1200.*
- Morgan, D. L. (1996). Focus Groups. *Annual Review of Sociology, 22, 129-152*

- Moustakas, C. E. (1994). *Phenomenological research methods*. Thousand Oaks, CA: Sage.
- Mustafa, H. (1992). The contributions of psychology to the study of administrative behavior. *International Journal of Public Sector Management*, 5(4), 15.
- National Association of Early Childhood Development Specialists in State Departments of Education, "Recess and the Importance of Play," *A Position Statement on Young Children and Recess*, 2001 (www.eric.ed.gov).
- National Education Association, (1994). Report on Size Discrimination. Washington, DC.
- National Research Council. (2002). Community programs to promote youth development. National Academies Press: Washington, DC.
- Neumark-Sztainer, D., Falkner, N., Story, M., Perry, C., Hannan, P. J., & Mulert, S. (2002). Weight teasing among adolescents: correlations with weight status and disordered eating behaviors. *International Journal of Obesity*, 26, 123-131.
- Neumark-Sztainer, D., Story, M., & Faibisch, L. (1998). Perceived stigmatization among overweight African-American and Caucasian adolescent girls. *Journal of Adolescent Health*, 23(5), 264-270.
- Nuemark-Sztainer, D., Story, M., & Harris, T. (1999). Beliefs and attitudes about obesity among teachers and social health providers working with adolescents. *Journal of Nutrition Education*, 31, 3-9
- Neumark-Sztainer, D., Story, M., Hannan, P. J., & Croll, J. (2002). Overweight Status and Eating Patterns Among Adolescents: Where Do Youths Stand in Comparison

- With the Healthy People 2010 Objectives? *American Journal of Public Health*, 92(5), 844-851. doi: 10.2105/AJPH.92.5.844
- Nihiser, A. J., Lee, S. M., Wechsler, H., McKenna, M., Odom, E., Reinold, C., & Grummer-Strawn, L. (2007). Body mass index measurement in schools. *Journal of School Health*, 77(10), 651-671.
- O'Brien, K.S., Hunter, J.A., & Banks, M. (2007). Implicit anti fat bias in physical educators: Physical attributes, ideology and socialization. *International Journal of Obesity*, 31, 308-314
- O'Brien, K. S., Puhl, R. M., Latner, J. D., Mir, A. S., & Hunter, J. A. (2010). Reducing anti-fat prejudice in preservice health students: a randomized trial. *Obesity*, 1-7. doi: 10.1038/oby2010.79
- Ogden, C., & Carroll, M. (2010). Prevalence of obesity among children and adolescents: United States, trends 1963-1965 through 2007-2008. *National Center for Health Statistics*.
- Paxton, R. J., Valois, R. F., & Drane, W. (2004). Correlates of body mass index, weight goals and weight management practices among adolescents. *Journal of School Health*, 74(4), 136-143.
- Paxton, S. J., Eisenberg, M. E., & Neumark-Sztainer, D. (2006). Prospective predictors of body dissatisfaction in adolescent girls and boys: A five-year longitudinal study. *Developmental Psychology*, 42(5), 888-899. doi: 10.1037/0012-1649.42.5.888
- Pearce, M. J., Boergers, J., & Prinstein, M. J. (2002). Adolescent Obesity, Overt and Relational Peer Victimization, and Romantic Relationships. *Obesity Research*, 10(5), 386-393

- Pecoraro, A. M. (2012). Weighing in on teacher attitudes of obese students: A descriptive correlational design. Ed D dissertation, Rowan University.
- Perez-Chada, D., Drake, C.L., Perez-LLoret, S., & Videla, A.J. (2009). Diurnal rhythms, obesity and educational achievement in south American cultures. *International Journal of Neuroscience*, 119, 1091-1104.
- Phillips, R. G., & Hill, A. J. (1998). Fat, plain, but not friendless: self-esteem and peer acceptance of obese pre-adolescent girls. *International Journal of Obesity*, 22, 287-293.
- Pliner P, Chaiken S, Flett GL. (1990). Gender differences in concern with body weight and physical appearance over the life span. *Personality and Social Psychology Bulletin*, 16, 263-273
- Puhl, R., & Brownell, K. D. (2001). Bias, Discrimination, and Obesity*. *Obesity*, 9(12), 788-805.
- Puhl, R., & Brownell, K. D. (2006). Confronting and coping with weight stigma: An investigation of overweight and obese adults. *Obesity*, 14, (10), 1802-1815.
- Puhl, R. M., & Heuer, C. A. (2009). The Stigma of Obesity: A Review and Update. *Obesity*, 17(5), 941-964.
- Puhl, R. M., & Heuer, C. A. (2010). Obesity stigma: Important considerations for public health. *American Journal of Public Health*, 100(6), 1019-1028
- Puhl, R. M., & Latner, J. D. (2007). Stigma, obesity, and the health of the nation's children. *Psychological Bulletin*, 133(4), 557-580.
- Puhl, R.M., & Friedman, R.R. (2008). *Weight bias: The need for public policy*. Retrieved on October 28, 2011, from

http://www.yaleruddcenter.org/resources/upload/docs/what/bias/weightbiaspolicy_ruddreport.pdf

- Puhl, R. M., Andreyeva, T., & Brownell, K. D. (2008). Perceptions of weight discrimination: prevalence and comparison to race and gender discrimination in America. *International Journal of Obesity*, 32(6), 992-1000. doi: 10.1038/ijo.2008.22
- Rappaport, E.B., Daskalakis, C., & Andrel, J. (2011). Obesity and other predictors of absenteeism in Philadelphia school children. *Journal of School Health* 81(6) 341-344.
- Rhodes, S. K., Shimoda, K. C., Waid, L. R., O'Neil, P. M., Oexmann, M. J., Collop, N. A., Willi, S. M., (1995). Neurocognitive deficits in morbidly obese children with obstructive sleep apnea. *The Journal of Pediatrics*, 127(5), 741-744
- Robert Wood Johnson Foundation. (2011). Assessing the impact of the Mississippi healthy students act. Retrieved from <http://www.rwjf.org/content/dam/farm/reports/reports/2012/rwjf401230>
- Robinson, S. (2006). Victimization of Obese Adolescents. *The Journal of School Nursing*, 22(4), 201. doi: 10.1622/1059-8405(2006)22[201:VOOA]2.0.CO;2
- Ryan, G. W., & Bernard, H. R. (2003). Techniques to identify themes. *Field Methods*, 15(1), 85-109.
- Sabia, J. J. (2007). The effect of body weight on adolescent academic performance. *Southern Economic Journal*, 73(4), 871-900.
- Shields, C. M. (2004). Dialogic leadership for social justice: Overcoming pathologies of Silence. *Educational Administration Quarterly*, 40(1), 109-132

- Shore, S.M., Sachs, M.L., Lidicker, J.R., Brett, S.N., Wright, A.R., Libonati, J.R. (2008).
Decreased scholastic achievement in overweight middle school students. *Obesity*,
16(7), 1535-1538.
- Smithson, J. (2000). Using and analyzing focus groups: Limitations and possibilities.
International Journal of Social Research Methodology, 3(3), 103-119
- Stice, E., Presnell, K., Shaw, H., & Rohde, P. (2005). Psychological and Behavioral Risk
Factors for Obesity Onset in Adolescent Girls: A Prospective Study. *Journal of
Consulting and Clinical Psychology*, 73(2), 195-202.
- Strauss, C. C., Smith, K., Frame, C., & Forehand, R. (1985). Personal and Interpersonal
Characteristics Associated with Childhood Obesity. *Journal of Pediatric
Psychology*, 10(3), 337-343. doi: 10.1093/jpepsy/10.3.337
- Strauss, R. S. & Knight, J. (1990). Influence of the Home Environment on the
Development of Obesity in Children. *Journal of the American Academy of
Pediatrics*, 103(6), 1-8
- Swinburn, B., & Egger, G. (2002). Preventative strategies against weight gain and
obesity. *Obese Review*, 3, 289-301.
- Tavakol, M & Dennick, R. (2011). Making sense of cronbach's alpha. *International
Journal of Medical Education*, 2, 53-55.
- The National Center for Safe Routes to School (2011). How Children Get to School:
School Travel Patterns from 1969 to 2009. Accessed August 15, 2012. Available:
http://saferoutesinfo.org/sites/default/files/resources/NHTS_school_travel_report_2011_0.pdf.

- Toma, J. D. (2006). Approaching rigor in applied qualitative research. In C. F. Conrad, & R. C. Serlin (Eds.), *The SAGE handbook for research in education: Engaging ideas and enriching inquiry* (pp. 405-423). Thousand Oaks, CA: Sage Publications
- U.S. Department of Health and Human Services (2006). Healthy People 2010 midcourse review. Washington, D.C.
- Van Daalen, C. (2005). Girls' Experiences in Physical Education: Competition, Evaluation, & Degradation. *The Journal of School Nursing*, 21(2), 115. doi: 10.1622/1059-8405(2005)021[0115:GEIPEC]2.0.CO;2
- Van Manen, M. (1990). *Researching lived experience: human science for an action sensitive pedagogy*. [Albany, N.Y.]: State University of New York Press.
- Videon, T. M., & Manning, C. K. (2003). Influences on adolescent eating patterns: the importance of family meals. *Journal of Adolescent Health*, 32, 365–73.
- Vogt Yuan, A. S. (2010). Body perceptions, weight control behavior and changes in adolescents' psychological well being over time: a longitudinal examination of gender. *Journal of Youth Adolescents*, 39, 927-939.
- Wang, J., Iannotti, R. J., & Luk, J. W. (2010). Bullying victimization among underweight and overweight U.S. youth: differential associations for boys and girls. *Journal of Adolescent Health*, 47, 99-101.
- Warschburger, P. (2005). The unhappy obese child. *International Journal of Obesity*, 29, S127-S129.
- Wechsler, H., McKenna, M. L., Lee, S. M., & Dietz, W. H. (2004, December). The role of schools in preventing childhood obesity. *Center for Disease Control and*

Prevention. Retrieved January 12, 2011, from

http://www.cdc.gov/healthyyouth/physicalactivity/pdf/roleofschools_obesity.pdf

Whetone, L. M., Morrissey, S. L., & Cummings, D. M. (2007). Children at risk: the association between perceived weight status and suicidal thoughts and attempts in middle school youth. *Journal of School Health, 77*(2), 59-66.

World Health Organization Technical Report (2000). *Obesity: Preventing and managing the global epidemic*.

Yach, D., Stuckler, D., & Brownell, K.D. (2006). Epidemiologic and economic consequences of the global epidemics of obesity and diabetes. *Nature Medicine, 12*(1), 62-66

Zullig, K., Ubbes, V. A., Pyle, J., & Valois, R. F. (2006). Self-Reported Weight Perceptions, Dieting Behavior, and Breakfast Eating Among High School Adolescents. *Journal of School Health, 76*(3), 87-92

APPENDIX A: LETTER OF INFORMED CONSENT

Dear Parent/Guardian:

I am a teacher at [REDACTED], as well as a doctoral student in the Education Leadership Department at Rowan University. I will be conducting a research project under the supervision of Dr. Leslie Spencer as part of my doctoral dissertation. The purpose of this research study is to understand and explore the lived social, emotional, and academic experiences of overweight adolescent students in middle school and high school. The goal is to share the results with the district to improve the culture, climate and experiences for overweight and obese students. Overweight or obese students interested in participating in an interview, which will take place at their school, can complete the bottom portion of the form. Students chosen for the interview will be compensated with a \$10.00 gift card. In order to receive the gift card students must complete the interview. If the talk of weight related issues becomes uncomfortable, students can speak with a guidance counselor during or after the interview.

Your decision whether or not to allow your child to participate in this study will have absolutely no effect on your child's standing in his/her class. Their participation is completely voluntary and they can withdraw at any time throughout the study. All the names of students participating in the interview will be kept confidential. Interviews may take up to 30 minutes. If you have any questions or concerns, please contact me [REDACTED] or you may contact my advisor, Dr. Spencer, at (856) 256-4500 ext.3761. Thank you.

Sincerely,
Julie Benavides

Please indicate whether or not you wish to have your child participate in an interview/focus group by checking the appropriate statements below and returning this letter to your child's teacher by January 9, 2013.

I GRANT permission for my child to participate interview/focus group (if selected)

I DO NOT grant permission for my child to participate in the interview/focus group.

(Parent/Guardian signature)

(Date)

Name: _____

APPENDIX B: ATOP: Attitudes Toward Obese Persons Scale

DIRECTIONS: Please mark each statement below in the left margin, according to how much you agree or disagree with it. Please do not leave any blank. Use the numbers on the following scale to indicate your response. Be sure to place a minus or plus sign (- or +) beside the number that you choose to show whether you agree or disagree.

-3	-2	-1	+1	+2	+3
I strongly	I moderately	I slightly	I slightly	I moderately	I strongly
Disagree	disagree	disagree	agree	agree	agree

1. _____ Obese students are as happy as non-obese students.
2. _____ Most obese students feel that they are not as good as other people.
3. _____ Most obese students are more self-conscious than other people.
4. _____ Obese students cannot be as successful as other people.
5. _____ Most non-obese people would not want to marry anyone who is obese.
6. _____ Severely obese students are usually untidy.
7. _____ Obese students are usually sociable.
8. _____ Most obese students are not dissatisfied with themselves.
9. _____ Obese students are just as self-confident as other people.
10. _____ Most people feel uncomfortable when they associate with obese students.
11. _____ Obese students are often less aggressive than non-obese students.
12. _____ Most obese students have different personalities than non-obese students.
13. _____ Very few obese students are ashamed of their weight.
14. _____ Most obese students resent normal weight students.
15. _____ Obese students are more emotional than non-obese students.
16. _____ Obese students should not expect to lead normal lives.
17. _____ Obese students are just as healthy as non-obese students.
18. _____ Obese students are just as attractive as non-obese students.
19. _____ Obese students tend to have family problems.
20. _____ One of the worst things that could happen to a person would be to become obese.

Thanks for participating PLEASE CHECK THE ONE THAT APPLIES TO YOU female _____ male _____
Allison, V.C. & Yuker, H.E. (1991). The measurement of attitudes toward and beliefs about obese persons.
International Journal of Eating Disorders, 10, 599-607

APPENDIX C: Demographic Questionnaire

Student Information

Name: _____

Age: _____

Ethnicity: White Hispanic African American Asian Other: _____

Gender: Female Male

Grade: _____

How many siblings do you have? _____

How many people live in your household: _____

Self-reported weight: _____

APPENDIX D: Interview Protocol Draft

1. Are there situations that make you feel self-conscious about your body? Weight?
2. Do you feel that people treat you differently because you are overweight? If so, how?
3. Do others treat you in a hurtful or negative way because you are overweight? If so, what do they do?
Tell me about a time when this happened.
Tell me how you reacted or felt about what they did.
Tell me what you did in response to this treatment.
4. Do others make negative assumptions about you because you are overweight? If so, what do they do?
Tell me about a time when this happened.
Tell me how you reacted or felt about what they did.
Tell me about the other people involved. Were they other kids, adults, parents, brothers and/or sisters?
Why do you think they did this?
5. What do you call this negative treatment?
How does this negative treatment affect you?
Has anyone at school been supportive to you about this? If so who? How?
Has anyone at home been supportive to you about this? If so who? How?
Have you talked with anyone about this? If so, what did they say that was helpful or not helpful?
6. How do you think people at school can help handle the treatment described above?
7. Tell me what it is like growing up in your family. Does your weight affect your relationships with people in your family?
How does your mother feel about you as a person who is overweight?
How does your father feel about you as a person who is overweight?
How do your brothers and/or sisters feel about you as a person who is overweight?
Is anyone else in your household overweight?
8. Have you ever been teased, bullied, harassed, or mistreated because of the way people react to you as a person who is overweight?
9. Tell me what it is like being in school as an overweight student? Does your weight affect your relationships with your teachers? If so how?
10. Tell me what your experience has been like building friendships? Relationships?

Interview questions adapted from

Neumark-Sztainer, D., Story, M. & Faibisch, L. (1998). Perceived stigmatization among overweight African-American and Caucasian adolescent girls. *Journal of Adolescent Health*, 23, 264-270

APPENDIX E: Scoring Instructions for ATOP

Step 1: Multiply the response to the following items by -1 (i.e., reverse the direction of the scoring): Item 2 through item 6, Item 10 through item 12, Item 14 through item 16, Item 19 and Item 20

Step 2: Add up the responses to all items.

Step 3: Add 60 to the value obtained in Step 2. This value is the ATOP score. Higher numbers indicate more positive attitudes.

APPENDIX F: Invitation to Students

Thank You Thank You Thank You

Thank you for wanting to participate in a research study designed to discover the experiences of overweight students. The focus group will meet on Tuesday, February 20, in room C203 at 2:30. The late bus will be available for you at 3:30. Also please be reminded you will receive a 10\$ gift card to Target for your participation. If you have any questions I can be reached at [REDACTED]

Julie Benavides, room C203

* Date above was changed for each group