

ATTITUDES OF MAHONING COUNTY RESIDENTS  
TOWARD OBESITY AND THE OBESE PERSON

by

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Attitudes of Mahoning County Residents Toward Obesity and the Obese Person

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## Abstract

This study used a descriptive correlational research design composed of a convenience sample of Mahoning County residents to identify attitudes toward obesity and the obese person. The sample was obtained from employers, health care workers and the general population. The study was conducted in Mahoning County and used the Bray Obesity Attitude Scale (1972) a tool well documented in terms of psychometric properties. In addition to the 47-item questionnaire, respondents were asked to provide sociodemographic data so that attitude scores could be compared to age, gender, level of education, ethnic background, and income.

A total of 250 questionnaires were distributed to the sample. One hundred twelve questionnaires were completed and returned for a response rate of 45 percent. The personal sociodemographic data indicated that participants' ages ranged from 20 to 77 with a mean of 42. The ratio of men to women participants was 33 percent males to 67 percent females. From the educational data it was concluded that the majority of respondents held at least a college degree (63%).

Information from the completed Bray Obesity Attitude Scale and the demographic questions provided correlative results which were used to determine attitudes of the people in the sample. The possible attitude scores ranged from 47 (least favorable attitude toward obesity) to 188 (highest favorable attitude toward obesity), with a mid point of 117.5 (neutral). Scores obtained in the study ranged from 99 to 167 with the mean score of 132.66. The analyses revealed that the participants had positive attitudes toward obesity. Attitudes were correlated to education, age, income, gender, and ethnic background.

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## TABLE OF CONTENTS

Signature Page	ii
Abstract	iii
Acknowledgement	iv
Table of Contents	v
List of Figures	vii
List of Tables	viii
CHAPTER I. INTRODUCTION	1
Statement of Research Problem	2
Significance and Justification	2
Statement of Purpose	4
Hypothesis	4
Delimitations of Study	5
Limitations of the Study	5
Assumptions of the Study	5
Operational Definitions	6
Classification of Obesity	7
Summary	7
CHAPTER II. LITERATURE REVIEW	9
Brief History of Obesity	9
Prevalence and Demographics of Obesity	11
Social Factors	12
Psychological Factors	21
Depression	21
Body Image	23
Coping Mechanisms	24
New Paradigm	25
Theoretical Framework	27
Summary	30
CHAPTER III. METHODOLOGY	32
Research Design	32
Setting	32
Population	32

Sampling Plan	33
Measurement/Instrument	33
Pilot Study	34
Methods/Procedures	35
Data Analysis	37
Summary	41
CHAPTER IV. ANALYSIS OF DATA	42
Demographic Profile of the Sample	42
Descriptive Statistics	44
Research Hypotheses	46
Summary	52
CHAPTER V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	54
Summary	54
Conclusions	55
Implications	56
Research Recommendations	56
BIBLIOGRAPHY	59
Appendix A. BMI Calculated	68
Appendix B. Metropolitan Height/Weight Tables for Men and Women	70
Appendix C. Ethical Considerations/ Human Subject Protection	73
Appendix D. Bray Obesity Attitude Scale	76
Appendix E. Letter of Permission, Dr. Charles Bray	82
Appendix F. Instruction Letter of Participants	84

## List of Figures

Figure 1. Conceptual Model	.....	28
Figure 2. Distribution and Frequency of Attitude Scores	.....	45
Figure 3. Distribution of Income in Relationship to Total Scores	.....	50

List of Tables

Table 1. Social Desirability Ratings by 25 People Not Involved in the Study	.....	38
Table 2. Correlation for Item to Total Question	.....	40
Table 3. Personal Sociodemographic Data	.....	43
Table 4. Descriptive Statistics of The Bray Attitude Scale	.....	45
Table 5. Descriptive Statistics for the Sociodemographic Variable Education	.....	47
Table 6. Descriptive Statistics for the Sociodemographic Variable Overweight/Obesity	.....	49
Table 7. Correlation Analysis between Sociodemographic Variables and Attitude Toward Obesity	.....	51



## CHAPTER I

### INTRODUCTION

Obesity is on the rise. It is estimated that 65 million adults aged 20 and older are obese (Aronne, 1997). The new lower guidelines for measuring weight, recently released by the Federal Government, classify 55% of the U.S. adult population -- 97 million -- as overweight (Health Line, 1998). Researchers know who is obese, and what is adding pounds. What hasn't been developed yet are effective treatments for this threatening health problem (Dortch, 1997).

Societal attitudes toward obese people are predominately negative (Maroney & Golub, 1992). Moreover, there is evidence that attitudes of health professionals toward the obese person are not different from those held by the general population (Bagley, Conklin, Isherwood, Pechiulis, & Watson, 1989). Since obese people suffer disproportionately from a number of medial problems such as diabetes, stroke, hypertension, and heart disease, obese persons are very likely to encounter society's distorted perceptions and prejudices. Aside from the health problems related to obesity, the stigma attached to obesity often has a negative impact on the emotional health of the obese population (Brownell, 1995). Many obese people suffer from psychological problems that are directly related to their obesity, including disparagement of the body image and binge eating (Brownell, 1995).

Society stigmatizes people with any characteristic that it considers undesirable. The obese person is deprived of full social acceptance and the right to be evaluated according to their unique characteristics and personality (Brink, 1994).

Cultural values tend to view body fat as ugly and unhealthy. “Obesity remains the last socially acceptable form of prejudice, and obese persons remain perhaps the only group toward whom social derogation can be directed with impunity” (Brownell, 1995, p. 417). To illustrate the severity of this prejudice, in recent studies children were shown black-and-white drawings of a normal-weight child, an obese child, and children with various handicaps, such as missing hands and facial disfigurement. The findings indicate that children rated the obese child as the least likable (Brownell, 1995).

#### Statement of Research Problem

Lack of knowledge about obesity and attitudes toward obesity and the obese person among specific Mahoning County residents is the focus of this research. Societal attitudes toward obese people are for the most part predominately negative. The unique ethnic characteristics present in Mahoning County may serve to provide a culture that is more tolerant towards obesity.

#### Significance and Justification

Obese people are affected by cultural and societal attitudes about weight. Social scientists interested in stigmatization have begun to focus on designing ways to combat the stigma. “An example of these new developments is Sobal’s four-component model for coping with the stigmatization of obesity which are : (1) helping a person recognize the presence of stigma, (2) preparing them to respond to stigmatizing acts, (3) reacting to these acts, and (4) repairing the damage done by stigmatization” (Brownell, 1995, p. 420).

Researchers from the National Association to Advance Fat Acceptance (NAAFA) have shown that a new paradigm on obesity is emerging. The first is society’s greater

acceptance of large women, and the second is a dramatic increase in overweight women's acceptance of themselves (Dortch, 1997). As more medical research identifies genetic and environmental causes of obesity, the intensity of the stigma may lessen.

Society equates obesity with overeating and perceives that eating is a controllable condition, thus negative attitudes develop about the obese person's character. The obese person may feel isolated at social functions, they may feel discriminated against in the job market, and they view themselves as inferior or as having less character strength due to their lack of willpower (Peternelj-Taylor, 1989).

Attitudes appear to be learned through interactions in situations which are then manifested in response to persons (Fishbein & Ajzen, 1980). Social psychologists believe that attitudes are directly linked to behavior and that behavior is an overt attitude response. Attitudes are often displayed through actions. Therefore, actions toward a person could display a favorable or unfavorable attitude (Carson, 1987).

Through negative stigmatizing attitudes, obese persons are continually subjected to barriers in attaining privileges, opportunities, and status afforded to others (Brink, 1994; Kalisch, 1972). Research conducted by Harris, Harris, and Bochner (1982) found that college students rated obese persons as less intelligent, less active, not as hardworking, less successful and unpopular.

Identifying the relationships of attitudes to specific sociodemographic variables may lead to a greater understanding of why certain attitudes exist and provide direction to improving the presence of negative attitudes.

The research conducted here will determine the attitudes of Mahoning County

residents regarding obesity and the obese person. Once cultural prejudices are faced honestly, discriminatory behavior toward obese persons can be changed.

#### Statement of Purpose

The purpose of this study was to identify and measure the attitudes toward obesity and the obese person from a sample of people in the Mahoning County. Mahoning County has strong European cultures and this ethnic makeup provides a unique characteristic to the County. Food is a central focus in celebrations, whether it is a baptism or a funeral, a banquet is readily available. This focus provides a uniqueness to the research because it shows that the negative stigma attached to obesity and the obese person may not be as prevalent in this County as it is nationwide.

#### Hypothesis

The hypotheses to be tested are as follows:

1. Participants who are older will have a more positive attitude toward obesity.
2. Participants with more education will have a more positive attitude toward obesity.
3. Participants who have immediate family members or close friends who are overweight or obese will have more positive attitudes toward obesity than those participants who do not have immediate family or close friends who are overweight or obese.
4. Participants who are male will have a less positive attitude toward obesity than female participants.

5. Participants who have higher incomes will have a more positive attitude toward obesity.

#### Delimitations of Study

The study was delimited as follows: (1) participants ranged in age from 20 to 77 years, (2) participants lived or worked in Mahoning County, (3) more females participated in the study (67%), (4) 63% of the participants had a college degree or higher, and (5) the questions are written for adults.

#### Limitations of the Study

1. The questionnaire was quite lengthy which may have resulted in lower response rate.  
Participants may have become distracted prior to completion of the questionnaire.
2. The attitude scale did not define the terms obesity, overweight, or fat, therefore each participant generated his/her own personal interpretation of the meaning of these terms.
3. Participants may have been reluctant to acknowledge their negative feelings or report stereotypes about others.
4. Convenience sampling was used which may limit the generalizability of the results.
5. National statistics indicate that 55% of the population is overweight. In this present study 93% reported family members as being overweight. These findings are not reflective of the population as a whole.

#### Assumptions of Study

Relative to this proposed study, the following assumptions are made:

1. People's attitudes reflect behaviors.

2. Body measurements obtained will be accurate.
3. Obesity has come to be viewed as a character flaw and a social hindrance (Fontaine, 1991).
4. The Body Mass Index is an appropriate and accurate measurement of obesity.
5. The questionnaire will reveal attitudes.
6. Participants will be reasonably honest when filling out the questionnaire.

#### Operational Definitions

The following terms are defined as used in this study.

Attitude - Behavior toward a person, group, thing, or situation representative of conscious or unconscious mental views developed through cumulative experience (Taber's, 1993).

Body Mass Index - Body Mass Index was used to determine obesity. This Index is body weight in kilograms divided by the square of the height in meters {  $wt / (ht)^2$  } (Bray, 1992). The acceptable BMI range is 19-25. People with Body Mass Index values above 25 should consider losing enough weight to lower the BMI at least one or two numbers. (Mayo Clinic, 1998) (Appendix A).

Obesity - is an abnormal increase in the proportion of fat cells, mainly in the viscera and subcutaneous tissues of the body. Obesity may be exogenous or endogenous (Mosby's, 1994). Obesity is defined as a BMI score of 30-39 and morbid obesity is defined as a BMI score of 40 or more (Mayo Clinic, 1998).

Prevalence - is the proportion of a population that has a health condition at a given point in time. It is a function of three factors; the case definition, the incidence rate of the condition (rate at which new cases occur in a population), and the mean duration of the

condition (the average time that an individual in the population has the health condition) (Brownell, 1986).

### Classification of Obesity

Obesity is typically classified as 30% over your ideal weight. However, health scientists and officials believe that increasing weight even 5% above ideal weight threatens health. The problem with these calculations is that there is a considerable variability between 5% and 30% and also different 'ideal' weight tables are used. In recent research, the most commonly accepted measure of body fat and health complications is the body mass index (BMI). Obesity is described as a BMI of 30 and gross obesity at 40. (Mayo Clinic, 1998).

### Summary

Aside from health problems associated with obesity such as hypertension, diabetes, heart disease, and stroke, the obese person faces the negative stigma attached to being obese which takes its toll on the emotional health of the obese person. Many obese people suffer from psychological problems that are directly related to their obesity, including disparagement of the body image and binge eating (Brownell, 1995). Obesity, a major health problem in the United States, remains the last socially acceptable form of prejudice.

Identifying the relationships of attitudes to specific sociodemographic variables may lead to a greater understanding of why certain attitudes exist. It may provide direction to improving the presence of negative attitudes.

In Chapter II a review of the literature is presented with a discussion of studies in which attitudes toward obesity were identified.

Chapter III will present the study design, the sample, and the tools used to measure attitudes toward obesity and the obese person. The statistical methods used to evaluate the scores and their relationship to sociodemographic variables will be presented.

In Chapter IV, the results of the data analysis will be presented along with a discussion of attitude scores correlating to sociodemographic variables.

In Chapter V, a summary of the study, the findings, limitations, and implications are discussed. Recommendations for future research are presented.



## CHAPTER II

### LITERATURE REVIEW

In a review of the literature, a substantial amount of information related to attitudes toward obesity and the obese person was found. In this chapter a brief history of obesity is presented and is followed by prevalence and demographic statistics related to obesity. The social and psychological consequences are examined and this provides the theoretical framework for the study.

#### Brief History of Obesity

One may think that obesity is a product of a modern-day affluence due to a more sedentary life style, lack of physical activity, and access to highly processed, readily available foods. However, there is a rich history of obesity dating back thousands of years.

#### Prehistoric Times through the 17th Century

The earliest historical reference to obesity shows a connection between weight and fertility. As exemplified in the famous Venus of Willendorf, a 25,000 year-old statue of a very heavy female figure, who was thought to be a symbol of fertility and characterized as a revered mother. Low body weight, at this time, was associated with cessation of menses and infertility.

This view changed when Hippocrates suggested that obesity was associated with menstrual irregularities and infertility. Hippocrates states “that obesity is considered a medical peril... sudden death is more common in those who are naturally fat than in the lean” (Bray, 1990, p. 910). Hippocrates also suggested several remedies for obesity: perform hard labor, sleep on a hard bed, eat only once each day, eat fatty food for greater

satiation, and walk naked as long as possible (Brownell, 1995).

During the 12th through 15th centuries, the moralistic approach became widely accepted as the cause of obesity. Personal shortcomings were blamed for obesity and hard work, eating high fiber foods and taking frequent baths were recommended for weight loss.

In the 16th and 17th centuries, the moral approach related to obesity began to wane. It was now thought that obesity was caused by an internal problem, an imbalance of bodily chemicals or a mechanical malfunction (Brownell, 1995).

#### 18th and 19th Centuries

Prominent physicians in the 18th and 19th centuries agreed with their predecessors that diet and increased activity was the key to treating obesity. Some theories of the etiology of obesity began to emerge at this time. It was emphasized that fat tissue, including inadequate oxidation of fat, along with nutrient intake was responsible for obesity (Brownell, 1995).

#### 20th Century and beyond

The 1950's brought attitudinal changes about dieting and weight control to the American society. The supermarket shelves began to carry low-calorie and diet food products. In the 1960's, the popularity of diet books was widespread. Any weight loss book was an almost guaranteed best-seller. A huge diet industry developed to help Americans lose weight. By the end of the 1980's the American diet industry exceeded \$30 million in sales. The explosion in obesity research began in the early 1990's. Studies in genetics and molecular biology have made attempts to address the issue of etiology.

Approximately 35,000 publications related to obesity have been published since 1966 (Foreyt & Goodrick, 1995). Studies have begun to concentrate on two major areas: the study of food intake and its control, and the use of behavioral methods for weight loss (Bray, 1992). A new dimension to America's attitude toward obesity has begun to emerge in the late 1990's. Today, instead of self-recrimination about their obesity status, some people feel that they are victims of discrimination and are increasingly willing to use litigation to obtain relief.

Weight watching, concern for body image, and health have become an integral part of our culture as we approach the 21st Century. Pressures exist in society to be thin and those that are not their ideal body size are surrounded by cultural reminders of what Americans think your size should be (Cassell, 1995).

#### Prevalence and Demographics of Obesity

Obesity, the most common and costly nutritional problem in the United States, affects approximately 65 million adults (Rosenbaum, Leibel, & Hirsch, 1997). The percent of adults over age 20 who are considered obese based on body mass index increased from 24% in the 1960's to 33% in 1988-1991. By 1994, the percent of obese adults rose to 35% (Dortch, 1997).

According to a recent survey conducted by the Coalition for Excess Weight Risk Education, twenty of the largest U.S. metropolitan areas were identified as having the highest rates of obesity. The data were based on self-reported weight and height as reported in the National Health Interview Survey. New Orleans, Louisiana topped the list with a 37.6 percent obesity rate and Cleveland, Ohio came in at number 5 with 31.5

percent obesity rate. Ranked number 20 was Baltimore, Maryland with 26.4 percent obesity rating. The average obesity percentage for the twenty metropolitan areas was 28.8 percent (Dortch, 1997).

Obesity, which is prevalent among the lower status groups namely; the poor, non-whites, and elderly, contributes to the continued oppression of the obese. These demographics place the obese into a subculture that already experiences discrimination and oppression.

### Social Factors

Being overweight or obese in America today is not easy. Americans who are overweight or obese live in a culture that places a high value on thinness and holds negative stereotypes about these people. Often the obese person faces discrimination in employment, health care, and education. The health implications of their weight status, and conflicting advice from family, well-meaning friends, and health care professionals puts additional social pressures on the obese person (Cassell, 1995). Health care professionals are often accused of making moral judgements about their obese patients. Research done by Czajka-Narins and Parham (1990) suggest that “shame and humiliation occur in medical encounters” ... because obesity is displeasing and often associated with lower social status, or caused by a character weakness (p. 27). All too often, the obese patient views their encounter with the health care professional as just one more exposure to discrimination. Adjectives often used by health care professionals to describe obese clients include: “weak-willed, ugly, awkward, self-indulgent, immature, and emotionally disturbed” (Cassell, 1995, p. 425). “These negative attitudes may add to the

psychological distress of the obese person and inadvertently affect the success of a weight loss program” (Maiman, Wang, Becker, Finlay & Simonson, 1979, p.331).

In a study conducted by Oberrieder, Walker, Monroe & Adeyanju (1995) the presence of negative attitudes toward obesity was revealed. The researchers state the purpose of this study was to compare dietetic students’ attitudes towards obesity with registered dietitians’ views. The dietetic students (n=118) were recruited from Kansas State University and the registered dietitians (n=234) were recruited from the Kansas Dietetic Association. The Bray Attitude Toward Obesity Scale was used for the assessment. Students returned 64 acceptable questionnaires which consisted of 54.2% and the registered dietitians returned 90 acceptable questionnaires for a return rate of 38.8%. The statistics obtained from Kansas State University and the American Dietetic Association verified that the samples from both groups were representative of the population. The findings from this study indicated that both the dietetic students and the registered dietitians shared a negative attitude toward obesity.

The effects of these negative attitudes towards obesity and the obese person among health care providers may have an impact on the health procedures that obese persons seek. Research conducted on the relationship of obesity to the frequency of pelvic examinations was studied in 1993 by Adams, Smith, Wilbur & Grady. The study focused on the relationship of obesity to the frequency of pelvic examinations and the effect of the patient and physician attitudes toward obesity. The sample consisted of 291 women and 1,316 Connecticut physicians. The average age of the women was 52, 99% were white, and 65% reported an annual income of \$31,000 or higher. The women were

recruited from a newspaper advertisement and the physicians who were registered as specializing in Family Medicine and Internal Medicine were selected by a mailed survey. The return rate was 44% for the physicians and was considered high for a mailed survey that contained no follow-up contacts. The mean age for the physicians was 45 and ranged from 26 to 88. Eighty four percent of the sample consisted of male physicians (n=1,089) and 16% consisted of female physicians (n=208). White physicians made up 93% of the sample and the remaining 7% were non-whites.

The questionnaire given to the physicians consisted of ten variables which might influence their willingness to perform a pelvic examination. The variables included: (1) very elderly (2) very young (3) very unattractive (4) very attractive (5) very thin (6) very obese (7) poor in hygiene (8) from a different ethnic background (9) severely disabled and (10) extremely reluctant.

The questionnaire for the women consisted of demographic data and 13-multiple choice or short answer items. The attitudes toward pelvic examinations and opinions about their own body image were evaluated with the questions and comments from the survey.

The women were placed into two groups; a positive (74%) group and a negative (26%) group. These grouping selections were based upon their opinions about their own appearance. The women were also grouped according to body size based on the Metropolitan Life Tables (Appendix B). Based on the Tables, 193 or 66% of the women were classified as average, 58 or 20% were overweight, and 40 or 13.7% were obese.

The findings of this study indicated that self perception of body size was significantly

related to the frequency of pelvic examination. The majority of obese people reported having negative opinions about themselves and were therefore the most reluctant to have a pelvic examination. In the results of the physician survey, researchers found 83% of the physicians were hesitant to perform a pelvic examination on a very reluctant person. The youngest physicians expressed more reluctance to examine a very obese patient. Researchers also found that female physicians (76%) were less hesitant to examine the reluctant patient as opposed to the male physician (85%).

In summary, the researchers indicated that one in six physicians were hesitant to perform a pelvic examination on an obese patient and four out of five physicians were hesitant to examine a reluctant patient. A strong correlation was found between obesity and the number of pelvic examinations. The negative attitudes of the physician or the negative attitudes of the obese person about their own appearance were considered the two prominent influences governing the resistance toward pelvic examinations.

In society, a cultural fixation with thinness exists which has influenced professional and societal attitudes toward obese people. It is believed that these cultural and societal attitudes have interfered with professional judgment in selecting long-term treatments of medical conditions and strategies for successful weight loss (Cassell, 1995). Obese persons are often ostracized and ridiculed, suffer prejudicial attitudes at the hands of society (Nash, 1987). Frequently, obese people blame themselves for their situation and are stigmatized not only by society but by themselves. In several studies (Tiggemann & Rothblum, 1988; Thompson, 1986) women were more likely than men to report concerns with their weight. Thompson found that non-obese women without evidence of eating

disorders tend to display similar body image distortions as women with eating disorders. Over 95 percent of the women in the study overestimated the size of the waist, hips, thighs, and cheeks. Male self-esteem was shown to be unrelated to their perceptions of body size. Research conducted by Fallon and Rozin (1985) found that based on female figure drawings, women who were rated as being more attractive to men were actually much thinner than what men actually preferred.

Richardson et. al. (1970,1971) presented children with black and white figures of children either in a wheelchair, on crutches, facially disfigured, amputees, or obese. The children disliked the obese children more than any of the other figures ( Rothblum, 1992). A similar study conducted by Wooley et. al., 1980 showed that children preferred very thin rag dolls as opposed to very fat dolls. Even the obese children who identified with the fat doll preferred the thin one. Wooley also reported an unexpected finding. While looking for obese and non-obese children to photograph for the study, Wooley asked parents for permission to photograph. All parents of the non-obese children granted permission while parents of obese children refused permission. When parents had an obese and non-obese child, permission was given to photograph only the non-obese child. The negative self-attitudes of the obese children are not aided by parental shame.

Studies conducted by Harris and Smith (1982) revealed that adults rate non-obese persons as happier, having more friends, smarter, more attractive, less lonely and less mean than obese persons. In Harris, Harris, & Bochner's (1982) investigation, a between-subject design of 46 male and 101 female Australian college students was used to rate written descriptions of a person who was either male or female, obese or non-



obese and wore glasses or not. Both male and female students rated the male and female obese person as less attractive, less intelligent, less hardworking, less popular, less successful, and less athletic than a non-obese person. There was no interaction reported by obesity or gender of those subjects who wore glasses.

In the 1970's, social learning theory emerged and was incorporated into the behavioral explanation of obesity (Bandura, 1977). In social learning theory, it is stated that "behavior is triggered by antecedents that elicit the behavior, and followed by consequences that either encourage or discourage the continuation of the behavior. Habits are over learned behavior patterns that no longer require much conscious regulation" (Nash, 1987, p.8). Habits are formed from associations such as eating while watching TV (pairing eating with watching TV). Eventually, turning on the TV becomes a stimulus for eating. Eating behavior is influenced by social factors and social cues such as seeing other people eat or being pressured by others to eat (Nash, 1987). Food is often used to celebrate a ritual in society and therefore is strongly coupled with positive emotions and nourishment. (Powdermaker, 1973 ; Messer, 1984 ; Rodin, 1977).

Eating is also associated with relaxation and feeling good and so it feels emotionally correct to use food to cope with feeling bad. Food has a sedating effect and provides distractions from problems or negative feelings (Nash, 1987). These social factors can contribute significantly to overeating which leads to obesity.

Most taste preferences are learned and can therefore be relearned. Tastes that were not initially preferred can through repeated reinforcement become preferred (Nash, 1987). Repeated exposure to the taste of low-fat or salt-free foods can result in reduced aversion

to those tastes (Schachter, 1971).

“One of the most striking facts about obesity is the powerful inverse relation between obesity and socioeconomic status” (Stunkard & Sorensen, 1993, p. 1036). Responsibility for this association belongs to three possibilities: (1) Obesity influences socioeconomic status, (2) Socioeconomic status influences obesity, or (3) A common factor or factors influence both obesity and socioeconomic status (Stunkard & Sorensen, 1993). A study conducted by Gortmaker et. al (1993) showed strong new evidence for the influence of obesity on socioeconomic status. This longitudinal study examined 10,039 subjects over a seven year period and found that overweight/obese women married less often, had lower incomes, and completed fewer years of school.

Sonne-Holm and Sorensen (1986) found that parental socioeconomic status was strongly related to prevalence of obesity in adulthood. In two similar studies from England, it was found that childhood socioeconomic status predicted the development of obesity in adult life (Braddon, Rodgers, Wadworth, & Davies, 1986 ; Power & Moynihan 1988). “The simplest explanation for these findings is that the relation of obesity and socioeconomic status is bidirectional: each influence is at work” (Stunkard & Sorensen 1993, p. 1036).

However, common factors may influence both obesity and socioeconomic status. Heredity is an example of a common factor. Studies conducted by Teasdale et.al (1990) on Danish adoptees found that the socioeconomic status of the biological parents had an influence on the offspring with whom they had no contact. Also, this study indicated that biological parents’ socioeconomic status influenced the BMI of the adopted offspring.

The possibility exists that a common factor or factors influence both obesity and socioeconomic status.

Overt discrimination against obese people is real in our society. Several factors help to maintain the stigma of obesity.

1. Obesity is prevalent among low-status groups; the poor, non-whites, and older persons.
2. The Puritan and Protestant history of the U.S. considered lack of self-control and self-indulgence to be immoral (Freedman, 1986) and obesity soon became associated with weak will power and laziness.
3. The current standard of beauty in society is directly related to thinness. For example winners of the Miss America contest have grown 1 inch taller and 5 pounds thinner between 1954 and 1978 (Freedman, 1986).
4. There have been two times during this century when women were urged to be thin. During the women's suffragette movement and again during the second wave of the feminist movement in the late 1960's (Wolf, 1991). Women needed to be less obsessed with food and focus on other matters.

The low esteem in which obese people are regarded may have a negative impact on their educational opportunities (Brownell, 1995). They are often rejected by their peers and are less likely to attend prestigious schools (Stunkard, 1998). Research conducted by Canning and Mayer (1966) has shown that Scholastic Aptitude Test scores were similar for both obese and non-obese teenagers. However, fewer obese males were ranked in the top third of the high school class. Suggestive but not statistically significant differences

were found for high school girls. In addition, this research also found that a significantly lower number of obese high school students attended Ivy League colleges. These data suggested that there may be prejudiced admission policies for obese people (Brownell, 1995).

Documentation on employers' reluctance to hire obese people is difficult to determine. An investigation by Larkin and Pines (1979) revealed that "overweight/obese persons are seen as significantly ... less desirable employees who, compared with others, are less competent, less productive, not industrious, disorganized, indecisive, inactive and less successful" (p. 315). The stigma continues and weight alone can elicit a host of negative attributes. In one study conducted by Harris and Smith (1982), college students rated obese persons as less intelligent, hard-working, and successful. In another study conducted by Venes et.al., (1982 ), students rated various categories of persons who they would consider suitable marriage partners. These researchers found that students rated embezzlers, cocaine users, and shoplifters as a more suitable partner than obese individuals (Blackburn, 1994).

Most people dislike the obese person and they do not want to be friends with them. Unlike racial and ethnic groups, the obese person doesn't receive support among their family or friends (Monello & Mayer, 1963). Television helps to reinforce the negative stereotypes of obese people. One need only to turn on The David Letterman Show or Late Night with Jay Leno to hear jokes about overweight people being sloppy, lazy, or unable to perform or enjoy sex.

## Psychological Factors

Psychological factors linked to obesity are depression, perceptions of body image, and coping mechanisms. Does body weight, over the lifespan, have a relationship to psychological attributes and behavioral tendencies? Recent findings have indicated a shift away from the unitary explanations (e.g., the ‘obese personality’) to models viewing obesity as multiply determined. Among the most widely considered are studies that evaluate personality factors that either lead to or maintain obesity. Implicit in this approach is that overeating is the primary cause of obesity. However, it appears that obese people do not eat more and often times eat less than a lean person. It is indeed difficult to separate the psychological factors from the physiological factors that cause and maintain obesity. It is unclear whether the obese person overeats initially to create their obesity. Yet there is convincing evidence that the metabolic changes that occur as a result of obesity or dieting cycles (weight loss then gain then loss) make it easier to maintain obesity on a relatively low caloric intake (Brownell, 1995). A review of the literature indicates that there is no significant difference in psychological functioning of obese and nonobese persons (O’Neil & Jarrel, 1992; Striegel-Moore & Rodin, 1986; Wadden & Stunkard, 1985).

## Depression

Clinical studies have consistently found depression to be associated with obesity (Williamson, 1990). Symptoms of depression may, in turn, exacerbate the eating problem. Regardless of what causes obesity, depression has been a consistent occupational hazard of obesity and vice versa (Beller, 1977). When philosopher David

Hume's earliest publications didn't receive the accolades he had anticipated, he was startled to find himself getting fat, and he wrote to his physician in the summer of 1731, "there grew upon me a ravenous appetite, [with] an effect very unusual, which was to nourish me extremely, so that in six weeks time I past from one extreme to the other, and being before tall, lean, and rawboned, became on a sudden the most sturdy, robust, healthful-like fellow you have seen" (Beller, 1977, p. 179).

Overweight/obese subjects scored higher for depression than normal weight subjects on the Center for Epidemiologic Studies Depression (CES-D) scale. A correlation between BMI and depression was found to be statistically significant, revealing that depression increased with body size (St. Jeor, 1997).

The connection between obesity and depression is not a modern concept. However, it is often difficult to determine the cause and effect relationship. Do obese people get depressed because they are fat, or do they get fat because they are depressed? Food is an outstanding over-the-counter panacea for depression despite its obvious side effects and the vicious circle that it sets in motion ( Beller, 1977). Food is the cheapest and most abundant mood-altering drug on the market.

Numerous studies using the Minnesota Multiphasic Personality Inventory (MMPI, Dahlstrom W.D., 1928- ) have found at least mild elevations in depression levels of obese persons. Analysis from a study of 18,328 women done by Swenson and colleagues (1973) at the Mayo Clinic concluded that obese people do display mild to moderate depression but that their psychological functioning does not differ significantly from non-obese patients. Feelings of guilt and shame are usually the highest self-reported concern

that the obese person exhibits. These feelings then directly affect self-esteem which complicates weight loss control thus the vicious cycle is continued.

### Body Image

Obese people are likely to encounter specific psychosocial ills and problems directly associated with their obesity (Chadwick & Cardew, 1996). One of these social ills includes body-image disparagement, an ongoing source of distress for many obese individuals (Stunkard & Wadden, 1992). Disparagement often leads to social discrimination and psychological distress for the obese person (Perri, Nezu & Viegner, 1992).

Studies conducted by Stunkard and Wadden (1992) have found that body image is the one consistent difference between obese and nonobese persons. Many obese individuals tend to overestimate or distort their body size and often feel that their bodies are despicable, ghastly, and viewed with contempt (Cash & Hicks, 1990). As Stunkard and Mendelson (1967) have written, "it makes no difference whether the person is also talented, wealthy, or intelligent; his weight is his only concern, and he sees the whole world in terms of his weight" (p. 1298).

There does not seem to be a statistically significant relationship between body mass index and body dissatisfaction (Brodie & Slade, 1988). An alternative interpretation shown by Cash and Hicks' (1990) national survey on body image disparagement shows a significant relationship between perceived overweight -- rather than actual overweight -- and body dissatisfaction.

## Coping Mechanisms

Despite the stigma of obesity, many obese people seem to cope well with their condition. Studies, in general, have failed to show differences between the psychological well-being of obese and nonobese people (Wadden & Stunkard, 1985). Obese people will often try to minimize obesity-related problems by acquiring adaptive behaviors, such as avoiding situations where being fat is a problem (attending a movie), overachieving, or simply accepting the social stigma of obesity (Hughes & Degher, 1993). Obese people are affected by cultural and societal attitudes about weight. Social influences on weight exist at several levels: family, organizational, community, and societal. Each level includes different influences over weight. The family provides the social value about appropriate weight for each family member. Family dynamics have an important influence on eating and weight.

Organizations in society such as workplace or schools provide the context within which weight behaviors are established. These organizations provide certain constraints on individuals and their opportunities for eating.

Community provides a context within which people live. Communities provide a system which is conducive to either higher or lower body weights. Communities also share interests and values that may encourage people to be overweight by variations in the social support they provide.

Finally, societal practices concerning food have a key influence on weight. Values about eating within a society are reinforced each day by social interactions that express social norms about weight. Society also apply sanctions against people who deviate from



the standards in weight (Brownell, 1995).

The social scientists interested in stigma have begun to focus on designing ways to combat the stigma. “An example of these new developments is Sobal’s four-component model for coping with the stigmatization of obesity which are : (1) helping a person recognize the presence of stigma, (2) preparing them to respond to stigmatizing acts, (3) reacting to these acts, and (4) repairing the damage done by stigmatization” (Brownell, 1995, p. 420).

### New Paradigm

“A paradigm is a model or pattern that provides a perspective for interpreting a situation” (Parham, 1996, p. 155). The “new weight paradigm” involves a shift in our concept of acceptable body weight. The new paradigm rejects the notions that only through slenderness can one be healthy and happy, but rather encourages self-acceptance (Parham, 1996).

Psychological health and social desirability are not inherent to weight but are a reflection of the cultural climate in which we live. The psychological and social consequences of weight can change, either by weight loss or by changing the social stigma and the discrimination to which obese persons are exposed (Allison & Pi-Sunyer, 1995).

To the degree that obesity is not readily reversible, we can view this attribute (just like other attributes) as having social as well as medical disadvantages. Rather than continuing to offer the obese person an ineffective treatment, there should be greater emphasis on exploring treatments designed to improve the self-esteem, self acceptance,

quality of life and health. There should be a greater effort to deal with discrimination and low self-esteem that affect obese persons. This involves moving toward a definition of “acceptable” weight that respects diversity, and does not exclude most obese individuals. Fat discrimination that affects opportunities in housing, college admission, employment, job advancement, marriage and medical assistance, may be one of the most often overlooked civil rights issues in America today (Allison & Pi-Sunyer, 1995). It is often mistakenly believed that obesity is simply a voluntary condition brought on by poor self-control.

Traditionally, the only treatment offered to obese people has focused on weight loss. It is often stated or implied that maintenance of significant weight loss is a realistic goal and that failure to maintain weight loss does not harm. Both of these assumptions are inconsistent with what is known today. There is evidence that binge-eating, wide fluctuations in body weight, and negative mood changes are health problems that may be a consequence of self-initiated and professionally led diet programs. Obese people feel that they are not able to exercise, feel good about themselves or be healthy unless they attain an “ideal body weight”. This reasoning leads to a particularly destructive trap since treatment is not effective in the long term. It is being increasingly recognized that health, fitness, and well being can be achieved by those who are obese without significant weight loss. The clear implications of these findings indicate that policies regarding “acceptable” body weights be formulated (Allison & Pi-Sunyer, 1995). The new paradigm calls for a greater respect for body-weight diversity and for protection against discrimination rather than demand that the obese person simply “try harder” to lose

weight (Allison & Pi-Sunyer, 1995). The new paradigm works to change behaviors and should not be evaluated on the weight loss criteria of traditional programs but rather by the extent to which the “new attitude” goals are being achieved (Parham, 1996).

### Theoretical Framework

The theoretical framework for this study was attitude formation. Attitude as defined by Fishbein and Ajzen (1980) is a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object. Ajzen expanded upon this term to further define an attitude as a learned predisposition to respond positively or negatively to certain objects, situations, concepts, or persons (Figure 1). As a result, it was concluded that attitudes possess three components:

1. Cognitive (beliefs or knowledge)
2. Affective (emotional or motivational)
3. Performance (behavior or action tendencies)

The cognitive component consists of beliefs or ideas which reflect a category of people or objects. The affective component consists of a person’s evaluation of, liking of, or emotional response to some object or person. The behavioral component involves the overt behavior of a person toward an object or person (Pratkanis, Breckler & Greenwald, 1989).

The theory of reasoned action (TRA) first developed by Fishbein in 1967 measures the relationships between beliefs, attitudes, intentions, and behaviors. This theory was developed in an effort to understand relationships between attitudes and behaviors. In the theory of reasoned action, Fishbein distinguished between attitude toward an object and

## Conceptual Model

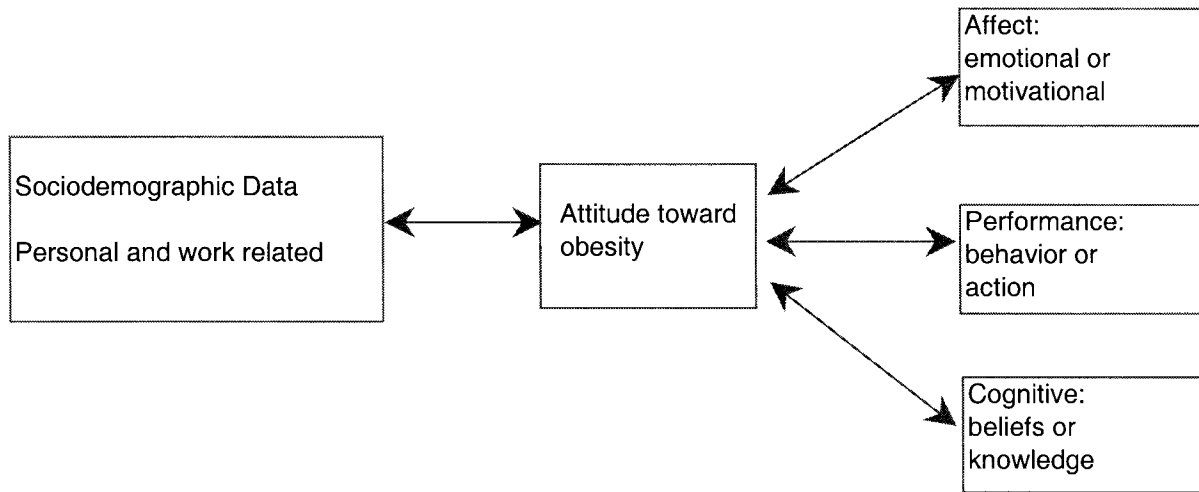


Figure 1: Adapted from Ajzen's (1980) definition of attitude

an attitude toward a behavior with respect to the specific object. Fishbein found that attitude toward behavior is a much better predictor of that behavior than attitude toward the target object at which the behavior is being directed (Fishbein & Ajzen, 1975). “TRA asserts that the most important determinant of behavior is a person’s behavioral intention. The direct determinants of an individual’s behavioral intentions are their attitudes toward performing the behavior and their subjective norm associated with the behavior” (Montano, D., Kasprzyk, D. & Taplin, S., Eds., 1997, pp. 86-87). Thus attitudes are determined by the individual’s beliefs about outcomes of performing the behavior.

Expanding upon the theory of reasoned action, Ajzen and colleagues (Ajzen, 1991 ; Ajzen & Driver, 1991) added perceived behavioral control to the theory and developed the theory of planned behavior. They wanted to account for factors outside of an individual’s control that may affect behavior. “This extension was based upon the idea that behavioral performance is determined by both motivation (intention) and ability (behavioral control)” (Montano, D., Kasprzyk, D. & Taplin, S., Eds., 1997, p 91). Ajzen stated that a person will expend more effort to perform a behavior if their perception of behavioral control is high (Ajzen, 1991). This perception of control over behavior is expected to have a direct effect on behavior. In addition, the theory of planned behavior postulates that perceived control is an independent determinant of behavioral intention and that those intentions along with subjective norms help shape attitudes.

Attitudes fulfill certain needs of people. One need is ego-defense. People have the need to protect themselves from accepting truths that are undesirable or threatening. It is impossible for people to incorporate every detail of information that is encountered in

their world. Therefore, the most efficient strategy is to categorize persons and objects on the basis of information and use known attributes about a certain group of people to make inferences and judgements. Perhaps people maintain their attitudes because these attitudes allow them to fit into important social situations and to interact smoothly with peers. Lastly, attitudes may serve as value expression by allowing the person to express their true self and underlying values (Gable & Wolf, 1993; Zanna, Olson, & Herman, 1987).

Socialization, personality development, and information are responsible for shaping attitudes. The population selected (health care workers, general population, and employers) for this study will determine if attitudes toward obesity correlated with selected sociodemographic variables. The selected correlated variables were age, gender, level of education, ethnic background, income, and weight.

Negative attitudes towards obesity and the obese person can have an adverse effect on the obese population. Discrimination in employment, education and health care are a few of the social ills that are associated with negative attitudes. The stigma of obesity continues to be maintained by the negative stereotyping of the obese person.

### Summary

Obesity is a major health problem in the United States, and one which health care professionals have to address at many levels. A survey of research findings revealed that most people have negative views toward obesity and the obese person. These negative stereotypes have not been adequately addressed by professional educators (Bray, 1992; DeJong, 1980; Maroney & Golub, 1992; Plutchik, 1976; Richardson, et al., 1961;

Weygandt, 1986).

The conceptual framework for this study which was attitude formation was presented. Research in this area revealed that a major factor in attitude formation is the satisfaction a person derived from carrying a certain attitude.

People must realize that negative attitudes toward obesity and the obese person exist in society within all professions. Careful and thorough examination of personal attitudes and acceptance of these attitudes may lead to a more positive view of the obese person.

Information from this study will be used to determine if residents of Mahoning County, Ohio hold the same attitudes of the research findings and if the identified variables show a correlation to these attitudes.

Chapter III provides an outline of the methodologies used in the study. An explanation of the design, the sample, the tool used to measure attitudes toward obesity, and the statistical methods used to correlate attitude scores to sociodemographic variables is discussed.

Chapter IV provides the descriptive data and findings from the completed questionnaires. The significance of these findings will be reported and discussed. The conclusions of the findings are presented in Chapter V. Implications of the study are discussed and recommendations for future research are included.

## CHAPTER III

### METHODOLOGY

Chapter III provides the research methodologies used in the study to identify the attitudes of the convenience sample of participants residing and/or working in Mahoning County. It also investigates the relationship between these attitudes and selected variables that are significant correlates of these attitudes. An explanation of the design, sample, tool used to measure attitudes toward obesity, and the statistical methods used in correlating attitude scores to sociodemographic variable are discussed.

#### Research Design

A descriptive correlation research design was used in this study. To determine the attitudes of the convenience sample toward obesity and the obese person, and the relationship to selected variables, a survey was conducted to obtain responses to the Bray Obesity Attitude Scale and the nine sociodemographic questions added.

#### Setting

This study was conducted in Mahoning County located in Northeast Ohio.

#### Population

The population for the study consisted of two hundred fifty participants aged 20 to 77 chosen from a convenience sampling. Three groups comprised the sample. One group consisted of health care workers, nurses, doctors, and allied health professionals, the second group consisted of employers from various types of businesses, and the third group came from the general population.



## Sampling Plan

Because the method of obtaining subjects for the study was convenience sampling, the power to detect significant relationships and differences in the study would have increased as the sample size increased. Another factor which influenced sample size was the level of significance selected. Thus, an alpha level of .05 was used in this study. To obtain participants for the three groups, the investigator divided the 250 questionnaires into three sections. The first section consisted of 84 questionnaires that were distributed to every fourth person from the current employee list of Mahoning County residents employed at Youngstown State University. The second section consisted of 83 questionnaires that were distributed to every fourth person from the current employee list at the Youngstown Osteopathic Hospital. The third section consisted of 83 questionnaires that were obtained from selected employees in Mahoning County.

Ethical considerations and human subjects protection have been addressed during this research. Appendix C lists the precautions taken to ensure fair and just treatment of participants.

## Measurement/Instrument

The Bray Obesity Attitude Scale (1972) was used to measure the attitudes toward obesity and the obese person (Appendix D). Permission was granted to the investigator to use the Attitude Scale (Appendix E). The tool consisted of forty-seven statements concerning attitudes toward obesity. The majority of the statements indicated clearly negative attitudes toward obesity and the obese person. The remaining statements

indicated positive attitudes. The participants were asked to respond to each statement in one of four categories. (1) Strongly Disagree; (2) Disagree; (3) Agree; (4) Strongly Agree. For each statement there was a possible point range from 1 to 4, with the maximum attainable number of points being 188. The instrument was scored by assigning 4 points for Strongly Agree, 3 points for Agree, 2 points for Disagree, and 1 point for Strongly Disagree if the statement was representative of a positive attitude, 4 points for Strongly Disagree, 3 points for Disagree, 2 points for Agree and 1 point for Strongly Agree if the statement was representative of a negative attitude. A total score above the midpoint range of 117.5 was considered to reflect an attitude of acceptance towards obesity and the obese person, and a score ranging from 47 to 117 reflected an intolerant or non-accepting attitude towards obesity and the obese person.

The Bray Obesity Attitude Scale (1972) was found valid and reliable for 160 college students at Lambuth College in Jackson, Tennessee. Validity was achieved by a jury of experts in the given field. Reliability was .88 using the Hoyt's reliability correlation and was improved to .89 when the Reciprocal Averages Program (RAVE) correction technique was applied (C. Bray, personal communication, May 5, 1998).

#### Pilot Study

The Bray Obesity Questionnaire was pilot tested by administering the questionnaire to a convenience sampling of twenty-five adults age 20 and older. Each participant was a resident of Mahoning County. The validity of the questionnaire was confirmed. The participants stated, however that they felt uncomfortable with some of the questions but none reported any confusion with the questionnaire. The participants also stated that they

would have liked a definition of what constitutes overweight and what constitutes obesity. The investigator listed these concerns to committee members. It was decided that even though some of the questions might be of poor quality it was decided not to change the questionnaire because comparisons of research using the Bray Scale would be compromised. It was also decided not to include any definitions of overweight or obesity since other researchers have used the Bray Obesity Attitude Questionnaire without defining these terms, the investigator felt that possible comparisons between studies might be compromised.

#### Methods/Procedures

The participants for this study came from three groups:

(1) Health care workers. This group came from a sampling of health care workers employed at The Youngstown Osteopathic Hospital in Youngstown, Ohio. The investigator set up an appointment to meet with the vice president of Human Resources and the Director of Nursing. After the meeting, verbal permission was granted to allow the investigator to distribute the questionnaire to employees. Later a formal letter of permission was provided by the vice president of Human Resources. The investigator contacted the assistant to the vice president of Human Resources. A day and time were arranged to meet and distribute the questionnaires. With a list of current employees the investigator chose every fourth name from the list totaling 83 participants. The investigator did not meet with any of the employees but instead provided a detailed cover letter explaining the purpose of the research and how to contact the investigator if necessary. The participants were given a two week deadline to complete the survey and

return them to the Human Resources Department. A follow-up letter was sent one week later as a reminder and a thank you note for those that had participated. The investigator returned again at the end of two weeks to pick up the completed surveys. Thank you letters were sent to the vice president of Human Resources, assistant to the vice president of Human Resources and the Director of Nursing.

(2) Employers. This group came from businesses located within the 4000-6000 blocks of Mahoning Avenue in Austintown, Ohio and from businesses located within a 3 square mile radius starting in the 1200 block of Boardman-Canfield Road in Boardman, Ohio and traveling west. The investigator contacted by phone every 4th business within the designated areas. If the managers agreed to participate in the research, then the investigator set a time to meet with the manager. Each manager was given a detailed description of the research and asked to distribute the questionnaire to only those employees in the organization who were active in the hiring process. Each manager was given three weeks to distribute the questionnaires and retrieve the completed questionnaires. A detailed cover letter (Appendix F) was provided for each participant to explain the research project. About one and half weeks later, each manager was contacted to inquire if they had any questions or problems. The investigator picked up the surveys and obtained a letter of permission from each of the organizations.

(3) General Population. This group came from a sampling of employees who are employed at Youngstown State University in Youngstown, Ohio. A current employee list was prepared for the investigator and contained only the names of current employees who reside in Mahoning County. A detailed cover letter was distributed with each

questionnaire. The investigator chose every fourth person on the list until 84 participants had been identified. The participants were given two weeks to return the completed questionnaires directly to the investigator.

A total of two hundred fifty questionnaires were distributed by the investigator. The Bray Obesity Attitude Scale and demographic data sheet were constructed so that participants answered directly on the instrument sheet. The survey was confidential and participants were instructed not to place their name or any personal identifiers on the questionnaire. Two thirds of the questionnaires had to be picked up by the investigator, one third were mailed directly to the investigators mailbox at The Youngstown State University.

#### Data Analysis

The data were analyzed using the SPSS (Statistical Package for the Social Sciences Version 8.0 for windows) program. The sociodemographic variables of education, income, and ethnic background were examined for differences using the Analysis of Variance (ANOVA).

The Independent sample  $t$ -test was performed on the variables that related to personal information (gender, age, self-overweight/obese, considers self not overweight/obese, considers family/friends overweight/obese and considers family/friends not overweight/obese) to determine if there was a correlation with attitude scores.

An evaluation of the Bray Attitude Obesity Questionnaire was conducted by the investigator to determine its usefulness. Social desirability is known to affect questionnaires so in order to determine the effect a sample survey was conducted by the

investigator. To rate the social desirability the Bray Attitude Obesity Questionnaire was distributed to twenty-five participants with instructions given to each participant to judge questions on the survey based upon the social responsibility of each question. Items were scaled as social desirability ranging from 1-4 where “1” was defined as strongly disagree that this is a socially desirable statement to make. The average ( $\bar{x}$ ) ratings for all items in the questionnaire was 2.86. This leads to the conclusion that the questionnaire elicits positive statements and/or attitudes from subjects as reported by twenty-five randomly selected raters who were not involved in the study. Table 1 shows the mean social desirability rating for all items.

Table 1.  $\bar{x}$  Social Desirability Ratings of 25 people not involved in the study

Item	Social Desirability Rating	$r_{I-tot}$
1	2.23	.537**
2	2.95	-.218*
3	2.09	.564**
4	4.05	.403**
5	2.14	.546**
6	3.23	.631**
7	2.32	.549**
8	2.09	.505**
9	3.32	-.095
10	2.64	.514**
11	2.45	.488**
12	2.77	.435**
13	2.27	.722**
14	3.27	.415**
15	3.45	.286**
16	2.45	.474**
17	2.68	.663**
18	3.36	.338**
19	2.59	.411**
20	3.14	.505**
21	2.64	.687**

Table 1. Social Desirability Ratings Continued

Item	Social Desirability Rating	$r_{I-tot}$
22	3.55	.324**
23	3.36	-.136
24	3.91	-.041
25	2.64	.244**
26	2.41	.628**
27	3.95	-.072
28	2.45	.458**
29	1.91	.644**
30	2.73	.186*
31	2.55	.438*
32	3.86	.010
33	3.23	.349**
34	2.59	.176
35	2.45	.654**
36	4.00	.259**
37	2.00	.596**
38	3.00	.501**
39	2.00	.660**
40	2.23	.596**
41	3.55	-.047
42	3.95	.100
43	3.64	.521**
44	3.32	.334**
45	2.82	.561**
46	2.64	.695**
47	1.50	.462**

× Chronbach's Alpha = .86;  $p < .05$

It was found that The Bray Attitude Obesity Questionnaire was responsible for social desirability. The Bray Questionnaire was found to be reliable with Cronbach's Alpha ( $r_{(11)} = .86 ; p < .05$ ). Correlations for items to total sum of the questions are reported in Table 2.

Table 2. Correlations for Item to Total Questions

Questions	Correlation to Total Sum of the Questions
1	.537**
2	-.218*
3	.564**
4	.403**
5	.546**
6	.631**
7	.549**
8	.505**
9	-.095
10	.514**
11	.488**
12	.435**
13	.722**
14	.415**
15	.286**
16	.474**
17	.663**
18	.338**
19	.411**
20	.505**
21	.687**
22	.324**
23	-.136
24	-.041
25	.244**
26	.628**
27	-.072
28	.458**
29	.644**
30	.186*
31	.438**
32	.010
33	.349**
34	.176
35	.654**
36	.259**
37	.596**



Table 2. Correlations for Item to Total Questions Continued

Questions	Correlation to Total Sum of the Questions
38	.501**
39	.660**
40	.596
41	-.047
42	-.100
43	.521**
44	.334**
45	.561**
46	.695**
47	.462**

\*\* Correlation is significant at the 0.01 level

\* Correlation is significant at the 0.05 level

#### Summary

In this chapter, the research methodologies used to determine the attitudes toward obesity of the three groups of participants and their relationships to the selected sociodemographic variables were identified. The Bray Obesity Attitude Scale has been proven both valid and reliable. Data obtained from this study provided baseline data regarding the attitudes of participants who reside and/or work in Mahoning County. The demographic data were used to identify correlates of attitudes and to describe the population studies. In Chapter IV, the statistical methods outlined in this chapter are presented.

The study is further summarized in Chapter V and conclusions of the findings are presented. Implications of the study and recommendations for further research are included.

## CHAPTER IV

### ANALYSIS OF DATA

Information from the completed Bray Obesity Attitude Scale and demographic questionnaires were used to determine attitudes of the convenience sample toward obesity and the obese person and to correlate their attitude scores with selected variables.

#### Demographic Profile of the Sample

A total of 250 questionnaires were distributed to a convenience sampling of participants who live and/or work in Mahoning County in Northeast Ohio. One hundred twelve questionnaires were completed and returned for a response rate of 45%.

The personal sociodemographic data reflected that the participants' age ranged from 20 to 77 years of age ( $\bar{x}$  = 42 years of age). The majority of respondents held a bachelor's degree or higher (38% bachelor's degree ; 26% post baccalaureate study or degree). The ratio of men to women participants was 67% females to 33% males. The results from the Chi-Square analysis indicated that the sample proportions are significantly different from the hypothesized values of  $\frac{1}{2}$  and  $\frac{1}{2}$ ,  $\chi^2 (1, N=112) = 12.90, p = .001$ . Of the sample, 71% considered themselves overweight at some point in their lives while only 17% considered themselves obese at some point in their lives. Additionally, 93% of family members and/or close friends were reported as overweight and 61% had family members and/or close friends who were obese. The income data showed that the majority of the participants (64%) had net monthly incomes of \$30,001 or higher. These statistics are summarized in Table 3.

Table 3. Personal Sociodemographic Data

Variable	n	Percent
<b>Age</b>		
20-24	3	2.7%
25-29	9	8.1%
30-34	11	9.9%
35-39	23	20.6%
40-44	22	19.8%
45-49	23	20.7%
50-54	11	9.9%
55-59	3	2.7%
60-64	5	3.5%
65-69	1	.9%
over 70	1	.9%
<b>Gender</b>		
Male	37	33%
Female	75	67%
<b>Ethnic</b>		
Asian/Pacific	3	2.7%
Black	8	7.1%
Hispanic	4	3.6%
White	96	85.7%
Other	1	.9%
<b>Income</b>		
\$0 - \$10,000	0	0%
\$10,001 - \$20,000	10	8.9%
\$20,001 - \$30,000	30	26.8%
\$30,001 - \$40,000	32	28.6%
\$40,001 +	40	35.7%
<b>Education</b>		
Less than high school	2	1.8%
High school	15	13.4%
Some college	24	21.4%
College degree	42	37.5%
Graduate study or degree	29	25.9%

Table 3. Personal Sociodemographic Data Continued

Variable	n	Percent
Self-reported overweight		
Yes (overweight)	80	71.4%
No (overweight)	32	28.6%
Self-reported obesity		
Yes (obese)	18	16.1%
No (obese)	93	83.0%
Family reported overweight		
Yes (overweight)	104	92.9%
No (overweight)	8	7.1%
Family reported obesity		
Yes (obese)	68	60.7%
No (obese)	44	39.3%

#### Descriptive Statistics

Each participant completed the Bray Obesity Attitude Scale, which contained 47 attitude related items, with Likert-scaled responses of (1) strongly disagree, (2) disagree, (3) agree, and (4) strongly agree. There were 37 unfavorable questions listed on the instrument, and 10 favorable items (#2,4,9,23,24,27,32,34,36, and 42). For favorable statements, the “strongly agree” response was given a value of 4, the “agree” 3, the “disagree” 2, and the “strongly disagree” 1. For the unfavorable questions, the scoring was reversed with “strongly disagree” having a value of 4, “disagree” 3, and so forth. A high score indicated a favorable attitude while a low score reflected an unfavorable attitude toward obesity. In this study, participants’ scores ranged from 99 to 167 with the mean score of 132.7. Figure 2 shows the distribution and frequency of the Questionnaire

scores. This data analyses revealed that the convenience sample in the study had positive attitudes towards obesity and the obese person. The average score of 132.7 which is 15.2 points above neutral (117.5) was prevalent. The descriptive statistics of the Bray Obesity Attitude Scale are summarized in Table 4 and Figure 2.

Figure 2. Distribution and Frequency of Attitude Scores

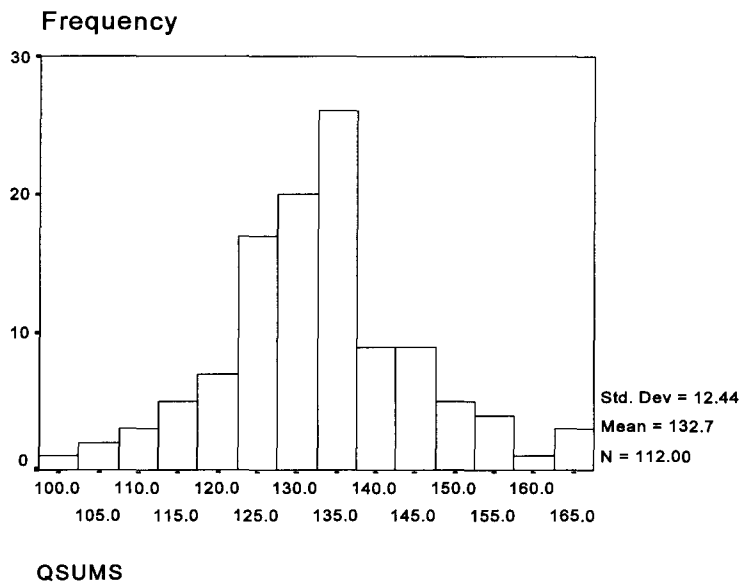


Table 4. Descriptive Statistics of the Bray Attitude Scale

Attitude Scale	Mean	S.D.	1st Quartile	Media	3rd Quartile	Cronbach Alpha
Attitude	132.7	12.44	126	133	138	0.86

Possible attitude scores ranged from 47 (= least favorable attitude toward obesity) to 188 (= highest favorable attitude toward obesity), with a mid point of 117.5 (= neutral).

## Research Hypotheses

1. As the age of the participants increases, a more positive attitude toward obesity is expected.

Hypothesis 1 explored the relationship of the demographic variable age as it relates to attitudes toward obesity. A  $t$ -test was conducted to evaluate the hypothesis that older people have a more positive attitude toward obesity, using a median split to form groups,  $t(110) = 2.58$ , ns,  $r = -.277$ .

2. As the amount of education increases, a more positive attitude toward obesity is expected.

Hypothesis 2 states that as the amount of education increases, a more positive attitude toward obesity is expected. A one-way analysis of variance (ANOVA) was conducted to evaluate the relationship between the amount of education and attitudes toward obesity. The independent variable, amount of education, included five levels: less than high school, high school, some college, college degree, and graduate study or degree. The dependent variable was the sum of the scores from the Bray Obesity Attitude Questionnaire. The ANOVA was significant,  $F(4, 107) = 2.08$ ,  $p < .05$ . The strength of the relationship between the amount of education and total scores on the Bray Obesity Attitude Questionnaire, as assessed by  $\eta^2 = .072$

Follow-up tests were conducted to evaluate pairwise differences among the means. The group sizes are unequal. The harmonic mean of the group sizes was used. The results of the test, as well as the means and standard deviations for the education levels are reported in Table 5.

Table 5. Descriptive Statistics of the Sociodemographic Variable Education

Education Variable	Mean Attitude Score	S.D.	N	Eta Squared
Less Than High School	139.5	2.12	2	
High School	125.5	15.00	15	
Some College	133.6	9.75	24	
College	135.3	12.35	42	
Graduate study or degree	131.2	12.44	29	
Total	132.7	12.44	112	.072

There were significant differences in the means between less than high school and high school, but no significant difference between the some college, college, and graduate study or degree groups. The majority of participants in this study held a bachelor degree or higher (63%) while the remaining participants (37%) had some college or less. The high school group scored the lowest overall score of 125.5.

3. Participants who have immediate family members or close friends who are overweight/obese or are themselves overweight/obese will have more positive attitudes toward obesity than those participants without immediate family or close friends or those who are overweight/obese.

Hypothesis 3 predicted that participants who reported family/friends and/or themselves as overweight/obese had more positive attitude scores about obesity. Four  $t$ -tests were conducted to evaluate the hypothesis. Test one which assessed the overweight status of the participants was significant,  $t(110) = 2.28, p = .05$ . Participants who reported being overweight now or at some point in their lives scored 134.33 on the Bray Obesity Scale Questionnaire, had a more positive attitude than participants who reported never being overweight scored 128.50 on the Questionnaire.

Independent-samples  $t$ -test two which revealed participants' obesity status was significant,  $t(109) = 2.79, p = .05$ . Participants who reported being obese now or at some point in their lives, scored 139.89 on the Bray Obesity Scale Questionnaire and had a more positive attitude. Participants who reported never being obese scored 131.19 on the Questionnaire.

Independent samples  $t$ -test number three which revealed the overweight status of the participants family and/or close friends was significant,  $t(110) = 2.39, p < .05$ . Participants who reported having family and/or friends who were overweight now or at some point in their lives scored 133.42 on the Bray Obesity Scale Questionnaire, while participants who reported having family and/or friends who have never been overweight scored 122.75 on the Questionnaire.

Independent samples  $t$ -test number four which revealed the obese status of the participants' family and/or close friends was significant,  $t(110) = 3.048, p < .05$ . Participants who reported having family and/or friends who were obese now or at some point in their lives scored 135.44 on the Bray Obesity Scale Questionnaire, while participants who reported having family and/or friends who have never been obese scored 128.36 on the Questionnaire. The results of the four  $t$ -tests, as well as the means are reported in Table 6.



Table 6. Descriptive Statistics for the Sociodemographic Variables of Overweight/Obesity

Variable	N	Mean	t
Self-reported Overweight:			
Yes	80	134.3	
No	32	128.5	t(110) = 2.28
Self-reported Obesity:			
Yes	18	139.9	
No	93	131.2	t(109), = 2.79
Family/Friends Overweight:			
Yes	104	133.4	
No	8	122.8	t(110) = 2.39
Family/Friends Obese:			
Yes	68	135.4	
No	44	128.4	t(110) = 3.048

p < .05

4. Male participants will have a less positive attitude toward obesity than female participants.

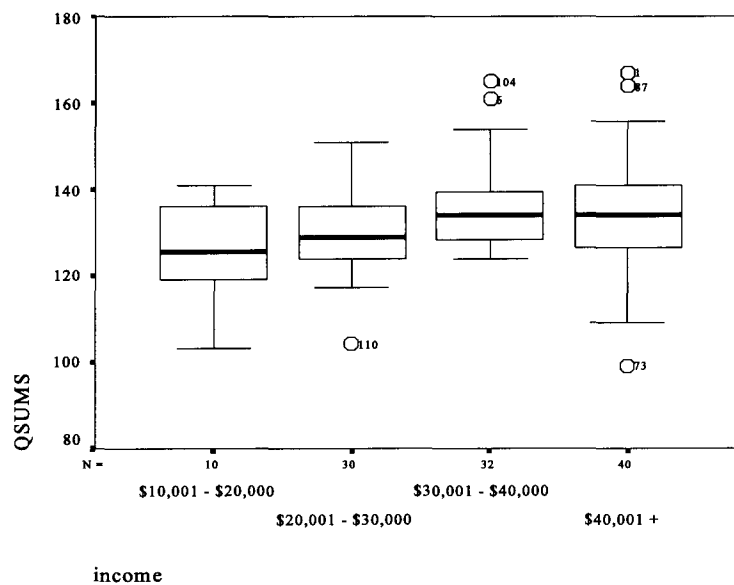
An independent samples t-test was conducted to evaluate the hypothesis that male participants will have a less positive attitude toward obesity than female participants. The test was significant,  $t(109) = -2.073$ ,  $p = .05$ . Males scored 129.19 on the Bray Obesity Attitude Questionnaire and the females scored 134.32.

5. Participants who have higher incomes will have a more positive attitude toward obesity.

Hypothesis 5 states that as the amount of income increases, a more positive attitude toward obesity is expected. A one-way analysis of variance (ANOVA) was conducted to evaluate the relationship between the amount of income and attitudes toward obesity.

The independent variable, amount of income, included five levels: \$0 - \$10,000; \$10,001 - \$20,000; \$20,001 - \$30,000; \$30,001 - \$40,000; \$40,001 +. The dependent variable was the sum of the scores from the Bray Obesity Attitude Questionnaire. The ANOVA was significant,  $F(3, 108) = 2.55, p = .05$ . The strength of relationship between the amount of education and total scores on the Bray Obesity Attitude Questionnaire, as assessed by  $\eta^2 = .066$ , was moderately strong. Figure 3 boxplot shows the distribution of income in relationship to total scores on the Questionnaire.

Figure 3. Distribution of Income in Relationship to Total Scores.



Follow-up tests were conducted to evaluate pairwise differences among the means. The group sizes are unequal. The harmonic mean of the group sizes was used. There were significant differences in the means between incomes at the \$10,001 - \$20,000 income level and the rest of the income levels. The highest Questionnaire scores (136.5)

were recorded for income level \$30,001 - \$40,000. There was not much difference between the \$20,001- \$30,000 level and the plus \$40,001 level. The majority of participants in this study earned \$30,001 or higher (n= 72) and had the highest scores on the Questionnaire. The five research hypotheses explored the relationship of nine sociodemographic variables with the participants' attitude toward obesity. The nine variables were age, gender, ethnic, income, education, self-reported overweight, self-reported obesity, family/close friends overweight, family/close friends obese.

Correlation analysis was used to test each of the five hypotheses individually. The results are summarized in Table 7.

Table 7. Correlation Analysis Between Sociodemographic Variables and Attitude Toward Obesity.

Hypothesis	Sociodemographic	Pearson r	
H #1	Age	-.002	ns
H #2	Education	.074	ns
H #3	Self-Reported Weight	-.212*	
	Self-Reported Obesity	-.262**	
	Family Weight	-.222*	
	Family Obesity	-.279**	
H #4	Gender	.197*	
H #5	Income	.163	ns

\*\* Correlation is significant at the 0.01 level

\* Correlation is significant at the 0.05 level

Pearson correlation analyses indicated that there were no significant linear relationships between the scores on the Bray Obesity Attitude Scale and the sociodemographic

variables of age, education and income. The sociodemographic variables of gender, self-reported overweight/obesity, and family/close friends weight/obesity were found to have linear relationships. The Pearson correlation between these factors suggests that the participants in the study who reported either self or family member/close friends as being overweight and/or obese tend to have a more favorable attitude toward obesity than those participants who did not report self or family/close friends as being overweight and/or obese.

### Summary

A total of 250 questionnaires were distributed to the three groups of participants. Only 112 completed and returned the questionnaire for a response rate of 45%. The personal sociodemographic data reflected that participants' ages ranged from 20 to 77 with the mean being 42. The ratio of men to women participants was 33% males to 67% females. Of the sample, 71% considered self overweight while only 16% considered self obese. The work related sociodemographic data revealed that the majority of respondents held a bachelor's degree or higher (63%). The majority of participants earned over \$30,001 (64%). Information obtained from the completed Bray Obesity Attitude Scale and the sociodemographic information provided the data to determine participants' attitudes towards obesity and the obese person. Data analyses revealed that overall, participants held favorable attitudes toward obesity and the obese person. Significance was achieved for four of the five hypotheses. No significance was shown when attitude scores were correlated to the sociodemographic variable of age.

The study is further summarized in Chapter V and conclusions of the findings are presented.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary

As we approach a new century, obesity continues to be a major health problem in the United States. Society reflects a predominately negative attitude toward obese persons (Maroney & Golub, 1992). Negative stereotypes are strongly influenced by current standards that beauty demands thinness for attractiveness (Rothblum, 1992).

The purpose of the study was to identify the attitudes of a convenience sample of 250 people who either reside and/or work in Mahoning County. Selected sociodemographic variables: age, gender, income, education, and family/friends who are overweight/obese were investigated to show if linear relationships existed between those factors.

Identifying the relationship of attitudes to specific sociodemographic variables may be of help in understanding why certain attitudes exist and give direction to improve negative attitudes.

The conceptual framework for the study was attitude formation. According to Ajzen and Fishbein (1980), a major factor in attitude formation is the satisfaction derived from holding a certain attitude. If the participants are to relate effectively with the clientele that they serve, then they need to be aware of their attitudes in order to anticipate personal reactions.

Information obtained from the completed Bray Obesity Attitude Scale and the sociodemographic data questionnaire provided data to determine attitudes of the participants and to correlate their attitude scores to selected variables. The possible

attitude scores ranged from 47 (= least favorable attitude toward obesity) to 188 (=highest favorable attitude toward obesity), with a midpoint of 117.5 (=neutral). Scores for the subjects in the study ranged from 99 to 167, with the mean score being 132.7. In the data analysis it was revealed that the participants from the three groups in the sample had favorable attitudes toward obesity. The only non-significant correlate of attitude was age.

### Conclusions

Information obtained from the completed Bray Obesity Attitude Scale and sociodemographic data questionnaires revealed the following:

☐ Participants in the study had favorable attitudes toward obesity. Because the sample in this study consisted of 67% females of whom 71% considered themselves overweight, it was not surprising that this sample population had a more favorable attitude toward obesity and the obese person.

☐ The significant correlates of attitude were gender and family/friends overweight/obesity. Possible explanations for these significant relations are that the participants who were mostly female reported family/friends as overweight (93%) or obese (61%) would explain the more positive attitudes toward obesity.

☐ As the education levels increase so did the attitudes toward obesity and the obese person. Possible explanations for this significance is that the participants exposed to more education will recognize that an individual's value is not solely based on weight.

☐ As your income increases you have a better attitude toward obesity. Possible explanations for this significance is that the participants who are earning higher incomes usually come from an educated background and have had the opportunity to work in a

more diverse culture thus enabling them to have a better acceptance of obese people.

Information from the Bray Obesity Attitude Scale and the demographic data revealed:

1. The one hundred twelve participants in the convenience sample had favorable attitudes towards obesity and the obese person. The average score from the Obesity Scale was 132.7 .
2. The only non-significant correlate of attitude was age. The participants in this study ranged from 20-77 years of age.
3. The sociodemographic variables of education, gender, income, or family/friends overweight/obese revealed significant results.

#### Implications

The participants in this study have shown an overall favorable attitude toward obesity and the obese person which is an encouraging finding. Yet this finding is inconsistent with the literature findings. An explanation for this finding may be that 45% of participants who responded to the questionnaire may not be representative of the entire population of Mahoning County. The conceptual framework for the study was built on the concept of attitude formation. The findings suggest that social influences, cultural norms, and personality characteristics may have influenced the participants' attitudes toward obesity. For purposes of this study the Bray scaling was acceptable and social desirability effects are addressed in the recommendations.

#### Research Recommendations

Similar studies to determine the attitudes of Mahoning County residents toward obesity and the obese person need to be conducted. It is not known whether the attitudes



of this sample reflect the cross section of Mahoning County residents since similar studies are limited. Additional research is needed to determine if the three groups in this study deliver the same quality of service to obese clients as they do normal weight clients. Further studies will need to balance the items so as to reflect a  $\bar{x}$  of 2.0 for social desirability. Thus eliminating the questions that elicit socially acceptable responses and are not truly measuring attitudes.

Examination of personal attitude development and acceptance would be beneficial for future studies. “The theoretical framework for the study was attitude formation” (Wise, 1995, p.53). Ajzen (1980) defined an attitude as a learned predisposition to respond positively or negatively to certain objects, situations, concepts, or persons. As such, attitudes possess cognitive (beliefs or knowledge), affective (emotional, motivational), and performance (behavior or action tendencies) components. The framework supported the study through the conceptualization of attitude development in relation to behavior and actions of individuals. Since it is known that socialization, personality development and information are responsible for shaping attitudes, the selected participants were studied to determine if attitudes toward obesity correlated with the selected sociodemographic variables.

Fishbein and Azjen’s (1980) theory embraced the idea that attitudes are molded by life’s experiences and beliefs learned from direct observations, values, cultural experiences and expectations. These attitudes can be displayed through one’s actions or behaviors which can result in a consistently favorable or unfavorable response toward an object or event. Beliefs reflect the information one has accumulated about the object or

event. The cultural experiences and societal's expectations also influence beliefs. The concepts of Fishbein and Azjen's theory are appropriate for this study. Mahoning County resident's attitude toward obesity and the obese person is based on important beliefs, values, cultural norms, and life experiences. Attitude formation begins early in life and are influenced by various experiences and exposure throughout one's lifetime. Therefore, it is highly possible that a person who is subjected to negative thoughts toward obesity will likely respond with a negative attitude. It is imperative that education related to obesity begin early to eradicate the stigma associated with obesity.

Hopefully, this study would serve to increase awareness to the extent that negative attitudes toward obesity and the obese person exist and promote self-examination of individuals with respect to their attitudes toward obesity.

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## Appendix A

### BMI Calculation

### How Body Mass Index (BMI) is calculated

1. Multiply your weight in pounds by 0.45. For example, if you weigh 115:  $115 \times 0.45 = 51.75$
2. Multiply your height in inches by 0.025. For example, if you're 5'2" (62 inches):  $62 \times 0.025 = 1.55$
3. Square the answer from step 2 ( $1.55 \times 1.55 = 2.4025$ )
4. Divide the answer from step 1 by the answer from step 3 ( $51.75/2.4025 = 21.54$ )

Appendix B

Metropolitan Height/Weight Tables for men and women

Metropolitan Life Insurance Company body weight table

Height and Weight Data for Men 25-59 years of age.

Height in Feet and Inches	Small Frame	Medium Frame	Large Frame
5'2"	128-134	131-141	138-150
5'3"	130-136	133-143	140-153
5'4"	132-138	135-145	142-156
5'5"	134-140	137-148	144-160
5'6"	136-142	139-151	146-164
5'7"	138-145	142-154	149-168
5'8"	140-148	145-157	152-172
5'9"	142-151	151-163	155-176
5'10"	144-154	151-163	158-180
5'11"	146-157	154-166	161-184
6'0"	149-160	157-170	164-188
6'1"	152-164	160-174	168-192
6'2"	155-168	165-178	172-197
6'3"	158-172	167-182	176-202
6'4"	162-176	171-187	181-207

Metropolitan Life Insurance Company body weight table

Height and Weight Data for Women 25-59 years of age.

Height in Feet & Inches	Small Frame	Medium Frame	Large Frame
4'10"	102-111	109-121	118-131
4'11"	103-113	111-123	120-134
5'0"	104-115	113-126	122-137
5'1"	106-118	115-129	125-140
5'2"	108-121	118-132	128-143
5'3"	111-124	121-135	131-147
5'4"	114-127	124-138	134-151
5'5"	117-130	127-141	137-155
5'6"	120-133	130-144	140-159
5'7"	123-136	133-147	143-163
5'8"	126-139	136-150	146-167
5'9"	129-142	139-153	149-170
5'10'	132-145	142-156	152-173
5'11"	135-148	145-159	155-176
6'0"	138-151	148-162	158-179



## Appendix C

### Ethical Considerations/Human Subject Protection

## Ethical Considerations/ Human Subjects Protection

To ensure that adequate safeguards were included and respected in this study, the following principles were applied to all participants:

1. Subjects' legal rights were respected; their right to privacy, dignity, and comfort were maintained during the investigation through the protection of confidentiality. All participants were instructed not to place their name or any personal identifying marks on the questionnaire.
2. Participation in the investigation was voluntary and the right to withdraw at any time without penalty was permitted.
3. The results of the research study were available upon request.



Youngstown State University / One University Plaza / Youngstown, Ohio 44555-0001

March 5, 1999

Dr. Carolyn Mikanowicz, Associate Professor for  
Ms. Martina Nicholas  
Department of Health Professions  
CAMPUS

Dear Dr. Mikanowicz and Ms. Nicholas:

Thank you for responding to the concerns of the Human Subjects Research Committee of Youngstown State University regarding your Protocol, HSRC #20-99, "Attitude of Mahoning County Residents Toward Obesity and the Obese Person." The Committee has reviewed the modifications you have provided and determined that your protocol now fully meets YSU Human Subjects Research guidelines. Therefore, I am pleased to inform you that your project has been approved.

Any changes in your research activity should be promptly reported to the Human Subjects Research Committee and may not be initiated without HSRC approval except where necessary to eliminate hazard to human subjects. Any unanticipated problems involving risks to subjects should also be promptly reported to the Human Subjects Research Committee.

We wish you well in your study.

Sincerely,

A handwritten signature in cursive script that reads "Eric Lewandowski".

Eric Lewandowski  
Administrative Co-chair  
Human Subjects Research Committee

cc:ECL

c: Mr. Joseph Mistovich, Chair  
Department of Health Professions

*Celebrating*  
**YSU**  
30 Years  
as a State University

Appendix D

Bray Obesity Attitude Scale

## **Bray Obesity Attitude Questionnaire**

This questionnaire is to assess the current attitudes of Mahoning County residents towards obesity and the obese person. Your participation in this survey is strictly voluntary. By completing this questionnaire, you are agreeing to participate. You may change your mind at any time during the survey period. This is a confidential and anonymous questionnaire.. Please do not write your name or any other identifying information anywhere on the questionnaire. There are no right or wrong answers. Therefore, please respond as honestly as possible. The results will be used to help future research and education about the social and psychological impact that obesity has on people.

## Bray Obesity Attitude Scale

Instructions: This is a questionnaire concerning attitudes toward obesity. Please indicate which of the following best describes YOUR reaction to each statement:

SD- Strongly Disagree

D - Disagree

A - Agree

SA- Strongly Agree

Please circle the letters to the right of each statement to indicate how you feel about the statement. There are no right or wrong answers.

**Do not omit any statements**

### Statements

- |  |    |   |   |    |
|--|----|---|---|----|
| 1. The sight or idea of an obese individual is repulsive.                                  | SD | D | A | SA |
| 2. "Fatty" and "Chubby" are acceptable terms among friends.                                | SD | D | A | SA |
| 3. Most obese individuals have very little ambition  | SD | D | A | SA |
| 4. The obese are just as valuable citizens as any other group.                             | SD | D | A | SA |
| 5. Having to sit next to an obese person is a rather uncomfortable experience.             | SD | D | A | SA |
| 6. I would prefer that my son or daughter not date an obese person.                        | SD | D | A | SA |
| 7. All other things being equal, I would select the nonobese person to be on my committee. | SD | D | A | SA |
| 8. Watching an obese person pick up a dropped object is humorous.                          | SD | D | A | SA |
| 9. Obesity is an individual problem.   | SD | D | A | SA |
| 10. The obese are more likely to suffer from emotional disturbances than the nonobese.     | SD | D | A | SA |

11. Fat people are jolly people.	SD	D	A	SA
12. Slender, thin people are healthier people than fat people.	SD	D	A	SA
13. Fat people are lazy.	SD	D	A	SA
14. Obese individuals exercise less than nonobese individuals.	SD	D	A	SA
15. Thin people are more popular than fat people.	SD	D	A	SA
16. Fat people enjoy life more than thin people.	SD	D	A	SA
17. All things being equal, I would hire a thin person rather than a fat person.	SD	D	A	SA
18. Fatness in older people is more acceptable than in younger people.	SD	D	A	SA
19. Nonobese people are more likely to be depressed than obese people.	SD	D	A	SA
20. Most obese people could lose weight if they really wanted to do so.	SD	D	A	SA
21. Nonobese workers are more efficient than obese workers.	SD	D	A	SA
22. Most obese youngsters play fewer active games than nonobese youngsters.	SD	D	A	SA
23. Disturbed family relations may cause obesity.	SD	D	A	SA
24. Excessive size is a serious social handicap for many obese children.	SD	D	A	SA
25. The obese child is likely to be considered as a "mama's boy".	SD	D	A	SA
26. All an obese person needs to do is to lose weight.	SD	D	A	SA
27. Motivation is important in achieving and maintaining proper body weight.	SD	D	A	SA

28. A fat baby is a healthy baby.	SD	D	A	SA
29. Obese people take little pride in the way they dress.	SD	D	A	SA
30. Less emphasis should be placed on obesity as a significant nutritional problem.	SD	D	A	SA
31. Most obese people don't see themselves as being as fat as other people see them.	SD	D	A	SA
32. Feelings of inferiority might cause a person to to overeat.	SD	D	A	SA
33. Obese youngsters tend to be passive and withdrawn from group activities.	SD	D	A	SA
34. The obese person is as socially acceptable as the nonobese person.	SD	D	A	SA
35. Obese individuals are not very pleasant to look at.	SD	D	A	SA
36. A person's weight is his own business.	SD	D	A	SA
37. There are a few exceptions, but in general obese people are pretty much alike.	SD	D	A	SA
38. Obese individuals have a lower opinion of themselves than nonobese individuals.	SD	D	A	SA
39. Nonobese people are more dependable than obese people.	SD	D	A	SA
40. Obese people enjoy food more than nonobese people.	SD	D	A	SA
41. Obesity should be treated like a disease.	SD	D	A	SA
42. Obesity can have a negative effect on a person's mental welfare.	SD	D	A	SA
43. I would rather have a nonobese spouse than an obese spouse.	SD	D	A	SA
44. Obese individuals eat more when they are emotionally upset.	SD	D	A	SA



45. Obese individuals sleep more than nonobese individuals. SD D A SA
46. The obese have little will power and self-control. SD D A SA
47. Most obese people enjoy being the object of humor. SD D A SA
48. Age: \_\_\_\_\_
49. Gender: (check one)  
Male \_\_\_\_\_ Female \_\_\_\_\_
50. Ethnic background: (check one)  
Asian/Pacific Islander \_\_\_\_\_ Black \_\_\_\_\_ Hispanic \_\_\_\_\_ White \_\_\_\_\_
51. Net yearly income: (check one)  
\$0 -10,000 \_\_\_\_\_ \$10,001 - 20,000 \_\_\_\_\_ \$20,001 - 30,000 \_\_\_\_\_ \$30,001 - 40,000 \_\_\_\_\_  
\$40,001+ \_\_\_\_\_
52. Education: (check one)  
Less than High School \_\_\_\_\_ High School \_\_\_\_\_ Some college \_\_\_\_\_ College degree \_\_\_\_\_  
Graduate study or degree \_\_\_\_\_
53. Have you ever considered yourself overweight? (check one)  
Yes \_\_\_\_\_ No \_\_\_\_\_
54. Have you ever considered yourself obese? (check one)  
Yes \_\_\_\_\_ No \_\_\_\_\_
55. Do you have immediate family members or close friends who are overweight? (check one)  
Yes \_\_\_\_\_ No \_\_\_\_\_
56. Do you have immediate family members or close friends who are obese? (check one)  
Yes \_\_\_\_\_ No \_\_\_\_\_

Appendix E

Letter of Permission, Dr. Charles Bray

**LAMBUTH**  
**UNIVERSITY**

Sept 1, 1998

Dear Martina,

I will be happy for you to use my "Bray Obesity Attitude Scale" in your thesis.

Good Luck in your study and let me know how it turns out.

If I can be of further assistance let me know.

Sincerely,

Charles R Bray

## Appendix F

### Instruction Letters to Participants

Cover letter 1

Dear Participant,

My name is Martina Nicholas and I am a Youngstown State University Health and Human Service graduate student. As partial requirement for a Master's degree, I am conducting a survey to determine the attitude of managers toward obesity and obese people. This study will enable me to complete my graduate school thesis requirements and more importantly, identify information that may have a significant impact on hiring practices.

I would like to invite you to participate in this study which involves approximately 20 minutes to complete the enclosed questionnaire. Your participation is completely voluntary. Your decision to participate or not to participate will in no way affect your current position.

If you decided to participate, please fill out the questionnaire and return it to the designated proctor. By completing and returning the questionnaire implies permission is given to this investigator to include your responses in the research study. Please do not discuss any items on the questionnaire with fellow employees as this may influence the responses.

This study is for research purposes only and your responses will be completely confidential. Please do not put your name or any other personal identifiers on the questionnaire. The findings will be reported in an aggregate form only, no individual responses will be used.

A summary of the results of the study will be available upon request. You may obtain a copy by contacting me at the phone number listed below. If you have questions about the study, please contact me or my faculty advisor at one of the numbers listed below. Thank you in advance for your time and cooperation in participating in this study.

Sincerely,

Martina Nicholas, M.L.S.  
Maag Library  
Youngstown State University  
One University Plaza  
Youngstown, Ohio 44555-3675  
330 742-2941

Carol Mikanowicz, Ph.D.  
Health Professions  
Faculty Advisor  
Youngstown State University  
One University Plaza  
Youngstown, Ohio 44555-3675  
330 742-3658

Cover Letter 2

Dear Participant,

My name is Martina Nicholas and I am a Youngstown State University Health and Human Service graduate student. As partial requirement for a Master's degree, I am conducting a survey to determine the attitude of health care workers toward obesity and obese people. This study will enable me to complete my graduate school thesis requirements and more importantly, identify information that may have a significant impact on caring practices.

I would like to invite you to participate in this study which involves approximately 20 minutes to complete the enclosed questionnaire. Your participation is completely voluntary. Your decision to participate or not to participate will in no way affect your current position.

If you decided to participate, please fill out the questionnaire and return in to the Human Resources Department by December 21, 1998. By completing and returning the questionnaire implies permission is given to this investigator to include your responses in the research study. Please do not discuss any items on the questionnaire with fellow employees as this may influence the responses.

This study is for research purposes only and your responses will be completely confidential. Please do not put your name or any other personal identifiers on the questionnaire. The findings will be reported in an aggregate form only, no individual responses will be used.

A summary of the results of the study will be available upon request. You may obtain a copy by contacting me at the phone number listed below. If you have questions about the study, please contact me or my faculty advisor at one of the numbers listed below. Thank you in advance for your time and cooperation in participating in this study.

Sincerely,

Martina Nicholas, M.L.S.  
Maag Library  
Youngstown State University  
One University Plaza  
Youngstown, Ohio 44555-3675  
330 742-2941

Carol Mikanowicz, Ph.D.  
Health Professions  
Faculty Advisor  
Youngstown State University  
One University Plaza  
Youngstown, Ohio 44555-3675  
330 742-3658

Cover letter 3

Dear Participant,

My name is Martina Nicholas and I am a Youngstown State University Health and Human Service graduate student. As partial requirement for a Master's degree, I am conducting a survey to determine the attitude of a sampling of Mahoning County residents toward obesity and obese people. This study will enable me to complete my graduate school thesis requirements and more importantly, identify information that may have a significant impact on the community.

I would like to invite you to participate in this study which involves approximately 20 minutes to complete the enclosed questionnaire. Your participation is completely voluntary. Your decision to participate or not to participate will in no way affect your current position.

If you decided to participate, please fill out the questionnaire and return it via interoffice mail by November 20, 1998 to Martina Nicholas at Maag Library. By completing and returning the questionnaire implies permission is given to this investigator to include your responses in the research study. Please do not discuss any items on the questionnaire with fellow employees as this may influence the responses.

This study is for research purposes only and your responses will be completely confidential. Please do not put your name or any other personal identifiers on the questionnaire. The findings will be reported in an aggregate form only, no individual responses will be used.

A summary of the results of the study will be available upon request. You may obtain a copy by contacting me at the phone number listed below. If you have questions about the study, please contact me or my faculty advisor at one of the numbers listed below. Thank you in advance for your time and cooperation in participating in this study.

Sincerely,

Martina Nicholas, M.L.S.  
Maag Library  
Youngstown State University  
One University Plaza  
Youngstown, Ohio 44555-3675  
330 742-2941

Carol Mikanowicz, Ph.D.  
Health Professions  
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