WHAT DO THEY BELIEVE: TEACHERS’ PERCEPTIONS OF ADOLESCENT’S
BODY MASS INDEX (BMI), A LOOK
INTO ITS AFFECTS

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ABSTRACT

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What Do They Believe: Teachers’ Perceptions of Adolescent’s

Body Mass Index (BMI), A Look Into its Affects

This thesis reports on the perspective that junior high school teachers have on their student’s academic success and sense of belonging as it relates to their body mass index (BMI).

This study used a questionnaire, developed and implemented by the researcher, Shaina S. Lightfoot. This allowed for a qualitative analysis to be conducted. The questionnaire asked the teachers questions about current classroom enrollment, sense of belonging and academic success as it pertains to each student in their current classroom. Analysis of the data showed that there is a strong relationship between a student’s BMI and their sense of belonging and a weak relationship between a student’s BMI and their academic success. The specific results, implications of the findings and the limitations are also discussed within the study.
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CHAPTER ONE

Introduction

With the increasing epidemic of obesity that is sweeping the nation, many people are at risk for health problem in their futures. Obesity has been shown to be a factor in five of the ten leading causes of death in the United States (Al Mamun, Barendregt, Bonneux, Mackenback, Peeters & Willekends, 2003). Shockingly, according to Center for Disease Control (CDC), obesity just in the state of Ohio, has reached its peak in year 2008 to a dramatic 28.9 percent of adults residing in the state. The CDC defines obesity as a body mass index (BMI) of 30 or greater. BMI is calculated from a person's weight and height and provides a reasonable indicator of body fatness and weight categories that may lead to health problems. Obesity is a major risk factor for cardiovascular disease, certain types of cancer, and type II diabetes (Center for Disease Control and Prevention, 2009c).

Increasingly, children and teens are becoming members of this obesity epidemic. According to the American Obesity Association (2005), about 30.4 percent of teenagers are overweight, and 15.5 percent of teens are obese. With that said, a striking 45.9 percent of teens are at risk for developing health problems due to weight. The number of obese children and adolescents has tripled since 1980.

One goal of society should be to find ways to increase the awareness of this epidemic. My personal goal is to categorize and give detail on the identity and problems that exist with obese children, then identify ways to combat this epidemic. However, if this is already an issue a child or adolescent is dealing with, I hope to develop ways in which they can become healthier.
Statement of the Problem

Obesity is a growing epidemic in almost all regions of the United States of America. The number of overweight teens and children now exceeds nine million (Center for Disease Control and Prevention, 2005a). The Centers for Disease Control and Prevention’s Division of Adolescent and School Health states that overweight children are more likely to grow to be overweight or obese adults (Center for Disease Control and Prevention, 2005b); also stating that 16% of children and adolescents in the United States are considered overweight.

Obesity is not only caused by poor dietary habits, but also lack of physical activity. Lack of physical activity and exercise is becoming more common in America’s youth (Center for Disease Control and Prevention, 2007; Collins, Chyen, Grunbrum, Hawkins, Harris, Kann, Ross, 2004; Center for Disease Control and Prevention, 2003, 2005a, 2005b). Today children are not burning as many calories as they are taking in. (Center for Disease Control and Prevention, 2005b). In view of the fact that obese and overweight individuals do not participate as much in physical activity and usually have poor dietary habits they may develop health problems. Type II diabetes, stroke, and heart disease are some of the physical ailments that obesity can be responsible for (Center for Disease Control and Prevention, 2005a, 2007). Thus, obese children are more likely to develop these ailments when they enter adulthood than their healthy weight companions (Center for Disease Control and Prevention, 2005c).

Along with health concerns, obese children are also often faced with difficulties in their learning environment as a result of their weight. New studies are being conducted to show a correlation between obesity and academic success. Some studies have shown that obese children tend to have lower test scores than those with average BMI’s (Datar, Magnabosco & Sturm, 2004; Datar & Sturm, 2006; Britt-Rankin, Gable & Krull, 2008). Obesity in children can also
negatively impact a child's grade-point average and the number of schooling years they completed (Blanchflower & Sargent 1994; Crosnoe & Muller, 2004; Sabia, 2007).

The most overwhelming effects of obesity on children are seen when it comes to their sense of belonging in school. Children like to feel accepted and supported by peers, at school, and anyone else within their environment (Edward, 1995). When a child feels as though he or she does not belong a feeling of loneliness may be experienced and they may try to ease the pain brought upon them. Many times the ways a child relieves this pain is by disengaging in what school offers. This may even lead to dropping out of school entirely (Youngs, 1992).

Obesity is clearly one of the growing epidemics in America and it has a tremendous effect on children. Children who are obese continue to face challenges in most every facet of life. These challenges include health problems, psychological and emotional troubles, and less physical activity. Arguably the two biggest hardships exist when talking a glance at an obese child’s academic success and sense of belonging. The goal of this discussion is to raise awareness about this epidemic, while examining the potential relationship between childhood obesity, academic success, and sense of belonging from adolescent teachers' perspectives.

**Research Questions**

The purpose of this study was to determine the ways in which childhood obesity affects junior high school students in Northwest Ohio. The study was funneled through teacher’s perceptions of obese children. There has been previous research that indicates that there is a relationship between childhood obesity, academic success, and sense of belonging (Britt-Rankin et al., 2008; Datar et al., 2004; Datar & Sturm, 2006; Goodenow, 1991, 1993; Goodenow & Grady, 1994; Youngs, 1992). Based on this research, it was the goal of this study to determine
what threats childhood obesity imposes in the learning environment through the following research questions:

- How do teachers perceive student’s weight as it pertains to their sense of belonging?
- How do teachers perceive student’s weight as it pertains to their academic success?

**Overview of Chapters**

Chapter two gives further insight into the topic of obesity. The information provided is relevant to the subject matter. It covers subcategories such as the obese population, causes of obesity, concerning health problems, psychological and emotional factors, physical activity, academic success, sense of belonging, and ways to combat obesity.

In chapter three, a description of methodology used in the study is provided. The instrument used to gather information from participants was a survey. A survey was used in order to allow opportunity for feedback. All participants who completed the survey were in-service teachers, teaching grades 5-12. Participants had the opportunity to relay any information they deemed relevant, as it pertains to each question. There were twenty participants in the study, all of whom agreed to participate. Two separate surveys were provided. Seven received the first survey, however, more in-depth answers were needed. For this reason, the other thirteen participants received a second survey. For the first survey, consent forms were sent to participants of a Northwest Ohio Junior High School. Once consent forms were returned, the surveys were sent out. The second survey was done via email. The participants were apart of a master’s program at Bowling Green State University. The completed survey served as a consent form. Once all surveys were received, the data was analyzed, coded, and recorded in three
separate categories: population of obese students, issues of academic success, and issues of sense of belonging. Though the study was conducted considering all possible elements that could be controlled, there were some limitations. Those limitations include teacher only perspective, the sole use of a survey, and lack of triangulation.

Chapter four provides an in-depth look at the results of surveys received from participants. From the results, relationships were determined between each topic, as it relates to the topic of obesity with students grades 5-12. The results are broken down into both frequencies and percentages. These frequencies and percentages are then used to determine whether the category does or does not establish a relationship with childhood obesity.

Chapter five examines the reasons for the study. This chapter highlights where connections are established between the results and prior research. Chapter five also takes a closer look into phenomena of childhood obesity to determine what the results really mean for those involved. Recommendations for future research are then provided.

Definition of Terms

There are some terms used in this study whose definitions are essential to the understanding of this topic. To begin discussing obesity we must explain it in its entirety. Obesity is an increase of fat cells in the body. This increase occurs when an individual takes in more calories than he or she burns off. To determine whether an individual is obese their body mass index (BMI) is measured. BMI is the weight in kilograms divided by the height in meters (Bonzheim, Garber, Glass, Hamm, Kaminsky, Kohl, Mikesky, 2006; Center for Disease Control and Prevention, 2004). If an individual has a BMI in excess of 25 they are considered overweight; if the BMI exceed 30 they are said to be obese.
The type of study conducted uses qualitative methods. QSR International (2007) states, “qualitative research is used to gain insight into people's attitudes, [behaviors], value systems, concerns, motivations, aspirations, culture or lifestyles” (para. 2). Qualitative research helps to explore issues and the answers to the questions provided. In qualitative research the researcher collects the data and analyzes them and attempts to make sense of it all (Glense, 1999). The details for qualitative research are gathered through open-ended questions in survey or interview format, which elicit participant direct quotes. As it pertains to this study, the qualitative data are provided by in-service teachers in Northwest Ohio.

Academic success is another term that is prevalent in the effects of obesity in children. When the notion of academic success is mentioned the general thinking is that of a student’s grade point average (GPA). Along with GPA, academic success involves learning to become a competent individual that will have the capability to function productively in society. It also refers to the ability to finish school in its entirety.

Lastly, sense of belonging is established as another integral component of this study. Sense of belonging refers to how a person feels within a certain group or environment. It focuses on the extent to which he or she is accepted and/or supported by other members in the group or environment. Almost all individuals need and want to matter to others in order to feel meaning and fulfillment in their lives. This is exemplified not only in the learning environment but even in the workplace of adults and on sports teams. When a person has a sense of belonging he or she feels better about the tasks he or she is asked to perform and usually work harder to accomplish those tasks.
CHAPTER TWO
Review of Literature

Introduction

This chapter will focus on prior research, including studies and statistics, on the topic of childhood obesity. The chapter is broken down into several sub-categories including: the obese population, causes of obesity, concerning health problems, psychological and emotional factors, physical activity, academic success, sense of belonging, and ways to combat obesity. The information will provide relevant material to be compared with results in chapter four.

Childhood Obesity

Childhood obesity is an increasing epidemic in the United States. Today in the United States teens are being faced with the increase rate of teen obesity. According to the American Obesity Association, about 30.4 percent of teenagers are overweight, and 15.5 percent of teens are obese. As Carroll, Flegal, Johnson & Ogden (2002) state, "the prevalence of obesity among U.S. children and adolescents has steadily increased since 1971" (p. 2848). In years from 1971-1974, about 5.0% of children ages 2-5 were identified as obese. During that same time period, about 4.0% of children ages 6-11 were obese. From 1988 – 1994, the percentage obese children ages 2-5 leaped to 7.2% and the percentage of obese 6-11 year olds nearly doubled to 11.3%. The most recent survey, 2003 – 2006, shows that the percentage of obese children ages 2-5 is around 12.4%. The percentage of children ages 6-11 considered obese is around 17.0% (Carroll et al., 2004; Carroll, Curtin, Flegal, McDowell, Ogden, & Tabak, 2006).

With this said, a striking 45.9 percent of teens are at risk for developing health problems due to being overweight. This figure has nearly tripled in the last twenty years (American Obesity Association, 2005). Although one must keep in mind that weight gain during the teen years is normal, and weight gain only becomes a problem when that weight gain progresses
beyond normal limits (Arnett, 2007). According to Centers for Disease Control, a person is obese when the BMI exceeds 30 percent (Center for Disease Control and Prevention, 2005a).

The CDC has specific guidelines to determine overweight and obesity. These guidelines are frequently used and widely accepted as guidelines for determination of weight status; Body Mass Index (BMI). The CDC’s (2005a) criteria for BMI’s of children and adolescents are categorized as “Underweight” (BMI < 5th percentile for age and gender), “Normal Weight” (5th < BMI > 85th percentile for age and gender), “At Risk for Overweight” (85th < BMI > 95th percentile for age and gender), and “Overweight” (BMI > 95th percentile for age and gender).

There is an unhealthy trend of obesity in our society today. Yet, the consideration of poor eating habits is no longer the only factor that contributes to childhood obesity. Instead, it is the combination of poor eating habits with the lack of physical activity and daily exercise that are normal bad habits of today’s youths (Center for Disease Control and Prevention, 2009b). Today’s children are no longer spending their free time playing outside. Instead, over half of today’s teens spend their time watching television three or more hours per day on an average school day, playing video or computer games or using a computer for obligations that are not school related (Centers for Disease Control and Prevention, 2007).

**Obese Population**

As reported by the CDC, in 2007-2008, the prevalence of obesity was 32.2 percent among adult men and 35.5 percent among adult women. However, this epidemic does not only apply to adults. Recent studies also done by the CDC indicate children who are overweight are more likely to become obese as adults when compared to those who are not overweight as children (Center for Disease Control and Prevention, 2009b). In the U.S., the prevalence of childhood obesity has tripled since the 1960s with a low prevalence of about three percent in the 1960s to
about 7–10 percent in the 1980s and 1990s (Center for Disease Control and Prevention, 2002; Carroll et al., 2004). The most recently reported prevalence in the U.S. was estimated at around 15 percent (Carroll et al., 2006). These statistics clearly illustrate the dramatic increase in childhood obesity over the last five decades.

This trend seems to be more prevalent in certain minority groups. Individuals who identify themselves as African American and Mexican American tend to have a higher risk for the development of obesity (Koplan, Kraak & Liverman, 2005). Carroll et al. (2004) shows the prevalence of obesity by race/ethnicity and gender. During the years ranging from 1988 – 1994, Non-Hispanic White girls had a 7.4% of obesity. While Non-Hispanic White boys were at a rate of 11.6%. In those same years, Non-Hispanic Black girls had a rate of 13.2% and the Non-Hispanic Black boys had a rate of 10.7%. Mexican American girls were at a rate of 9.2% while Mexican American boys’ obesity rate was 14.1%. These figures were then compared to that of the years ranging from 2003 – 2006. Non-Hispanic White girls had a 14.5% rate of obesity and Non-Hispanic White boys were at a rate of 17.3%. Non-Hispanic Black girls’ obesity rate was 27.7% and Non-Hispanic Black boys’ obesity rate was 18.5%. Mexican American girls rate reached 19.9% and Mexican American boys rate totaled 22.1% (Carroll et al., 2004, 2006).

The data clearly shows that minority groups have a higher risk of becoming obese. Both the Non-Hispanic Black and Mexican population obesity rates are higher than that of Non-Hispanic Whites. When looking at gender, boys have higher rates in both Non-Hispanic Whites and Mexican populations. The Non-Hispanic Black girl’s rate is tremendously higher than Non-Hispanic Black boys.
Factors Contributing to Obesity

It has been stated that at the individual level, childhood obesity is the result of an imbalance between the calories a child consumes as food and beverages and the calories a child uses to support normal growth and development, metabolism, and physical activity (Center for Disease Control and Prevention, 2005b). In simpler terms, obesity results when a child consumes more calories than the child uses. The imbalance between calories consumed and calories used can result from the influences and interactions of a number of factors, including genetic, behavioral, and environmental factors (U.S. Department of Health and Human Services, 2001). It is the interactions among these factors – rather than any single factor – that is thought to cause obesity (World Health Organization, 2000).

Studies indicate that certain genetic characteristics may increase an individual's susceptibility to excess body weight (Farooqi & O'Rahilly, 2000; Bougneres, Fallin & LeStunff, 2001). However, this genetic susceptibility may need to exist in conjunction with contributing environmental and behavioral factors (such as a high-calorie food supply and minimal physical activity) to have a significant effect on weight. Genetic factors alone can play a role in specific cases of obesity.

Concerning Health Problems

Obesity for children and adults can lead to many different health problems. Schmidt (2003) states, “child obesity can cause serious diseases that are detrimental to an individual’s long-term health” (p. 704). Obesity occurring during childhood will increase the likelihood of obtaining these serious health problems in their later years as adults (Center for Disease Control and Prevention, 2009b). The CDC (2009c) mentions that these diseases consist of but are not limited to: Coronary heart disease, type II diabetes, cancers (endometrial, breast, and colon),
hypertension (high blood pressure), dyslipidemia (for example, high total cholesterol or high levels of triglycerides), stroke, liver and gallbladder disease, gynecological problems (abnormal menses, infertility), osteoarthritis (a degeneration of cartilage and its underlying bone within a joint), sleep apnea and respiratory problems.

**Psychological and Emotional Factors**

Children and adolescents deal with worrying about acceptance from their peers on a daily basis. The feeling of being unaccepted and disapproved by others is detrimental to teen’s positive self-esteem (Arnett, 2007). In recent studies, it has been found that children with peer relationship problems had a significantly higher prevalence of overweight and obesity issues than children without peer relationship problems. These overweight and obese children are often bullied (Body and Mind, 2010). Bullying is broadly defined as a class of intentional and repeated acts that occur through physical, verbal, and relational forms in situations where a power difference is present (Bradshaw, O’Brennan, & Sawyer, 2007). Bullying is bad in any context, and when obese children are bullied the effects can be even more severe than usual. Body and Mind (2010) illustrate this fact when they stated that, "obese children miss two days more of school a year than their normal weight classmates" (para. 23). They further concluded that these absences occur because the overweight children are attempting to avoid being bullied or teased.

Peer relationship problems can lead to depression (Boulton & Hawker, 2000) and socially isolated children are less physically active (Debraganza, Geffken, Lewin, Milsom, Silverstein & Storch, 2007). The prominence of physical appearance as a positive component of self-esteem also helps explain why girls’ self-esteem especially declines as she enters puberty (Arnett, 2007).
Physical Activity

Physical activity has been noted as a means to combat issues associated with being overweight or obese. Studies have indicated that participating in physical activity is important for children and teens as it may have beneficial effects not only on body weight, but also on blood pressure and bone strength (Blimkie, Malina, & Strong, 2005). Daily participation in school physical education among adolescents dropped 14 percentage points over the last 13 years — from 42 percent in 1991 to 28 percent in 2003 (Brener, Eaton, Epping, Fulton, Lee & Lowry, 2004). Physically active children are also more likely to remain physically active throughout adolescence and possibly into adulthood (Malina, 1996).

As mentioned by the CDC (2005c), children spend a considerable amount of time with media. One study found that time spent watching TV, videos, DVDs, and movies averaged slightly over three hours per day among children aged 8–18 years (Foehr, Rideout, & Roberts, 2005). Several studies have found a positive association between the times spent viewing television and increased prevalence of obesity in children (Andersen, Bartlett, Crespo, Macera, Smith & Toriano, 2001; Dietz & Gortmaker, 1985). Media use, and specifically television viewing, may: displace time children spend in physical activities (Fulton, Galuska, Kann, Lowry & Wechsler, 2002; Hammer, Killen & Robinson, 1993), contribute to increased energy consumption through excessive snacking and eating meals in front of the TV (Coon & Tucker, 2002; Birch & Francis, 2006), influence children to make unhealthy food choices through exposure to food advertisements (Institute of Medicine, 2005) and, lower children's metabolic rate (Butte, Treuth & Wong, 2000).
Academic Success

Determining the impact of obesity on a child's academic success is an issue that has seized the attention of countless individuals. Emerging research documents the connections between physical activity, good nutrition, physical education and nutrition programs, and academic performance (Center for Disease Control and Prevention, 2009a). Recent research at the elementary level indicated that obese kindergartners tended to score significantly lower on math and reading tests than did normal-weight children (Datar et al., 2004; Datar & Sturm, 2006; Britt-Rankin et al., 2008).

In another study conducted at the middle and high school levels it indicated that children and adolescents at risk of obesity typically earned lower grades, and individuals who were obese at age 16 completed significantly fewer years of schooling than did their non-obese peers. Also, obese girls tended to perform poorly on math and reading tests when compared to their non-obese peers, and obesity negatively impacted grade-point average for white teenage females (Blanchflower & Sargent, 1994; Crosnoe & Muller, 2004; Sabia, 2007)

Overweight students also rated their educational futures lower than did their normal-weight peers. Consequently, obese women are less likely to pursue college or other post high school training. Also, women who are obese as adolescents completed fewer years of schooling (Ball, Crawford & Kenardy, 2004; Ireland, Mellin, Neumark-Sztainer, Resnick & Story, 2002).

Sense of Belonging

The concept of a sense of belonging is identified as the extent to which one feels personally accepted, respected, included and supported by those in his/her environment (Edward, 1995). Goodenow (1991, 1993) mentioned that school or classroom peer relations are different from those with individual friends, cliques, or groups. There has been an increase in the last few
decades of the prominence of peers in children’s lives. Hymel and Rubin (1995) highlight this increase as they state that, “today’s children begin to enter organized peer groups at earlier ages (e.g., day care) and remain in age-segregated schools for more years than their cohorts or yesteryear” (p. 273). A sense of belonging in school is particularly crucial to adolescents as they move through the transition of middle school and high school. It has been discussed that each child is concerned to find a sense of belonging among peers. Since children spend at least six hours a day in school, it is imperative for them to achieve a place of belonging within that environment, or they may end up feeling they do not have a place anywhere in society (Edward, 1995).

When a student is welcomed and valued in school, this encourages them to have a healthy self-esteem. The higher a student’s self-esteem, the better able he or she will is to develop and sustain beneficial relationships. These students then attract and sustain friendships with others who have a similar sense of belonging. However, individuals with low self-esteem, tend to seek low self-esteem peers who think poorly of themselves, feel disengaged and isolated, and are generally deficient in school (Goodenow, 1991, 1993; Goodenow & Grady, 1994; Youngs, 1992). Many times these are the students who are not successful in school. Students who fail and drop out of school often view school as unwelcoming, do not actively participate, and feel no identification with others. As stated by the Center for Educational Statistics in Washington, D.C. imparts, “a feeling of not belonging is the second leading cause of dropping out of school” (Youngs, 1992, para. 5).

Since most school activities are with others or in the presence of others, one’s quality of relationship with those others affects virtually all school activities (Byrnes & Yamamoto, 1983). According to Scott-Jones (1984), “subjects like English or Social Studies require participations
in open discussion and emphasize students’ ability or disability to interact with others (e.g., social competence)” (p. 302). Social development is therefore intimately related to cognitive development and achievement.

**Combating Obesity in Schools**

The CDC established a state-based program that attempts to help prevent obesity by helping with nutrition and physical activity. The Nutrition and Physical Activity Program to Prevent Obesity and other Chronic Diseases helps 28 states total. Twenty-one states are funded with more than $400,000 in order to build their programs. Another seven states are being funded with $750,000 to $1.3 million (Center for Disease Control and Prevention, 2005d). School programs that embrace the CDC’s suggested guidelines for nutrition and physical activity have been effective in lowering childhood obesity rates (Fitzgerald & Veugelers, 2005).

Schools need to focus on good nutrition in the lunch program, instead of business. Strong (2009) mentions the government should consider children's health, not agribusiness interests, when they decide which foods to include in the National School Lunch Program. Pennsylvania schools were given $1 million from a federal stimulus grant called Communities Putting Prevention to Work (Body and Mind Staff, 2010). These schools are working to place nutrition information in cafeterias and on menus sent to parents.

As stated by the CDC (2009a), by following the suggested guidelines of practicing healthy eating habits and more physical activity on a daily basis, schools can help reshape children's social and physical environments and provide information, tools, and practical strategies to help students adopt healthy lifestyles.
Summary

The number of overweight children in the United States is continually increasing. These overweight children are more likely to have health problems (i.e. heart disease, type II diabetes, cancer, hypertension, stroke) than non-overweight children. Being overweight as a child most often leads to psychological, emotional, and academic problems as well. There are ways to combat this epidemic, including physical activity and better food choices for children. This epidemic must become a top priority for teachers and administrators.
CHAPTER THREE

Methodology

Introduction

The purpose of this study is to inquire how childhood obesity affects junior high and high school students in Northwest Ohio. This will be assessed through teachers’ report of sense of belonging and academic achievement. This study was guided by the following research questions:

- How do teachers perceive students weight as it pertains to their sense of belonging?
- How do teachers perceive students weight as it pertains to their academic success?

This study surveyed twenty in-service junior high and high school teachers in Northwest Ohio. The teachers taught five grades through twelve.

Data were collected to determine the affects childhood obesity has on junior high and high school students in Northwest Ohio. For the purposes of this study, two questionnaires were designed in order to determine the overall affect childhood obesity has on junior high and high school students grades five through twelve.

Research Design

The core method used in this investigation of the relationship between childhood obesity, academic success, and sense of belonging follow the method of qualitative survey research. In qualitative research the researcher gathers data through open-ended questions and analyzes the data in an attempt to make sense of it all (Glense, 1999). Qualitative survey research is used to gain an in-depth understanding of a particular phenomenon (Berkwits & Inui, 1998). The purpose of this study is to identify teacher’s perception of childhood obesity, as it relates to academic success and sense of belonging; therefore, qualitative research was the best method of
use. Because teacher perceptions are the focus, qualitative research was used to explore the in-depth nature of these perceptions. Participants in this study were asked survey questions to identify the similarities and differences of their perceptions. These similarities are then coded into themes previously established in the survey questions. Once data was coded into themes they were used to identify a relationship to the topic of childhood obesity in order to answer the research question.

A survey was used in this study. This type of instrument was used to gather one’s overall perception of the obesity topic. Hannan (2007) states:

> surveys provide the use of open-ended questions that allow respondents to state their opinions in ways not pre-selected by the researcher. These give the possibility of discovering things that were unsuspected and enable some respondents to challenge the sort of assumptions that may have been made (para. 3).

Each survey contains a series of open-ended questions, which allow for participants to state opinions with no pre-selected answers.

**Research Participants**

The participants involved in this study were 20 in-service teachers, teaching grades 5-12 from Northwest Ohio. Demographic data was not collected because the gender and ethnicity of the teacher were not relevant to the results of the study. For this study participants volunteered to complete surveys; all of which were given by the researcher either face to face or via email. As pertaining to the first set of participants, there was no incentive given to the teachers to participate in this study. However, the second set of participants was given an incentive of extra credit by their professor in their master's level college course. The difference between the two surveys was that the second survey assisted in giving a more in-depth viewpoint of teacher
There were no direct benefits to the participants of this study; it was strictly on a voluntary basis for the purpose of helping a local graduate student. Risks involved from participation were no greater than what one would experience in daily life.

**Instrumentation**

There were two different surveys; the first survey was comprised of three open-ended questions (See Appendix A). The second survey was comprised of nine open-ended questions (See Appendix B). Both instruments were designed by the researcher to directly investigate the teachers’ perception of the impact a child’s BMI has on their academic success and sense of belonging. It was necessary for two surveys developed because the first survey was distributed to some participants ($n=7$), and the results that were received were somewhat limited. Some of the participants only responded to one part of the question, which led the researcher to break down the question. For example the former question, as stated in Appendix A, asks participants: Explain your perception of their sense of belonging compared to others. Participants answered with general statements, thus giving no opportunity for conclusions to be drawn from the survey. Therefore, the survey was re-developed and sent out to a different set of teachers ($n=13$) to gain more in-depth responses. For example, the question previously stated was redeveloped as four separate questions to allow for conclusions to be drawn (See Appendix B): What is your perception of how overweight students feel about themselves in your classroom compared to others, how do overweight students interact with their peers in the classroom, how do overweight students interact with teachers in the classroom, and what is your perception of overweight student’s sense of belonging compared to their peers. The re-developed survey was sent via email to in-service teachers who were all enrolled in a master's level college course. Their professor gave an incentive of extra credit to complete the survey.
Procedures

To effectively conduct this study of the impacts childhood obesity has on a student’s academic success and sense of belonging, numerous procedures were involved. The first step included initially contacting a Northwest Ohio Junior High School to confirm their willing participation and interest in this study. A formal letter explaining the components and aims of this study was sent to the school principal (See Appendix C). To communicate an approval to Bowling Green State University Human Subjects Review Board (HSRB), a formal letter was sent permitting research, of the teachers, to be done (See Appendix D).

Since teachers were asked to complete a survey during their leisure time, which asked questions containing their personal views, consent letters were developed and distributed one week before collection began (See Appendix E). This helped to provide ample time for the consent letters to be returned and analyzed so that accommodations could be made for those teachers not willing to participate. However, this did not turn out to be the case. All consent letters were returned within the allotted time and all teachers agreed to take part in the study. It was of high priority to ensure the teachers were informed of the details of the study before they participated. Therefore, a recruitment script was developed and read to the teachers by the researcher, which included an overview of the study, with its aims and courses of action clearly defined (See Appendix F). Once school participation was confirmed and teacher consent forms were returned and analyzed, surveys were then distributed. All teachers who agreed to participate actually did.

The second step in the process was done via email completion. Selected teachers were informed of the study through email of the Informed Teacher Consent Form (See Appendix E). These participants were given an allotted amount of time to complete the survey as it related to
their students’ sense of belonging and academic success and return it to the researcher via email. These participants were students in a masters level educational assessment course and were given extra credit to complete this survey.

**Data Collection**

The data collection consisted of one component: participant teacher survey results. On announced days, participating teachers completed surveys. During the first encounter with the teachers, they were informed of the details in the research study by the researcher via recruitment script. In the second visit with the teachers, the data collection day (May 28th), the researcher entered each room to collect all surveys from the teachers during the free period at 10:15 AM - 11:00 AM in order to not interrupt during regular teaching periods. The deadline for the survey was Wednesday May 28, 2010.

The second groups of participants were informed of the details in the research study by the researcher via recruitment script. The recruitment script was given to the participants via email. The returned and completed survey served as the participant’s consent to participate in the research study.

**Data Analysis**

Mertler (2006) has also designed a Three-Step process to analyze qualitative data. The first step used to analyze the data is the organizational process. Organization involves the development of a coding scheme to reduce the large amount of data within the observation and survey. The categories, previously established based on survey questions and review of literature, were used to code the data into three different themes. For example, the first theme of population of overweight students, which includes race and gender, was established when literature was reviewed on the topic of childhood obesity and deemed relevant to the research
question. The second theme of issues of academic success involves the effect obesity has on a child's academic success. The last theme of issues of sense of belonging identifies whether or not an overweight child feels personally accepted by those in his/her environment.

The second step used to analyze the data is to describe the collected data. A connection between the data collected and research questions must be established (Mertler, 2006). In this study each theme, which emerged from step one, was recorded with percentages and frequencies of respondents. No new themes emerged from the survey analysis. The themes indentified in the survey supported the literature review and research questions. The recorded percentages and frequencies were then used by the researcher to determine whether a relationship existed between the corresponding theme and childhood obesity. These relationships were used to answer the research question: how teachers’ perceive childhood obesity as it pertains to academic success and sense of belonging. There was no indication, based on data collected, that a relationship exists between childhood obesity and academic success. However, a relationship between childhood obesity and sense of belonging was established.

Finally the third step used to analyze the collected data is to interpret the data. During this step, similarities, differences, patterns, and implications are identified (Mertler, 2006). The researcher began with the common themes described by the coding process and developed this information into a chart that effectively shows the relationship between the impacts childhood obesity has on a student’s academic success and sense of belonging. To show the relationship between themes and childhood obesity, a chart was developed revealing all results from each survey. The most representative quotes were then selected, from the data, based on accurate representation of the percentages. The percentages and quotes were later compared to prior research and used to determine were similarities and differences existed.
Limitations

The biggest limitation in this study is teachers giving their input on the lives of students. My original research was designed not only to include teachers but to survey students to investigate their perceptions of obesity as it relates to academic success and sense of belonging. During my search to find a school to conduct this study, I had a difficult time getting a principal to commit to doing the research at their school. The ideal circumstance would allow for me to receive input from the students themselves. However, this would not be the best thing to do considering how fragile the topic of obesity can be; the subject matter is about the lives of students. Though talking about obesity is sometimes healthy, doing this through a survey may seem impersonal to the child and drive them to more overeating and low self esteem (Bodel, 2010). An attempt to talk to a child about obesity must be done in a way that shows sensitivity and support (Direnfeld, 2006). In agreement, many school principals believed the research would subject their students to feel emotional stress from the questions being asked to them. Therefore, the need to included only teachers became my only options to conduct this study. This served as a huge limitation to my research.

Secondly, this study was limited to using a survey as my primary data collection method. While the use of a survey allowed more participants to be involved in the study, its use did not allow me to investigate or question respondents, which limited the depth of responses received from participants. Use of a survey also did not allow for clarification, if needed. Some participants, though questions were stated as precise as possible, may not have understood the exact type of response looked for.

Finally, triangulation was not used in this study. Triangulation is a tool used in qualitative research to check and establish validity in a study (Guion, 2002). To triangulate data
of this survey, Guion (2002) states, “at least three categories of individuals would have to be established.” These categories would include teachers, parents and students. Though information provided by participants is accurate, if information was retrieved from each category of individuals, the validity of the study would be improved. However, triangulation was not approved for use by HSRB for this study.

Summary

As previously stated, the instrument used in this study was a survey. Use of a survey allowed participants to give feedback to each question. The participants included were in-service teachers of grades 5-12. All 20 participants were allowed to give all information they deemed relevant to each question. Seven participants received one survey and thirteen participants received another. Two separate surveys had to be used because the first set did not provide enough detail to each question. Data from the surveys was recorded and coded into three categories: population of obese students, issues of academic success, and issues of sense of belonging. Though there were some limitations, the results were enough to reveal relationships between the three categories and childhood obesity.
CHAPTER FOUR

Results

Introduction

The purpose of this study is to identify how teachers perceive the weight of students as it pertains to sense of belonging and academic success. This chapter focuses on the results of the survey of in service teacher participants. Each teacher’s views on the topic of childhood obesity, as it relates to three main themes, are expressed in Table 1. The results are then analyzed to indentify the variety of relationships that exist between each corresponding them and childhood obesity.

Results and Relationships

The results of the study are attempts to explain how teachers perceive students’ weight as it pertains to both their sense of belonging and academic success. The thematic results found through the surveys are supported through both percentages and specific perceptions of respondents. These themes with supporting percentages and frequencies are displayed in Table 1. Through the results shown in Table 1, relationships can be described about themes, which may or may not exist in overweight students.

Three main themes were identified by teachers pertaining to overweight students: (1) population of overweight students, (2) issues of academic success and (3) issues of sense of belonging. For example, teachers reported the population of overweight students, within their respective class, through gender, race, and socio-economic status (SES). Teachers also indicated the relationship of weight to academic success.
Table 1

*Reported Theme Percentages and Frequencies (N=20)*

<table>
<thead>
<tr>
<th>Main Category</th>
<th>Percentage (Frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Supporting Evidence</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Population of Overweight Students</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>55% (n=11)</td>
</tr>
<tr>
<td>Males</td>
<td>25% (n=5)</td>
</tr>
<tr>
<td>Females</td>
<td>30% (n=6)</td>
</tr>
<tr>
<td>Race</td>
<td>50% (n=10)</td>
</tr>
<tr>
<td>Caucasian</td>
<td>30% (n=6)</td>
</tr>
<tr>
<td>Minority</td>
<td>20% (n=4)</td>
</tr>
<tr>
<td>Socio-economic Status</td>
<td>65% (n=13)</td>
</tr>
<tr>
<td>Issues of Academic Success</td>
<td>15% (n=3)</td>
</tr>
<tr>
<td>Successful</td>
<td>5% (n=1)</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>10% (n=2)</td>
</tr>
<tr>
<td>Issues of Sense of belonging</td>
<td>100% (n=20)</td>
</tr>
<tr>
<td>Embarrassed</td>
<td>90% (n=18)</td>
</tr>
<tr>
<td>Less Interaction</td>
<td>55% (n=11)</td>
</tr>
<tr>
<td>Low self-esteem (sense of belonging)</td>
<td>70% (n=14)</td>
</tr>
</tbody>
</table>

*Note:* Percentages do not total to 100%. When percentages do not total 100%, the remaining percentage of the teachers believed the category was not significant, as it pertains to the topic of obesity.
Population of Overweight Students

There are three sub-categories associated with the population of overweight students. Teachers participating in this study identified three sub-categories: gender, race, and socio-economic status.

**Gender.** Eleven teachers (55%) believed gender was related to the population of overweight students. Five teachers (25%) report there were more overweight males students, while the other 6 teachers (30%) stated that female students were more overweight than male students. For example, Teacher 1 stated, “many of the students that are overweight in my classes are male students. However, Teacher 9 contradicted Teacher 1 who notices overweight students “tend to be more females than males.” The remaining teachers (n=9, 45%) felt there was no noticeable relationship between gender and overweight students. For instance, Teacher 17 acknowledged, “I have noticed that most of my [overweight] students are a mix of gender.” Although gender was definitely addressed in multiple ways through the responses of teachers, there was no clear pattern of teacher beliefs about weight and gender. Given the responses of teachers, there is no evidence to suggest one gender as being more likely to be overweight than another.

**Race.** Ten of the participating teachers (50%) suggested race and overweight students were related. Six (30%) believe Caucasian students are more likely to be overweight, while another 4 (20%) believe minority students are more likely to be overweight. Teacher 18 confirmed, “I tend to see more Caucasian students overweight than any other race,” while Teacher 11 suggested that, “African Americans tend to have more of a weight issue than Caucasians. These results may have been misleading because most of the students associated
with teacher participation were Caucasian, as seen in the comment from Teacher 6, “we are predominately Caucasian school; therefore most of the overweight students are Caucasian.”

Again, while many teachers noted race was related to adolescents being overweight, no distinct pattern between race and overweight students was established. Some teachers believed Caucasians were more prone to being overweight and others believed African Americans were more likely to be overweight, while others still believed there was no association at all.

**Socio-economic status.** Thirteen teachers (65%) indicated that there was a relationship between socio-economic status and overweight students. All of the teachers who affirmed that there was a relationship between socio-economic status and overweight students reported that having a low socio-economic status was related to a child being overweight. For example, Teacher 9 commented, “most of my overweight students are from a lower SES.” In addition, Teacher 16 supported when stating, “85% of my overweight students are considered to be living in impoverished conditions.”

Unlike gender and race, a clear pattern existed between socio-economic status and the weight of students. The majority of teachers reported SES as an issue in overweight students, and all reporting this believed it had to do with lower SES.

**Issues of Academic Success**

There were only three participating teachers (15%) who reported a relationship between academic success and overweight students. Teacher 2 stated, "overweight students are more successful than the average student." The other two teachers believed overweight students were unsuccessful when compared to the average student. Teacher 13 states, “overweight students are not as successful.” The remaining seventeen teachers (85%) found no link between academic success and overweight success. Teacher 20 explained by stating, “the academic performance of
overweight students is the same as non-overweight students.” Teacher 9 also supported this notion and confirmed, “academic performance is the same for all students”.

This study's results indicate no existing pattern between academic success and overweight students. Thus, these results suggest academic success of overweight students is not directly related to the weight of said student.

**Issues of Sense of Belonging**

Three aspects were examined, as they pertain to sense of belonging, in overweight students. A majority of teachers \((n=18, 90\%)\) suggested a strong link between embarrassment and overweight students. One example is from Teacher 4’s assertion, “I have noticed a few of my overweight students seem to be embarrassed.” Teacher 5 declared the same belief, “my perception is there are often feeling of embarrassment [among overweight students].

More than half of the teachers \((n=11, 55\%)\) stated overweight students had less interaction during school compared to non-overweight students. Nine teachers (45%) were indifferent when talking about the relationship between student interaction and overweight students. Teacher 3 illustrated this by stating, “overweight students usually stay to themselves and shy away from contact with other students.”

Nearly two-thirds of teachers \((n=14, 70\%)\) observed an association between low self-esteem and overweight students, while, 6 teachers (30%) were indifferent to the association between low self-esteem and overweight students. Teacher 5 showed an association between low self-esteem and overweight students by describing, “my perception is that [overweight students] have low self-esteem.”

These results suggest an association between overweight students and issues of sense of belonging. Teachers in this study have commented strongly on this relationship indicating that
overweight students are negatively affected socially because of their weight. Some interact less, while others feel embarrassed. Many also have lower self-esteem. This study suggests in these teachers' classrooms overweight students exhibit a lower sense of belonging.

**Summary**

As it pertains to population of overweight students, the only relationship exists between low socio-economic status and childhood obesity. Those students having a low socio-economic status are more likely to become overweight. The results of this study do not show a relationship between academic success and childhood obesity. Though prior research suggests a relationship between low academic success and childhood obesity, the results to do not support the research. However, the study does support the research on sense of belonging. There is a clear relationship between a low sense of belonging and childhood obesity.
CHAPTER FIVE
Conclusions, Implications, and Recommendations

Summary of the Study

As stated by the CDC (2009b), obesity reached a peak in 2008 to an outstanding 28.9 percent of adults residing in the state of Ohio; thus making this an increasing epidemic. More specifically, children and teenagers are among the many of this growing epidemic that is sweeping the nation. The American Obesity Association (2005) stated that a striking 45.9 percent of teens are at risk for developing health problems due to weight.

Along with health concerns, obese children have been noted to be faced with problems in their learning environment. Therefore, this study sought out to show a relationship between obesity and academic success. This current study was focused on teacher’s perceptions of obese children as it pertains to their academic success and sense of belonging. The following questions set the guidelines for this study:

- How do teachers perceive student’s weight as it pertains to their sense of belonging?
- How do teachers perceive student’s weight as it pertains to their academic success?

The participants in the study were twenty in-service teachers from the Northwest Ohio area. The instrumental technique used in this study was a survey. Surveys were designed by the researcher to directly investigate the teachers’ perception of the impact a child’s BMI has on their academic success and sense of belonging.
Summary and Discussion of Findings

In this study, some of the findings aligned with previous research, while other areas seem to be in disagreement. For example, some teachers have mentioned there was a relationship between obesity and gender, while others indicated the opposite. This would put the population of male and female overweight students about equal. Prior research has shown that the ratio of male to female overweight students, though not exactly the same, is around about the same (Carroll et al., 2004, 2006). Thus, the results from this study support previous research.

This study suggested that there is not an overwhelming association between race and overweight students. However, research suggests that members who identify themselves as African American and Mexican American tend to have a higher risk for the development of obesity (Koplan et al., 2005). The results of the present study do not identify that minorities are more overweight than Caucasian students. This may likely be due to the geographic area by which the study was conducted. Most of the students in the classes of teachers who were surveyed are Caucasian. Regardless, results from this study do not align with prior research on overweight students and race.

A relationship between low socio-economic status and overweight students is shown through the results in this study. At a glance, this does not seem to be supported by most research. For a child to become overweight, the child must take in more calories than what he or she is burning. So, how can a child who does not come from a wealthy family be overweight? As associated with low socio-economic status, it may be a function of the types of food the child takes in. Lower SES families do not purchase fresh produce and healthy foods. Instead, they buy cheaper processed foods that store well and have high calories in them.
Recent research has revealed a relationship between overweight students and academic success, stating that overweight students are more likely to receive lower grades (Center for Disease Control and Prevention, 2009a). The present study does not suggest a relationship between academic success and overweight students. Most teachers in this study said there was no relationship, and those who did report a relation believed that some overweight students excel and other overweight students do not perform as well as their non-overweight peers.

The strongest theme from this study that supported previous research was in looking at the sense of belonging of overweight students. This study reveals that a vast majority of overweight students feel embarrassed, are less likely to interact with other students, and generally have low self-esteem. Prior research shows that this low sense of belonging is detrimental to the success of students (Goodenow, 1991, 1993; Goodenow & Grady, 1994; Youngs, 1992). It may cause them to develop relationships with other low self-esteem students or even drop out of school. Having a low sense of belonging negatively affects the lives of students.

**Conclusions and Implications**

This study shows that teachers need to pay particular attention to overweight students. Teachers must take an active role in helping overweight students feel a sense of belonging. Teachers must find productive ways to make sure overweight students boost their self-esteem and interact more with other students. Having relationships with other students will increase a child’s confidence. An increased confidence will help a child to feel more comfortable in their body or take an active role in reaching an ideal weight. The new relationships developed with peers will help to motivate children (Goodenow, 1991).
Teachers and administrators should increase the amount of physical exercise during and after school. Teachers routinely take kids out of recess as a punishment or to do school work. Not taking away recess to focus on academics is important to the overall welfare of the student. Recess may also be considered in junior high and high school students to stress the importance of physical activity. Afterschool clubs, outside of the normal sports clubs may also be considered. An increase in the amount of physical exercise while young will help children stay active, even up through adulthood, thus decreasing the possibility of obesity (Malina, 1996).

Teachers and administrators can also take an active role in the types of food children are eating. Schools have a direct impact on the types of food children put into their bodies through lunch programs and vending machines (Strong, 2009). Teachers and administrators must first educate themselves then take action to help students make their own nutritious food choices. Instilling these values in young students will help them to adopt and maintain a healthy lifestyle (Center for Disease Control and Prevention, 2009c).

**Recommendations for Future Research**

Future research should take a closer look into obesity through the eyes of students. Talking to students would allow teachers, administrators, and parents to have an in-depth look at obesity through the eyes students. The new findings may give teachers, administrators, and parents new avenues by which the phenomena of obesity can be attacked. Talking to students will also give students an outlet to express their feelings, concerns, and help them boost self-esteem.

Face-to-face interviews are necessary to dig deeper into the question of sense of belonging in school. These interviews may also give insight into the causes of obesity such as physical activity, lunch programs, and personal issues. These interviews will allow questions to
be thoroughly explained and give teachers an opportunity to give more information and detail on the topic.

Teachers, administrators, and students should also be interviewed about what they feel can be done to combat childhood obesity. All of these parties have a different perspective which can be beneficial in diminishing the growth of this epidemic. From these perspectives, a new method of attack may be found that eliminates the increase of childhood obesity in the U.S., provides nutritional food choices in lunch programs, and increases the amount of physical activity.
REFERENCES


APPENDIX A

Teacher Questionnaire 1
Teacher Questionnaire

Grade Level Teaching: __________

Question 1: Are there any obese students in your past/current class? Explain any similarities you have seen between overweight students and gender, race, and SES (Socioeconomic status)?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Question 2: Explain your perception of their sense of belonging compared to others?

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______________________________________________________________________________
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______________________________________________________________________________
______________________________________________________________________________
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Question 3: Explain your experience with students who are overweight and their academic success?

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______________________________________________________________________________
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______________________________________________________________________________
______________________________________________________________________________
APPENDIX B

Teacher Questionnaire 2
Teacher Questionnaire

Grade Level Teaching: __________

As you complete this questionnaire, you will come across the term overweight. In definition, this is what I mean by the term overweight; overweight is generally defined as having more body fat than is optimally healthy.

Question 1: Are there any obese students in your past/ current class?

Question 2: Explain any similarities you have seen between overweight students and gender?

Question 3: Explain any similarities you have seen between overweight students and race, and SES (Socioeconomic status)?

Question 4: Explain any similarities you have seen between overweight students and SES (Socioeconomic status)?

Question 5: What is your perception of how overweight students feel about themselves in your classroom compared to others?

Question 6: How do overweight students interact with their peers in the classroom?

Question 7: How do overweight students interact with teachers in the classroom?

Question 8: What is your perception of overweight student’s sense of belonging compared to their peers?

Question 9: In general, how does the academic success of overweight students compare to their peers?
APPENDIX C

Information Letter to a Northwest Ohio Junior High School Principal
Bowling Green State University Research-Based Thesis Project

The Impact Body Mass Index has on a Student’s Academic Success and Sense of Belonging

Dear Tinora Junior High Principal,

My name is Shaina S. Lightfoot. I am a student at Bowling Green State University currently pursuing my Masters Degree in Curriculum and Teaching. I am working to complete my Thesis and the research it entails. The focus of my research deals with the impact a child’s Body Mass Index (BMI) has on their academic success and sense of belonging. For this project I want to evaluate your teaching staff’s perceptions in order to understand the impacts a child’s BMI has on their academic success and sense of belonging. This document will explain to you the questionnaire that your staff can agree to participate in and the procedures that will be used to collect questionnaire materials. Your decision regarding your staff’s participation in this study will have no impact on your employment with your school district or any future relationship you may have with Bowling Green State University. I am just interested in learning your perspective as a teacher on the topic of my research. There are no direct benefits to the participants of this study; it is strictly on a voluntary basis. However, with the information your teaching staff provides, researchers will be able to gain a better understanding of the impacts a child’s BMI has on their learning and sense of belonging, and then discover ways to help children become healthier.

In the completion of this Thesis, I hope to find ways to bring more awareness to this epidemic. One of the growing concerns affecting today's teenagers is the increase in the rate of obesity. According to the American Obesity Association, about 30.4 percent of teenagers are overweight, and 15.5 percent of teens are obese. With that said, a striking 45.9 percent of teens are at risk for developing health problems due to weight. My ultimate goal is to develop ways in which children and teens can avoid this problem from occurring. However, if this is already an issue a child or adolescent is dealing with, I hope to develop ways in which they can become healthier. Your participation is very critical to my research and will help with the formation of my study.

With your permission I would be eager to conduct my research at your fine school establishment. If you have any questions about this study, please do not hesitate to contact me by phone 614-937-4884, or email, sslight@bgsu.edu; or feel free to contact my Research Advisor, Tracy Huziak-Clark at 419-372-7363 or email thuziak@bgsu.edu. We would be very happy to talk with you about any concerns you have about this effort. You may also contact the Chair, Human Subjects Review Board, Bowling Green State University, 419-372-7716 (hsrb@bgnet.bgsu.edu), if any problems or concerns arise during the course of the study. Thank you for your time and consideration.

Sincerely,

Shaina S. Lightfoot

Bowling Green State University Masters Student
APPENDIX D

Permission Letter from a Northwest Ohio Junior High School Principal
Date: April 16, 2010
To: Whom it may concern
From: G. Kent Adams
RE: Consent to survey

Please accept this as my permission for Shaina Lightfoot to survey the teachers at Tinora Junior High.

I have been informed that the topic information is “Impact of Body Mass on Academic Success and Sense of Belonging.”

We have tentatively set May 10, 210 for this survey.

Respectfully,

G. Kent Adams, Principal
APPENDIX E

Informed Teacher Consent Form
Bowling Green State University Research-Based Thesis Project
The Impact Body Mass Index has on a Student’s Academic Success and Sense of Belonging

Informed Consent
For Participants - Teachers

Dear Timora Junior High Staff,

My name is Shaina S. Lightfoot. I am a student at Bowling Green State University currently pursuing my Masters Degree in Curriculum and Teaching. I am working to complete my Thesis and the research it entails. The focus of my research deals with the impact a child’s Body Mass Index (BMI) has on their academic success and sense of belonging. For this project, I want to evaluate your perceptions in order to understand the impacts a child’s BMI has on their academic success and sense of belonging. This document will explain to you the questionnaire that you can agree to participate in and the procedures that will be used to collect questionnaire materials. Your decision regarding your participation in this study will have no impact on your employment with your school district or any future relationship you may have with Bowling Green State University. I am just interested in learning your perspective as a teacher on the topic of my research. There are no direct benefits to the participants of this study; it is strictly on a voluntary basis. However, with the information you provide, researchers will be able to gain a better understanding of the impact a child’s BMI has on their learning and self-esteem, and then discover ways to help children become healthier.

The risks of participation are no greater than what you would experience in daily life. You may decide to skip questions or discontinue participation at any time without penalty. The information you provide for the questionnaire will be used to develop a better understanding your student’s academic success and sense of belonging as it relates to their BMI.

In the completion of this Thesis, I hope to find ways to bring more awareness to this epidemic. One of the growing concerns affecting today’s teenagers is the increase in the rate of obesity. According to the American Obesity Association, about 30.4 percent of teenagers are overweight, and 15.5 percent of teens are obese. With that said, a striking 45.9 percent of teens are at risk for developing health problems due to weight. My ultimate goal is to develop ways in which children and teens can avoid this problem from occurring. However, if this is already an issue a child or adolescent is dealing with, I hope to develop ways in which they can become healthier. Your participation is very critical to my research and will help with the formation of my study.

With your agreement, you will complete a questionnaire compiled of short response questions dealing with sense of belonging and academic success, as it relates to your student’s BMI. I am also asking to come into your classroom during Activity Hour to collect the teacher questionnaire. I expect that the time needed to complete the questionnaire will last about 15 minutes. I will be there to collect all data from staff between 10:15 AM - 11:00 AM. If you wish to participate in this effort, then please indicate so on the back of this letter.

I will be removing any indication of your name or identification numbers. I will not be able to tell which questionnaire belongs to which teacher. You will be assigned a pseudonym and this will be
used in all dissemination of the results. The data will be kept in a password-protected file that only I will have access to.

If you have any questions about this study, please do not hesitate to contact me by phone 614-937-4884, or email, sslight@bgsu.edu; or feel free to contact my Research Advisor, Tracy Huziak-Clark at 419-372-7363 or email huziak@bgsu.edu. We would be very happy to talk with you about any concerns you have about this effort. You may also contact the Chair, Human Subjects Review Board, Bowling Green State University, 419-372-7716 (hsrb@bgsu.edu), if any problems or concerns arise during the course of the study. Thank you for your time and consideration.

Sincerely,

Shaina S. Lightfoot
Bowling Green State University Masters Student

I have been informed of the purposes, procedures, risks and benefits of this study. I have had the opportunity to have all my questions answered and I have been informed that my participation is completely voluntary. I do wish to give my consent to participate in this study.

Signature (Participant)
APPENDIX F

Recruitment Script
Teacher Recruitment Script (read to teachers by PI):

My name is Shaina Lightfoot, I am a student at Bowling Green State University I am is currently pursuing her Master’s Degree in Curriculum and Teaching. I am working to complete my Thesis and the research it entails. The focus of my research deals with the impact a child’s Body Mass Index (BMI) has on their academic success and sense of belonging. In order to understand your perspectives the impacts of a child’s BMI, I am asking you to complete a 3-question Questionnaire dealing with sense of belonging and academic success, as it relates to your student’s BMI.

- Your decision regarding your participation in this study will have no impact on your employment with your school district or any future relationship you may have with Bowling Green State University.

- There are no direct benefits to the participants of this study; it is strictly on a voluntary basis. However, with the information you provide, researchers will be able to gain a better understanding of the impacts a child’s BMI has on their learning and sense of belonging, and then discover ways to help children become healthier.

- The risks of participants are no greater than what you will experience in daily life.

- The time needed to complete the survey and questionnaire will last about 15 minutes.

- If you would not like to participate, please let me know. If you do want to participate, I will come during Activity Hour to collect your completed questionnaire.