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Differences in Race and/or Gender in Attitudes and Beliefs Towards Obesity Among Students at The University of Southern Mississippi

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The University of Southern Mississippi

Differences in Race and/or Gender in Attitudes and Beliefs Towards Obesity Among
Students at The University of Southern Mississippi

by

Erick Brown

A Thesis

Submitted to the Honors College of
The University of Southern Mississippi
in Partial Fulfillment
of the Requirements for the Degree of
Bachelor of Arts
in the Department of Anthropology and Sociology

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Approved by

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CHAPTER I: INTRODUCTION

Overweight and obesity have been described by various experts as critical problems in populations around the world, especially in the United States. These issues are so characterized because they affect numerous facets of life in this society. Researchers in the medical community have repeatedly described the health-related risks associated with obesity rates, asserting that higher risks of debilitating or fatal disease are tied to one's level of obesity. They also say that obesity rates of populations are related to other disease rates, and many imply or clearly state that obesity is the cause and therefore the problem to be contested. Expert economists have a similar perspective of overweight and obesity. Government agencies and independent researchers all repeatedly presented two basic conclusions in their research: that the rise in obesity prevalence is increasingly costly to society at large, and that the economic conditions of individuals and their families affect their risk for obesity. Social scientists also describe weight control as a problem in the United States and abroad, contrasting only in their description of its causes. Social research has focused on the role of the social environment (i.e. access to healthful options for food, exercise and healthcare; social desirability of overweight and obesity in particular communities) in analyzing the social problem of weight management. Most findings in such research have been linked to traditional demographic classifications such as race and gender, usually in an attempt to describe social disparities. It is common to find that these researchers reject the notion that individuals have the ability or the responsibility to manage their weight alone, labeling this notion as a fundamental attribution error.

This has led recent study in this field to shift its focus to psychosocial and environmental explanations for the recurring phenomenon of increasing obesity prevalence. Contemporary researchers feel that the macrosocial and microsocial causes of this trend intersect when one's attitudes about obesity affect and are affected by the aggregate of related stimuli in one's social environment. This study seeks to describe such attitudes of college students at the University of Southern Mississippi. These attitudes will be described according only to the level of negativity found in survey responses, and will be compiled and analyzed according to race and gender as indicated in the title.

CHAPTER II: LITERATURE REVIEW

General Trends

The prevalence of obesity in the United States has consistently escalated with every passing year. Since 1985, every new decade has presented a rise in obesity rates, with 33.8% of adults being classified as obese in 2010 (Centers for Disease Control [CDC] 2011). The problem is not expected to get any better in the near future. The rate of adult obesity is expected to rise to 41% by 2015 (Wang and Beydoun 2007). The obesity epidemic is quickly becoming the most plaguing health issue in American society because of the seriousness of associated health problems. According to the CDC, obesity accounts for more than 300,000 deaths per year. Studies show that obesity can double or even triple the mortality rate within a population (Adler and Stewart 2009), which is most likely a result of the risks for cardiovascular diseases, type 2 diabetes, and cancer to which obesity contributes (Nyholm, et. al 2008).

Obesity by Social Demographics

The damages of the obesity epidemic are not limited to health problems, as the health costs of such problems to society are substantial. It is well documented that the economic impact of obesity's prevalence is comparable to natural disasters, totaling to \$99.2 billion in 1995, \$51 billion of which were directly related to medical treatment of obesity-related conditions (Blixen, et. al 2006). However, the economic costs to society of an overweight or obese population should not obscure the economic realities associated with the onset and growth of obesity. No variable is more consistently related to health behavior than socioeconomic status (July et. al 2003), which has been found to

affect obesity levels for many different groups. A recent Swedish study found that the national boost in obesity was even higher in rural areas, where socioeconomic status was generally lower (Nyholm et. al 2008). Being overweight or obese has also been shown to lead to employment and advancement barriers, decreased income levels, and more frequent reprimands and job action (Merten et. al 2008), leaving overweight and obese people in more tenuous economic positions, which could increase their level of obesity. However, Wang and Beydoun (2007) assert that socioeconomic status (SES) is not as directly related to obesity trends as once thought, but instead that SES indirectly affects obesity through other factors like level of education, occupation, and marriage. This assertion is supported by Burke and Heiland's (2008) findings that disparities in body mass index between black and white females remained largely the same when socioeconomic variables are controlled. Most scholars, however, see the link between class and obesity as fairly direct as well as associated with other social issues.

Age has been equally examined as a variable related to obesity trends. Obesity research has most often targeted those groups who are deemed most at risk (Wang and Beydoun 2007): young adults (because they present the highest prevalence of obesity) and children, who are incapable of controlling all the factors that can lead to weight issues. Childhood obesity rates more than doubled between the years 1961 and 2001 (Latner and Stunkard 2003), and adolescent (ages 12-19 years) obesity rates have more than tripled in a similar time span (Yen-hsin and Landale 2011). These statistics are of particular import because the developmental period between adolescence and adulthood is a key period of weight gain for many people, and those who become obese during this transition are more likely to exhibit the same problem in later adulthood, along with many other health issues that stem from obesity (Nelson et. al 2007). This phenomenon

has been explained by researchers in the field as a by-product of low self-esteem, negative self-perceptions, and the added social stress of being overweight in a society that stigmatizes such a condition (Klaczynski et. al 2004; Sykes and McPhail 2008). The present research is a survey of those attitudes and beliefs, which the aforementioned researchers attribute to the social environment.

Race and gender are variables that have been thoroughly studied in relation to obesity. While the prevalence of overweight/obesity is dangerously high for the entire society, race and gender classifications show disparities which make it even more hazardous to members of certain groups. Several findings suggest that non-Hispanic Blacks present the highest prevalence of obesity, with other non-White races following closely behind (Wang and Beydoun 2007). Gender is also a variable that is related to obesity, particularly when considered in conjunction with race. No subgroup has higher obesity rates than non-Hispanic Black women over age 40 at 53.2% obesity, which is almost 20% higher than non-Hispanic White women of the same age (Flegal et. al 2002). Yet similar comparisons of male obesity rates showed no significant differences between the same racial groups (Blixen et. al 2006; Burke and Heiland 2008). Even these surface findings support the notion that race and gender play pivotal and intersecting roles in the expansion of obesity rates.

Socioeconomic challenges faced by women and racial minorities are repeatedly highlighted in the literature as reasons for these disparities in obesity rates.

Socioeconomic status directly affects education levels, access to healthcare, and access to healthy lifestyle opportunities, and as such clearly plays a role. However, this paradigm is slowly shifting to form other explanations for this phenomenon. Zhang and Wang (2004) found that SES groups with the highest levels of education presented the greatest increase

in obesity prevalence between 1971 and 2000, which severely destabilizes the purported causal relationship between low education levels and high obesity rates. Similar findings related to other popular variables have weakened those relationships as well. Coupled with the continued rise in obesity prevalence, these developments have led researchers to examine the social environment for variables that may have a stronger connection (and subsequently more effective solutions) to overweight and obesity.

Attitudes towards Obesity

Recent contributions to obesity research are becoming increasingly critical of the traditional ways of understanding and responding to obesity. They suggest that public reactions to obesity as a social problem in the United States is tied to the value of individualism which prevails in our social affairs. People in postindustrial societies tend to believe that individual talent and exertion are the primary determinants of personal outcomes (Klaczynski et. al 2004), which inevitably obscures an understanding of the social factors which are shaping people's lives. This bias explains the failure of current actions targeting the "obesity epidemic," which concentrate primarily on the education and behavior modification of individuals (Moczulski et. al 2007) rather than addressing the problems in society as a whole.

For instance, physical education programs in schools were born from the problem of rising obesity, and were designed (purposely or inadvertently) to curtail the onset of obesity in the key stages of child development (Sykes and McPhail 2008). However, this approach has failed to stop or even slow the growth of the obesity epidemic, but instead has created psychosocial issues among overweight and obese students (Sykes and McPhail 2008). Because these programs are focused on educating students to modify their individual behaviors in pursuit of the "thin ideal" (Klaczynski et. al 2004) – and

because overweight/obese students are targeted and socially ostracized due to their weight, which most physical educators see as the sole determinant of health (Sykes and McPhail 2008) – they inevitably fail to treat the actual causes of the problem. Said plainly, solving a social problem requires a socially conscious solution. Devising such an approach requires some concept of the differences in ethnic and economic environments (Blixen et. al 2006) which contribute to the overall problem and the disparities found between groups.

Still, understanding social variables is not enough to elucidate the causes of the obesity epidemic. Another important factor is one's attitude towards obesity. Though individual agency alone cannot curb America's weight problem, it can play a substantial role if it is approached correctly. Individual behavior patterns are the result of individual beliefs and values, so those belief patterns must be adequately defined before behavior patterns can be affected. An understanding of the social environment must be paired with an understanding of attitudinal trends among groups in order to create a solution that treats every part of the problem.

Most of the studies about attitudes towards obesity highlight those negative attitudes which damage the psyche of obese people (Allison et. al 1991), presumably to prevent exacerbation of the psychosocial issues which contribute to the cycle of obesity. As with the environmental factors described earlier, the attitudinal factors contributing to obesity have been studied among various groups. Studies show that children subscribe to societal ideals and begin shaping negative attitudes towards obesity and overweight at a very early age (Latner and Stunkard 2003). Because the prevailing ideology in this society teaches youths that obesity is the result of personal failure to manage body shape (Klaczynski et. al 2004), the stigmatization of the obese is accepted and perpetuated by

most children, even those who themselves present with obesity (Latner and Stunkard 2003). This stigmatization leads obese children to incorporate these taught attitudes about obesity into their embodied subjectivities (Sykes and McPhail 2008), which can lead them into a cycle of psychosocial damage and perpetual weight gain. Not every child embraces and internalizes these beliefs to the same degree (Klaczynski et. al 2004), but it is unlikely that these attitudes contribute nothing to the fact that 19% of children ages 6 to 11 are overweight (Bissel and Hays 2011).

Some attitudinal trends have also been linked to race and gender. Significant evidence suggests that non-White ethnic groups present higher rates of overweight/obesity in part because they reject many of this society's health values, namely that individuals have the power and responsibility to control their own environment and health (Blixen et. al 2006). Studies also show that Blacks are less likely to subscribe to the thin ideal (Caldwell et. al 1997) and are more likely to desire higher BMI values for themselves and/or their mates (Burke and Heiland 2008). Parnell et al (1996) found that White females of varied body size tend to consider themselves "heavy", while their Black counterparts of all sizes were more likely to consider themselves "normal". Much of the prior research employs these types of comparisons between Black and White females, with the general consensus being that, though Black females tend to have more positive attitudes towards obesity, all females have more negative beliefs about obesity than men due to the societal pressures levied against them (Caldwell et. al 1997; Klaczynski et. al 2004; Wilfley et. al 1996). Further understanding of these value patterns might afford these groups some relief from social stigmatization and chronic health hazards.

Building on prior research, this study was designed to illuminate the actual attitudes held by young adults of all races, genders, and levels of health towards obesity and its prevalence in society. A great deal of the research that informed this project has called for such a study. Compared with the wealth of information about the prevalence of obesity, data concerning people's feelings about obesity are very lacking. That is, most prior research has presented only the average differences in obesity prevalence that certain groups exhibit (Wilfley, et. al 1995) without exploring how they are judged or viewed by others. In this study, I sought to document the thoughts and feelings of college students towards a condition that increasingly affects every population, including theirs (Nelson, et. al 2007). According to the Behavioral Risk Factor System survey, people between the ages of 18 and 29 years report the highest frequency of overweight and obesity, which makes the present research very valuable to understanding the conceptualization and meaning of a growing problem.

A secondary goal of this research was to find correlations between those attitudes and the actual body size of the respondent. By gathering simple data like weight and height, the BMI of each respondent was calculated and compared to their scores on the attitude scale. The final goal of the research was primary: to link any such correlation to race and gender – if possible – to see if any further correlations exist. The latter will inform future researchers as to the relationship between one's psychosocial condition and their physical condition (obesity level), which could facilitate the synthesis of more holistic solutions to an increasingly chronic problem in our society.

CHAPTER III: METHODOLOGY

Data Collection

This study was conducted using a 40-question survey which was adapted from two reputable questionnaires developed by the Rudd Center for Food Policy and Obesity at Yale University: the Attitudes Towards Obese People (ATOP) and the Beliefs About Obese People (BAOP). These two instruments have been widely used by researchers, and have been validated as some of the best instruments created to date for the psychometric measure of attitudes and beliefs about obesity (Allison et. al 1991). Each scale is publicly available for researchers through Yale's Rudd Center website. Combined, the surveys measure subjects' attitudes and beliefs regarding obesity and its effects on peoples' livelihoods. These survey questions employed a 6-point Likert scale with answers ranging from "I strongly disagree" (coded 1 during data analysis) to "I strongly agree" (coded 6 during analysis) to gauge the subject's feelings about particular statements (see Appendix). Since most of the items in the first section of the questionnaire were framed negatively (i.e. "Most obese people feel that they are not as good as other people") any positive questions were reversed in the scale during data analysis for consistency. Reversed questions are indicated in the Appendix.

In addition to the ATOP and BAOP instruments, twelve original questions were added to the survey (see Appendix). These questions were developed to bring in areas that have been shown in the literature to be relevant to attitudes and beliefs about obesity: age, gender, race, height and weight, exercise habits, work responsibilities and level of stress. The final question on the survey asks the subject to rate their own body size on a 4-point scale, ranging from "Too thin" to "Obese."

These surveys were administered to six sections of Sociology 101 and Anthropology 101 during the last six weeks of the fall semester of 2011. These introductory level courses in the Department of Anthropology and Sociology were chosen for survey in an attempt to collect data from students across disciplines and classifications. Each of these 100-level courses is an option for fulfilling part of the general curriculum requirements at The University of Southern Mississippi, which gives the sample a variety that makes it more representative of the entire student population. Students in each class were given 15 minutes at the beginning of the class period to complete the survey. Participation in the study was completely voluntary, and subjects were encouraged to only complete those questions and/or sections that did not threaten their personal comfort. A consent form outlining these details was attached to each questionnaire (See Appendix). The project design and the survey instrument itself were approved by the Institutional Review Board at the University of Southern Mississippi prior to the onset of research.

These data were analyzed using SPSS to generate t-tests and one-way analyses of variance by subgroups. The frequencies of negative answers were calculated with averages of aggregate scores on the Likert scale survey. Averages were then sorted by the group with which they were associated. For example, Blacks in the sample ranked obesity at 3.53 on a 6-point scale of negativity, meaning the average of all the answers from Black respondents on all questions in the first section of the questionnaire equaled 3.53 after all answers were coded as described before. That data is presented and explained in full detail in the “Results” section, and tables of the data are available in the Appendix.

Expectations

Using the knowledge gained from reading prior research, I hypothesized that non-White respondents would exhibit more positive attitudes towards obesity as compared to their White counterparts. Particularly, non-White females were expected to show the most positive attitudes towards obesity and describe their own body size as “Too thin” or “About right” at the end of the survey (see Appendix). Since males tend to present such similar beliefs and values regarding overweight regardless of socioeconomics, I anticipated that males of all races would display similar attitudes that were slightly less positive than the non-White females, with White females’ perceptions of obesity ranking most negative of all subgroups.

In accordance with the secondary goals of the research, I expected that those respondents whose body mass index ranked above the threshold for overweight ($BMI \geq 25$) might be more likely to show more positive perceptions, while respondents below that threshold would exhibit relatively negative attitudes towards obesity. That is, a positive correlation between one’s own body mass and their opinions concerning obesity was expected. The final expectation was that the final question asking respondents to describe their own body size (see Appendix) might serve as a final indicator of one’s perceptions concerning obesity.

CHAPTER IV: FINDINGS

The total number of responses collected was 324. Male respondents comprised 37.7% (N=122) of the total responses, while females made up the other 62.0% (N=201) of the sample (missing values N=1). The ethnic majority in the sample was White (60.2%, N=195), followed by Black with 32.7% of the sample (N=106). Asians and Hispanics each had equal representation in the sample at 1.5% (N=5), and there was one Native American respondent in the sample (0.3% of the sample). Eight respondents self-classified as “other” in regards to race, making up 2.5% of the sample (missing values N=4). The mean age for the sample was 20.47 years. Age ranged from 10 to 54 years, but the most frequently recorded ages were between 18 and 22 (86.1%, N=279), which is to be expected in a sample totally comprised of college students.

The survey instrument employed a 6-point Likert scale, with answers ranging from “I strongly disagree” (coded 1 during data analysis) to “I strongly agree” (coded 6 during data analysis). Because the wording of each item in the questionnaire is negatively arranged (positive wordings were reversed in the attitude scale during data analysis; See Appendix), there is a negative relationship between attitude scores and perceptions about obesity. That is, the greater a given score on the attitude scale, the more negative the attitude being assessed. The mean attitude score for the sample was 3.63, showing only moderate negativity in the overall perception of obesity. The mean attitude score for Black respondents was 3.53. When compared to the mean attitude score for White respondents (3.65), there was no significant difference found in attitudes about obesity between the two most prevalent ethnic groups in the sample. There was even less difference found between males and females. The mean attitude score for males was 3.62,

while females scored a mean of 3.63, showing no significant difference in attitudes towards obesity related to gender. No subgroup had a score that deviated significantly from the sample mean, which further illustrates the homogeneity of the attitudes between groups.

The only significant correlations found in the data were all related to individual BMI scores of respondents. A negative correlation surfaced when attitude scores were compared to personal BMI, showing that participants with higher BMI exhibited less negative attitudes towards obesity, as expected (see Appendix). Also, a positive correlation was found between average BMI and self-description of body size. That is, the higher a person's BMI, the more likely they were to describe themselves more negatively. This phenomenon was quite interesting because the sample described itself so accurately. The 14 respondents who answered "Too thin" had a mean BMI of 20.0, which is barely above the "Underweight" threshold of the BMI scale. Those who answered "About right" showed a mean BMI of 23.0 (in the "Normal" range of the scale). Participants who indicated that they were "Somewhat larger than [they] would like" had a mean BMI of 28.7 (which is considered overweight), while the 8 people who selected "Obese" averaged a BMI of 38.6, which is well over the scale's obesity threshold (see Appendix).

CHAPTER V: DISCUSSION AND CONCLUSION

Contrary to the majority of the prior research, the findings of this study show that there is essentially no difference in attitudes and beliefs towards obesity between the groups in question. The responses collected during this study have almost no resemblance to the conclusions made by previous studies. While the directionality of the group attitude scores matches the expected outcomes, the margins of difference are completely insignificant. White respondents did view obesity more negatively than Black ones, but only by 0.12 scale points. As it relates to gender, males were less negative than females in their perceptions, but only by a negligible 0.01 scale points. This data seems to refute all the assertions made in prior research about the differences in attitudes that were expected.

These surprising findings may be a result of two possible causes: flaws in the design of the study and/or a shift in popular opinions concerning obesity. There are many aspects of this research design which may have skewed the results. First, the convenience of the sample may have only gathered respondents who have similar background and experiences, leading them to answer so similarly. 71.6% (N=232) of the sample reported that they were from Mississippi or Louisiana (the two most obese states statistically), and all of those people have received higher education from the same institution. It is not unreasonable that such commonalities would lead to common opinions about obesity. Also, the data collected was analyzed according to demographic averages (i.e. all males, all Blacks, etc.) making it difficult to accurately extrapolate the actual attitude of each subgroup (i.e. Black males, Non-white Hispanic females, etc.) and compare them to others. To describe the attitudes and beliefs of these smaller subgroups would require

more tedious manipulation of the data by proceeding researchers. Some analysis was done on the basis of responses to individual questions, but those findings were excluded to protect the integrity of the scale that was created. Though the sample's attitude score on an individual question might uncover interesting prospects, focusing on one survey item removes any findings therein from the overall scale, which gives meaning to the score. Any conclusions drawn from the analysis of a single survey item would be void of the relative meaning found in the overall questionnaire. Subsequent studies in this area should employ more rigorous statistical analysis to possibly find results that are more congruent with previous findings.

However, I suspect that changes in public opinion are more responsible for these results. Again, the majority of the sample reported Mississippi and Louisiana as their home state. With these being the most obese states in the union, citizens of these states have probably been presented with more education and awareness programs related to obesity. Since many social programs stem from social research, these programs have probably shared academia's emphasis on combating stigmatization of obesity. So it is likely that the students in this sample have experienced some sort of obesity education at some point in their lives, whether through school, television programs and advertisements, internet campaigns or other vehicles. These efforts at curbing the obesity stigma could be a cause of such homogenous findings in the current research. In other words, the campaign against obesity stigma may have successfully created a social desirability bias in favor of obesity tolerance. Additionally, my presence in each classroom that took the survey may have caused some participants to change their answers for fear that I might see those answers. This is only a small part of the social

desirability bias, while the social programs that are shaping public opinion make up the larger part of those biases.

Although those programs may have injured the attitudinal results, they may have simultaneously been the cause for the sample's impressive accuracy in self-description. It is unlikely that every respondent knew the guidelines for overweight and obesity by memory, or that they had checked their own BMI recently enough to know exactly how to classify themselves. However, it is more likely that previous educational encounters with the BMI scale or other obesity-related information made each respondent familiar enough with the scale to make an educated guess about their own scores. For instance, a student who has never measured her own BMI might still be able to accurately guess based on what she learned in an introductory health course. Similarly, the images shown in a news special on the "obesity epidemic" might help a slightly overweight man construct negative feelings about himself, as Bissel and Hays (2011) asserted. Prior research by the likes of Sykes and McPhail seems to support this possibility in its campaign against obesity stigmatization in a society that aggrandizes the power of individual agency to control life circumstances.

Future research on this subject should focus on smaller subgroups in an attempt to shed light on which particular combinations of social factors affect people's attitudes towards obesity. Classifications like race or gender may be too inclusive to allow for the adequate examination of these combinations. A future study which dissects the subgroups of the current sample into smaller subgroups according to more specific social circumstances might find information which supports the present assertions more clearly. A clearer understanding of the relationship between social variables and the social

outcome of obesity will enable subsequent researchers to offer clear answers to what has been framed as a social problem of utmost concern.

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APPENDIX A: Informed Consent

To the participant:

This study is being conducted as research for a senior thesis within the Department of Anthropology and Sociology at The University of Southern Mississippi. The purpose of this study is to explore the attitudes and beliefs of college students towards obesity and the differences in those beliefs when it comes to race and gender. The data collected through this questionnaire will provide insight into attitudes and beliefs in regards to obesity and the lifestyle surrounding the condition.

This survey consists of 41 questions related to attitudes towards obesity and is estimated to take approximately 15 minutes to complete. USM students in Anthropology 101 and Sociology 101 classes for the fall semester of the 2011-2012 academic school year will receive this survey, but participation is completely voluntary. Subjects participating in the study only need to be 18 years of age or older and a USM student. Benefits for participation include an opportunity to share your views and to contribute to academic research. Every effort has been made to ensure your comfort while completing this questionnaire, yet some questions may present ideas that may be unsettling for some participants. If at any time a question makes you uncomfortable, you may skip the question or withdraw your participation without any penalty, prejudice, or loss of benefits.

This study is completely anonymous and surveys will in no way be tied to any identifiable subjects. Because signatures indicating consent for participation would compromise anonymity, consent is therefore implied in participation. Please do not put your name or student ID number anywhere on the survey. Questions concerning the research should be directed to the Principal Investigator, Erick Brown, at (662) 386-9089 or via email at Erick.A.Brown@eagles.usm.edu, or to the Thesis Director of this study, Dr. Amy Chasteen Miller (Department of Anthropology and Sociology, University of Southern Mississippi, Hattiesburg, MS 39406) at (601) 266-5476. This project has been reviewed by the Human Subjects Protection regulations. Any questions or concerns about rights as a research subject should be directed to the Director of Research and Sponsored Programs, University of Southern Mississippi 39406, (601) 266-4119. **Please detach and keep this letter for your own personal record.**

Thank you,

Erick Brown
Senior Sociology student

and Principal Investigator

APPENDIX B: Questionnaire

*Note: Questions which were reversed on the scale during data analysis are indicated by a parenthetical “r”.

I. Instructions: Below you will read a list of 28 statements. For each statement, place an “X” in the box under the heading that most represents how much you agree or disagree with it. Please do not leave any blank. Please do not put your name anywhere on this questionnaire.

	I strongly disagree	I modera -tely disagree	I slightly disagree	I slightly agree	I modera -tely agree	I strongly agree
1. Obese people are as happy as nonobese people. (r)						
2. Most obese people feel that they are not as good as other people.						
3. Most obese people are more self-conscious than other people.						
4. Obese workers cannot be as successful as other workers.						
5. Most nonobese people would not want to marry anyone who is obese.						
6. Severely obese people are usually untidy.						
7. Obese people are usually sociable. (r)						
8. Most obese people are not dissatisfied with themselves. (r)						
9. Obese people are just as self-confident as other people. (r)						
10. Most people feel uncomfortable when they associate with obese people.						
11. Obese people are often less aggressive than nonobese people.						
12. Most obese people have different personalities than nonobese people.						
13. Very few obese people are ashamed of their weight. (r)						

14. Most obese people resent normal weight people.						
15. Obese people are more emotional than nonobese people.						
16. Obese people should not expect to lead normal lives.						
17. Obese people are just as healthy as nonobese people. (r)						
18. Obese people are just as sexually attractive as nonobese people. (r)						
19. Obese people tend to have family problems.						
20. One of the worst things that could happen to a person would be for him to become obese.						
21. Obesity often occurs when eating is used as a form of compensation for lack of love or attention.						
22. In many cases, obesity is the result of a biological disorder. (r)						
23. Obesity is usually caused by overeating.						
24. Most obese people cause their problem by not getting enough exercise.						
25. Most obese people eat more than nonobese people.						
26. The majority of obese people have poor eating habits that lead to their obesity.						
27. Obesity is rarely caused by a lack of willpower. (r)						
28. People can be addicted to food, just as others are addicted to drugs, and these people usually become obese.						

II. Demographic Background. Please mark a check in the box next to the appropriate response, or fill in the blank where needed.

1. **Gender:** Male Female

APPENDIX C: Tables of Sample Demographics

GENDER	Frequency	Percent
Male	122	37.7
Female	201	62.0
Missing Values	1	0.3
Total	324	100

RACE	Frequency	Percent
Asian	5	1.5
Black	106	32.7
Native American	1	0.3
Non-White Hispanic	5	1.5
White	195	60.2
Other	8	2.5
Missing Values	4	1.2
Total	324	100

AGE (years)	Frequency	Percent
10	1	0.3
17	2	0.6
18	39	12.0
19	123	38.0
20	60	18.5
21	36	11.1
22	21	6.5
23	8	2.5
24	8	2.5
25	7	2.2
26	4	1.2
27	2	0.6
28	4	1.2
29	1	0.3
31	1	0.3
32	3	0.9
34	1	0.3
45	1	0.3
54	1	0.3
Missing Values	1	0.3
Total	324	100

STATE OF BIRTH	Frequency	Percent
Alabama	19	5.9
Louisiana	28	8.6
Mississippi	204	63.0
Other	66	20.4
Missing Values	7	2.2
Total	324	100

APPENDIX D: Tables of Descriptive Statistics

RELIABILITY (of instrument)

Cronbach's Alpha	.854
Number of Survey Items	28

Group Statistics

Attitude Scores (by race)	N	Mean Attitude Score	Standard Deviation
Black	106	3.5255	0.57574
White	195	3.6518	0.55746

Data on other races excluded due to statistically negligible representation in the sample.

Attitude Scores (by gender)	N	Mean Attitude Score	Standard Deviation
Male	122	3.6227	0.05617
Female	201	3.6347	0.03930

Correlations

Attitude Score v. Age (years)		Attitude Score	Age (years)
Attitude Score	Pearson Correlation	1	-0.073
	Significance (2-tail)		0.189
	N	324	323
Age (years)	Pearson Correlation	-0.073	1
	Significance (2 tail)	0.189	
	N	323	323

Correlation is significant at or below the 0.05 level.

Attitude Score v. Self-reported BMI		Attitude Score	BMI
Attitude Score	Pearson Correlation	1	-0.120
	Significance (2-tail)		0.034
	N	324	314
BMI	Pearson Correlation	-0.120	1
	Significance (2-tail)	0.034	
	N	314	314

Correlation is significant at or below the 0.05 level.

Self-reported BMI v. Self-described

Self-reported BMI

Self-described Body

Body Size

Size

Self-reported BMI	Pearson Correlation	1	0.672
	Significance (2-tail)		0.000
	N	314	313
Self-described Body Size	Pearson Correlation	0.672	1
	Significance (2-tail)	0.000	
	N	313	316

Correlation is significant at or below the 0.01 level.

Analysis of Variance

BMI v. Body Size

N of responses

Mean BMI

Standard Deviation

Too thin	14	20.0076	1.99059
About right	186	23.0304	3.05630
Somewhat larger than I would like	105	28.7413	4.87240
Obese	8	38.5561	4.29211
Total	313	25.2078	5.18084

BMI v. Body Size

Sum of Squares

df

Mean Square

F

Significance

Between	3996.879	3	1332.293	94.043	.000
Within	4377.542	309	14.167		
Total	8374.421	312			

Correlation is significant at or below the 0.01 level.