THE EFFECT OF TELEVISION VIEWING ON
CHILDREN'S CONCEPTIONS ABOUT
NUTRITION AND HEALTH

by

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ABSTRACT

No one is born with an innate sense of what constitutes beauty, health or the ideal body shape; we learn and internalize cultural standards that dictate this image through the general process of socialization. On an annual basis, children spend more time in front of the television than any other activity except for sleep. Therefore, television presents to the child considerable information about how one should look, behave, succeed in life, and be popular. Television is also a major source of information about food and bodyweight. This thesis explores the relationship between television viewing and children's conceptions about food, their nutritional knowledge, and how healthy bodies are attained. A secondary content analysis examines nutritional messages and typical images that the average child sees on television today. The primary focus of the research is a survey administered to fourth and fifth grade children. The questionnaire ascertains the children's perceptions about good nutritional diets and healthy bodies.

The results of this research have implications for both the physical and emotional health of our children. Findings reveal that television viewing is significantly associated with inadequate nutritional practices among fourth and
fifth grade children. Additionally, the amount of television viewing and misconceptions about basic nutritional principles are positively related to several important variables for the children in this age group. Since the mass media appear to be a major factor in the socialization of children in regard to body images and self-concept, their role as promoters of constant dieting, obsession with weight, and obsession with preparing and eating food for emotional satisfaction deserves further study.
CHAPTER ONE

WHAT IS TELEVISION TEACHING OUR CHILDREN?

No one is born with an innate sense of what constitutes beauty, health or the ideal body shape; we learn and internalize cultural standards that influence this image through the general process of socialization. In conjunction with family and school, the mass media, particularly television, play a crucial role in socializing our children. Research shows that on an annual basis, children spend more time in front of the television than any other activity except for sleep (Dietz, 1990). Therefore, television presents to the child considerable information about how one should look, behave, succeed in life, be popular, and so forth.

Television as teacher--wishful thinking or a frightening thought? Communication scholars have long debated the socializing and teaching capabilities of the medium. Some theorize that as active viewers, we are cognizant of the choices we make about programming and thus are aware of its impact on us. For example, some proponents of the uses and gratifications perspective profess that people choose certain relaxing programming content to alleviate stress (Zillmann and Bryant, 1980). Other perspectives, such as
cultivation theory (Morgan & Signorielli, 1990), argue that television affects us in ways about which we are unaware.

Prior to the prevalence and pervasiveness of the mass media, children were socialized primarily through the family and the community (e.g., church, school etc.). Today, the basic structure of both the family and community has changed and no longer are they the only major influences that socialize our children. Now, with multi-television set homes the norm rather than the exception, children may receive more socializing messages from a mass medium than parents, school, church, community etc. (Signorielli, 1989).

An important conclusion of the 1972 Surgeon General's Committee on Television and Social Behavior focused upon the general learning effect associated with television viewing. Specifically, children can learn all types of things from television; nevertheless, without parental/adult mediation or age-specific, child-oriented programming, this learning is incidental and potentially harmful (Singer & Singer, 1983). Unfortunately, considerable research supports the notion that few parents make strong efforts to influence their children's television use (McLeod & Brown, 1976). In the absence of real life information, children may readily accept television's social information (Austin, Roberts, and Nass, 1990).

Austin et al. (1990) examined the role of parental influence on children's television-interpretation processes. They found that parents play a
two-fold role in the child's social construction of reality: (1) the parents help to shape the child's view of real life; and (2) through active discussion of content, the parents influence the child's perceptions about television content, which in turn influences the child's perceptions of reality. The evidence reveals, however, that barely half of parents report talking "often" to their children about television content (Austin et al., 1990). In light of the paucity of family discussion, this research strengthens the concerns of many scholars that television plays a major role as a socializing agent in our society.

The evidence supports the notion that television's influence is a factor in the child's construction of social reality (Hawkins & Pingree, 1982). Television also happens to be a major source of information about food and bodyweight. Joan Gussow, a nutritionist, believes that even parental knowledge about nutrition is gravely lacking and that all of us learn what to eat primarily through television advertising (Gussow, 1972). The research questions that I wish to address are ones concerned with the relationships among children's television viewing habits, their ideas about healthy bodies, and the associated nutritional knowledge and practices necessary to attain and maintain good health.

Specifically, this research project will examine the role that television plays in children's understanding of basic nutritional concepts. In addition, the study will explore the relationship between television and the child's personal
eating habits, his/her beliefs about the nutritional practices of other people, and the child's ability to differentiate healthy body types. Parental supervision and influence play a small part in the child's awareness and knowledge of good nutrition.

**Television's Nutritional Messages - The Impact on Children Socialization**

Socialization is often viewed as a process by which norms, attitudes, and behaviors are transmitted from the "socializing agent" to the "learner" (Churchill & Moschis, 1979). The processes by which a learner acquires information about values and behaviors can be divided into three categories—modeling, reinforcement, and social interaction. Modeling involves imitation, reinforcement involves either reward or punishment mechanisms, and social interaction often involves a combination of modeling and reinforcement (Churchill & Moschis, 1979).

Bandura and Walters (1963), among others, suggest that children acquire attitudes and behaviors by modeling these traits from media portrayals as well as other sources. The modeling process consists of five stages: first, the child observes the image or behavior; second, s/he identifies with that model. Third, the child realizes that this image is desirable and that rewards bring about positive results. Fourth, the child reproduces the modeled image/behavior which brings him/her satisfaction in some form. Finally, the behavior is reinforced and likely to be repeated (Tan, 1986; McQuail, 1988).
As stated earlier, children are among the heaviest viewers of television. The average child (under twelve) watches approximately three and one half hours of television per day (Signorielli, 1989). Thus, the medium provides numerous opportunities for presenting reinforced behaviors that could be modeled. The constant bombardment of the mass media's "ideal" images and messages are omnipresent throughout childhood (a time when the formulation of self-concept is crucial). Although the television world seems realistic, it presents a distorted and biased view about numerous issues such as increased violence, underrepresentation of women, and misconceptions about nutrition and healthy body images (Signorielli, 1989).

**Culitivation Theory**

Culitivation theory begins with the notion that television is our society's storyteller, telling the same stories to most of the people most of the time (Signorielli, 1989). Television is the source of the most widely shared set of messages and images in our history (Gerbner, Gross, Morgan, & Signorielli, 1986). It has become the primary common source of socialization and its mass produced images and messages "form the mainstream of a common symbolic environment" (Gerbner et al., 1986, p.18). Accordingly, television's chief function is enculturation, that is, to be a medium of the socialization of most people into their cultural roles and standardized behaviors (Gerbner & Gross, 1976).
The Cultural Indicator's research project is an ongoing study examining television programming and the conceptions of social reality that viewing cultivates in the audience. This project began over twenty years ago in response to the Surgeon General's Scientific Advisory Committee on Television and Social Behavior. The study of violence on television was an early focus of research, but since its inception, numerous other topics have been examined. For example, cultivation studies have been conducted exploring the role of women, minorities, and scientists (Morgan & Signorielli, 1990). Some seminal work has also been done in the area of health issues grounded in cultivation analysis (Gerbner, Morgan, & Signorielli, 1982). This thesis expands upon that research.

According to cultivation theorists, television serves primarily to extend and maintain the status quo rather than alter or weaken traditional beliefs and norms. Much like common rituals and mythologies, television's system of messages enables people to perceive as right and normal those behaviors, values, and beliefs which fit into the reigning social order (Gerbner & Gross, 1976).

Cultivation theory posits (and research supports) the notion that "living" in a television world cultivates ideas and concepts based on television "reality" rather than the viewers' own real life experiences (Morgan & Signorielli,
Cultivation research asks three interrelated questions (Morgan & Signorielli, 1990):

1. What are the processes, pressures, and constraints that influence and underlie the production of mass media content?

2. What are the dominant, aggregate patterns of images, messages, facts, values, and lessons expressed in media messages?

3. What is the independent contribution of these messages to audiences' conceptions of social reality.

The first question examines the institutional processes underlying the production of media content. The second question is addressed through content analysis of network dramatic programming to assess the most representative, and recurrent aggregate samples of messages that total communities are exposed to over a period of time (Gerbner, Gross, Morgan, & Signorielli, 1986).

The third question examines the relationships between television viewing and viewers' belief systems through a process called cultivation analysis. Cultivation analysis focuses on the effects of accumulated exposure to a general system of messages that cuts across the wide variety of programming on television. The images critical to cultivation analysis are not those of any individual program, but rather the overall images that pervade much of the total programming. Hence, even a light viewer cannot escape television's dominant messages over a period of time (Gerbner et al., 1986).
Cultivation theory asserts that television is unlike the other media. Because of its sheer pervasiveness and considerate amount of daily exposure, it is a force for enculturation rather than merely a source of entertainment and/or information. Television penetrates almost every single home in our country; it crosses all socioeconomic and class barriers as well as all age groups. It precedes literacy--most infants and preschoolers are exposed to television long before they read--and television serves as a constant companion for many of the elderly in their later years (Gerbner & Gross, 1976).

Television presents a sense of public identity, relevance and a sense of importance about what we do. It helps us to determine who we are and how we fit into the world; it influences our opinions, and shapes our behaviors (Morgan & Signorielli, 1990; National Institute of Mental Health report, 1982).

Our society, however, consists of many diverse subcultures, each with its own ideas, practices and beliefs. Yet there is one dominant set of values, beliefs, and behaviors that is not merely the total of the various subcultures. Rather, it is a general mainstream representing the most widely shared meanings and assumptions of our culture (Morgan & Signorielli, 1990). Television's omnipresence and dominant set of images can be seen as a manifestation of the mainstream of our culture (Morgan & Signorielli, 1990).

Cultivation theory takes this phenomenon into account through a process called mainstreaming. Mainstreaming means that heavy viewing may
override the belief patterns of the viewer's subculture. In other words, differences that are usually associated with varied social or political groups may be diminished as these groups are enculturated into the "reality" of the televised world. According to Signorielli and Morgan (1990): "through the process of mainstreaming, television has in essence become the true 20th century melting pot of the American people" (p. 23).

**Nutritional Messages**

According to a recent National Institute of Mental Health report, "Television and Behavior: Ten Years of Scientific Progress and Implications for the Eighties" (1982), televised messages in both advertising and programming are doing a disservice in educating people about health and nutrition, as well as providing inaccurate role models for good health practices. Granted, providing these services is not the goal of commercial television. Nevertheless, incidental learning from televised messages and portrayals may be contributing to unhealthy lifestyles (Gerbner, Morgan, & Signorielli, 1982). The updated report highlights research demonstrating that children who watch a lot of television have poorer nutritional habits than children who do not watch as much (National Institute for Mental Health report, 1982).

Several scholars (Dietz, 1990; Dietz & Gortmaker, 1985) have hypothesized a correlation between television viewing and eating disorders (obesity, anorexia, and bulimia). The preliminary results indicate a direct
relationship between heavy television viewing and the prevalence of obesity in children and adolescents (Dietz, 1990). Dietz offers two mechanisms that may explain this association. First, displacement may be a factor. The twenty hours a week that the child is sitting in front of the television could obviously be spent in more energetic activities. Second, television viewing is often associated with snacking.

Linkages of television viewing with anorexia and bulimia are less explicit due to lack of research and the difficulty of conducting such research. However, the available data suggest that the prevalence of these nutritional diseases may be related to the amount of television consumption and the media portrayals of females (Dietz, 1990). The recent increase of reported cases of bulimia and anorexia reflect the widespread preoccupation with weight and eating among children and adolescents. For example, 80% of ten-year old girls reported that they were currently on a diet to lose weight and 50% feared that they were becoming fat and had engaged in binge eating (Dietz, 1990).

Advertising

Research evidence suggests that children’s preferences for food are influenced by advertising. The majority of televised advertisements are for nonnutritious foods, and the consumption of these heavily advertised products may have a negative effect on the nutritional well being of the child. As a result, a large amount of the criticism concerning messages aimed at children has
been leveled at the advertising industry. The typical child will see between 22,000 and 40,000 commercial messages a year, and well over half of these commercials are for edible products (Condry, Bence, & Scheibe, 1988).

Recent research has explored the concept of children's cognitive defenses. This concept is defined as children's understanding of the persuasive selling techniques of advertising and the associated distrust of the commercials (Brucks, Armstrong, & Goldberg, 1988). This stream of research assumes that because children have cognitive defenses, they will use them. In contrast, Brucks et al., (1988) found that unless a direct question (used as a cue) concerning knowledge about advertising and its tactics was posed to the child (in this case, 9 and 10 year old children), advertising knowledge was not activated. Therefore, one can assume that children's actual use of cognitive defenses has been overestimated.

In the past twenty years, criticism has focused on the potentially harmful health and nutritional effects that the plethora of advertisements for heavily sugared cereals and sweets have on the young viewer. For example, Barcus (1971) found that 67% of the children's program commercials were for sugared cereals, candy, and other sweets. These commercials stress the fun and positive attributes associated with food.

According to research compiled by Signorelli (1988), non-nutritious foods dominate both the children's programming and advertising. The findings
also revealed that seven out of ten children thought that (1) fast foods were more nutritious than foods prepared at home; and (2) to maintain good health, children should take advertised medicine, eat fast foods, take vitamins and drink Coke. Clearly, these children may see the televised world as realistic and one to be modeled.

Goldberg, Gorn, and Gibson (1978) examined the relationship between broadcast food messages and children's preferences for snack and breakfast foods. Those children who had viewed pronutrition Public Service Announcements (PSAs) chose more vegetables, fruits, and other healthy food; those who had viewed commercials for highly sugared foods opted for the sugared snacks. Further studies conducted by Goldberg and Gorn (1982) supported the earlier research and expanded upon the long term effects of pronutrition PSAs. In addition, their research revealed that in order for PSAs to be effective, they must be professionally produced with jingles, emotional appeals, and other advertising tactics that capture the attention of the child. Also, results indicate that children should receive daily exposure to the PSAs for maximum benefit. The study confirms that children basically know what they should eat, but their behavior is affected by a variety of reasons--one of which is the number and type of commercials they see in a given day.

The link between eating heavily sugared cereals, too many sweets, snacking in general and the increase of nutritional diseases such as dental
caries and obesity has been confirmed by a considerable body of research. Dental research, for example, has shown a positive correlation between the frequency of eating sweet carbohydrate or snack foods and the increase of decayed, missing, and filled teeth (DMFT) in 143 adolescents (Clancy, Bibby, Goldberg, Ripa, & Barenie, 1977). The same study found a negative correlation between eating apples and drinking fruit juice and DMFT increments. There was an inverse relationship between children’s development of caries and parents’ educational level and social class (Clancy et al., 1977). The nonnutritional advertising on television could possibly be a factor in the increased incidence of caries, especially among the lower socioeconomic groups who tend to be heavy viewers.

The effectiveness of health disclosures within children’s television commercials was the topic for a study conducted by Faber, Meyer, and Miller in 1984. The results revealed that the majority of children were able to recall and understand the disclosures. The most consistent finding was that children over eight years old were pronouncedly more affected by the pronutritional messages than were the younger children.

Faber et al. hypothesized that the preoperational young child did not have the cognitive abilities to understand fully the disclosures. The study simply looked at short-term recall and understanding; it did not explore the link between learning and behavior change. In summary, the authors conclude that
short disclosures placed at the end of the commercial can be recalled and understood by most children, even very young ones.

Another interesting finding of this research was that recall was greatest when a mild fear appeal was used in the disclosure. The fear level was low enough to increase attention, but not high enough to cause the child to attend only to the fear and not the message. Goldberg, Gorn and Gibson (1978) also found that mild fear appeals in a Fat Albert television program on the consequences of eating too much junk food influenced the child's eating patterns.

Subsequent research examined the impact of pronutritional messages on television. A study conducted by Peterson, Balfour, Bridgwater and Dawson (1984) explored the effects of pronutrition programming on kindergarten-age children's nutrition knowledge, food preferences, and eating habits. Effects were measured using recall, information, preference, and behavior assessments. The results indicate that children learned the nutrition concepts, but failed to change their behavior. Even though the children did not change their behavior, the results are encouraging in that they show that television can be a viable medium for teaching healthy nutritional concepts.

Wiman and Newman's (1989) study of children's nutritional awareness and television advertising exposure revealed that adult commentary on commercial messages after they have been viewed by children enhances
nutritional comprehension. Additional findings of this study support the notion that exposure to child-oriented television advertising is associated with lower scores on nutritional knowledge (1989). Several studies conducted by Roberts and his colleagues (Roberts & Bachen, 1978; Roberts, Gibson, & Bachen, 1979) showed that pronutrition messages can have an impact upon the child's food preferences as well as nutritional knowledge. These studies revealed that children who viewed pronutrition PSAs had higher scores on a nutritional knowledge test than children who did not. Further research should examine the possible links between learning prosocial concepts and changing consumptive behavior.

Bolton (1983) addressed the question concerning the long-term effects of television food advertising on children's diets. Previous research had indicated that food advertising affected children's preferences in the short term (Goldberg, Gorn, & Gibson, 1978). In contrast, Bolton (1983) looked at the long-term effects taking the advertisements, parental influence, and children's characteristics into account as possible influences on children's diets. The study found a small but significant long-term effect of television food advertising and the child's nutritional status. This influence is likely to be harmful to children whose nutritional intake is severely compromised anyway. These may be children from families with limited budgets, limited knowledge of nutrition, limited parental supervision (due to a variety of reasons), etc. This is especially
crucial because it is often these very children who watch large amounts of television and thus are exposed to numerous nonnutritional messages.

That food choices affect nutritional status and advertising influences food choices is common knowledge. The mass media, in particular magazines and television, emphasize nonnutritious messages. Today there are fewer messages about general health and nutrition in the print media than there were in the first half of this century (Barr, 1989). Moreover, this trend toward advertising nonnutritious foods has continued since the introduction of television.

Communication scholars have examined the relationship between television food advertising and purchasing behaviors. A direct positive relationship was found between frequency of snacking behaviors and the purchase and consumption of heavily advertised snack foods (Clancy-Hepburn, Hickey, & Nevill, 1974). Galst and White (1976) found that children's purchase-influencing attempts at the supermarket were positively related to the amount of television viewing at home. Sugared cereals and candy were the most heavily requested items. Of all purchase-influencing attempts, 68% were for sweetened cereals.

A content analysis of letters written to the Federal Trade Commission concerning television advertising to children was conducted by Ward (1984). The data showed that 42% of the letter writers supported the ban of television
commercials for heavily sugared foods, 10% supported a total ban of advertising directed at children, and 13% thought that the FTC should take no action at all. Most of the writers that supported either the partial or total ban gave the concern for the children's health and nutrition as their reason.

Ward concedes that this sample was far from a true reflection of the total population; thus, the results are not generalizable to the public. Most letter writers have strong opinions about their subjects and tend to be more highly educated. Accordingly, Ward proposes that further research be conducted using a survey of a nationally representative sample of consumers.

In response to Ward's content analysis, Peggy Charren (president of Action for Children's Television) noted that while this research is worthwhile and laudable, it neglects to inform the people that the airwaves belong to the public and that the broadcast industry is bound to serve the best interests of this public. Charren called for data that measure the awareness of the general population of their fundamental rights as beneficiaries of this public trust (August & Charren, 1984).

Most recently, the American Academy of Pediatrics, proposed that food advertisements aimed at children should be banned from television because they promote profit-making rather than healthful eating (July 23, 1991). According to Dr. William Dietz, author of the academy's statement, the pediatric
community believes that parental control of the television set should be increased as well as a total ban of food commercials be put in effect.

Television and Eating Disorders

Dietz and Gortmaker (1985) found that for 12-17 year old adolescents, the prevalence of obesity increased by 2% for each additional hour of television viewing. Although a common belief is that advertising is the main culprit for nonnutritious food references, Dietz's study found nonnutritional messages even more often in prime time programming. Prime time, moreover, is when elementary school age children do most of their television viewing (Wartella, Alexander, & Lemish, 1979).

The research conducted by Dietz and Gortmaker (1985) utilized both cross-sectional and longitudinal studies. They analyzed data for samples of children (ages 6 to 11) and adolescents (ages 12 to 17) who took part in two National Health Examination Surveys. The sample exceeded 13,000 respondents and the researchers found a significant positive relationship between television viewing and obesity and superobesity (using the triceps skinfold measures). This relationship remained significant while simultaneously controlling for variables that are known risk factors affecting obesity such as socioeconomic class, prior obesity, region, parental obesity, season, race etc.. In their analysis, only prior obesity had a larger independent effect than television viewing did on the prevalence of obesity.
This analysis also revealed a dose-response effect of television viewing times and the prevalence of obesity. For adolescents, each hourly increment of television viewing was associated with a 2% increase in prevalence (Dietz & Gortmaker, 1985). There were no significant differences between obese and nonobese children as regards to their ability to get along with friends, the number of friends, time spent with friends, time spent alone, and time spent in other leisure activities such as listening to the radio or reading. The authors suggest that the lack of differences between obese and nonobese children (save the amount of television viewing) rules out the probability that obese children are lonely and therefore spend more time watching television.

Dietz and Gortmaker (1985) concluded that only prior obesity had a larger independent effect than television viewing for the prevalence of obesity in the 6-17 age group. Because of the social stigmatization associated with obesity, the implications for such a strong relationship between television viewing and this eating disorder are chilling. Dietz and Gortmaker (1985) suggest that a reduction in viewing time, reduced consumption of advertised foods, and reduced snacking while viewing may intervene in the treatment and prevention of childhood obesity.

Under some conditions, television food commercials stimulate eating in obese subjects (Falciglia & Gussow, 1980). The researchers suggest that food advertisements may be powerful environmental cues affecting eating
behavior of children. Their findings showed that obese subjects were clearly more responsive to televised food commercials as an eating cue than were normal weight subjects. Stunkard and Wadden (1990) examined the "external" theory of the origins of human obesity. This theory became popular in the 1960's and essentially states that obese people have an unusually high susceptibility to food cues in the environment. Given the pervasiveness of television and its advertising for highly caloric, nonnutritious foods, this could be a contributing factor for excessive caloric intake for obese children.

Silverstein, Perdue, Peterson, and Kelly (1986) conducted a content analysis that examined the presentations of male and female body images in the print media. The results provide strong support for the hypothesis that women receive more messages to get slim and stay that way than do men. At the same time, women receive many more conflicting messages about the joys of preparing and eating food. The total number of food advertisementss for the women's four magazines examined in this research was 1,179, compared to a total of 10 in the men's four magazines. The implicit message that we are sending to young girls and women is to stay in shape and diet, but simultaneously think about, prepare, and enjoy food. These images send contradictory messages to the children at a time when development of self-concepts about their body image is critical.
Dietz (1990) explored the relationship between the prevalence of food (and the social, fun aspects associated with eating) on television and the "ideal" body images that a child perceives in advertising and programming. Specifically, the explicit message children receive from pervasive television images is that they should eat all that they want (especially sweets) and have fun eating. The implicit message, based on the lack of fatness in female screen characters, is that they will never become fat. Consequently, Dietz believes that in this respect the only answer for the adolescent is bulimia, because only a bulimic can eat all the food she wants and not gain weight.

Kaufman's (1980) examination of prime time nutrition offers essentially the same argument as Dietz, except that she concentrates solely on obesity. Her research also reveals that television characters were usually happy while in the presence of food and often snacked. Kaufman concludes that television characters ate on the go, rarely ate to satisfy hunger, snacked between meals and used food primarily to satisfy emotional and social needs. Overall, the patterns of food choice and eating practices on television are "patterns usually associated in real life with problems in weight control and nutrition" (Kaufman, 1980, p. 45). Once again, television is found to present to the viewers two conflicting viewpoints. One "suggests that we eat in ways almost guaranteed to make us fat; the other suggests that we strive to remain slim" (Kaufman, 1980, p. 45).
Tucker (1986) offered a cogent argument to explain his findings that the physical fitness of high school students was partially a function of the amount of television that they watched. He posited that the relationship depends on a combination of passivity (more viewing time means less time for physical activity) and selection (as physical activity declines, physical fitness declines and the attraction to passive activity increases). Thus, television watching and poor physical fitness enter into a downward cycle. Tucker proposed that for purposes of good physical fitness, television viewing should be limited to one hour per day.

Recent research directed by Gold and Hei (1990) showed that children who watch two hours of television a day are at significantly more risk for having high cholesterol levels. Moreover, the risk climbs the more they watch. Children watching television four hours a day (close to the average viewing time for a child today) are four times as likely to have high cholesterol than children who watch for less than two hours. Gold and Hei posit that the basic message is that if you cannot limit the amount of television that your child watches, you should get them to increase their exercise and practice good nutritional eating habits.

At present, approximately one in five adult Americans, or thirty four million people, are obese (as defined as twenty percent or more above the desired weights reported in the Metropolitan Life Insurance Company tables)
(Manson, Colditz, Meir, Stampfer, Willett, Rosner, Monson, Speizer, & Hennekens, 1990). The data from the researchers' study demonstrate a strong positive association between obesity and the risk of coronary heart disease and women. Even a mild-to-moderate overweight is associated with a substantial increase in coronary risk.

Studies of relative weight and coronary disease risks in men have yielded conflicting results. Members of the medical community are once again questioning the wisdom of the relaxation of the standards of desirable weight for people in light of these recent findings. (VanItalie, 1990). Any link between obesity and television viewing is increasingly alarming when one realizes the severe consequences of obesity.

**Body Images**

The research confirms that there are gender based stereotypes of body images (Cash & Brown, 1989). Females hold consistently more negative views about their bodies than do males, and these body images are considerably more distorted than the males' images. Women were twice as likely as men to rate themselves as overweight, even when in reality the women were normal weight and the men were overweight (Cash & Brown, 1989). The fear of becoming fat is more strongly socialized in females in our culture, and television and the print media emphasize women's physical appearance to a greater extent than it does men.
A recurring theme in the growing body of literature on eating disorders is the relationship between slim standards of bodily attractiveness for women and body dissatisfaction, which leads to subsequent dieting, binging, and other eating problems (Silverstein & Perdue, 1988). For the last two decades, the standard of bodily attractiveness has reverted to the slim standards of the 1920's. Therefore, women who wish to adhere to this extreme standard must diet frequently to become or remain slim. Silverstein and Perdue assert that in the 1920's, the only other time that models were as noncurvaceous as they are now, an epidemic of eating disorders appeared among young women.

Silverstein, Perdue, Peterson, and Kelly (1986) presented data that support the hypothesis that the prevalent slim standard of body images of women on television may lead to eating disorders. Their findings demonstrated that the mass media promote a slimmer, more weight conscious standard for women than for men, and that the standard of bodily attractiveness is slimmer now than it has been in the past.

When comparing weight ratings between male and female characters on television, they found that 67% of the women were rated as thin compared to only 17% of the male characters. Only 5% of the females were rated as heavy compared to 25% of the males (Silverstein et al., 1986). These percentages do not accurately reflect the percentages of obesity in our society.
but they often are perceived as realistic, especially to children. This presents conflicting viewpoints: men can be heavy, but women cannot.

A study conducted by Ogletree, Williams, Raffeld, Mason, and Fricke (1990) revealed that children's advertisements generally reinforce the gender status quo--there is much greater emphasis for physical attractiveness for girls compared to boys. The results showed support for the hypothesis that children's commercials (with their emphasis on food and female attractiveness) may be one factor in the differential rate of eating disorders in males and females. Their study focused more on the importance of appearance for the females rather than the emphasis on food in these commercials.

Blyth, Simmons, and Zakin (1985) conducted research exploring the factors involved with body image for early adolescent females. Essentially, they assert that girls evaluate their physical appearance by three ways: 1) the way her peers react to her, 2) the way she compares herself to others in her immediate environment, and 3) a comparison to cultural ideals. The authors claim that television, with its consistently portrayed prepubertal female image, plays a key role in this "cultural ideal" comparison. They also state that the clearest, single finding in their research is that the cultural ideal of thinness is strong and pervasive.

Obesity affects over one-third of our population, yet it is underrepresented on television (Tucker, 1986). In a content analysis conducted
by Gerbner, Gross, Morgan and Signorielli (1988) only 6% of the 806 television characters in one sample week of primetime programming were obese and not one of these overweight characters were children. Television characters rarely eat a balanced meal or even pay attention to what they eat. Kaufman's (1980) study showed that of the 537 prime time characters that she examined, not one child, teenager, or young adult was obese. Another study showed that no leading characters were obese and less than 2% of all female characters were obese (Tucker, 1986). Prime time nutrition presents anything but a balanced diet and a true representation of body types.

This "ideal thin" female body image is not limited to television. Both television and magazines are pervaded by advertisements that promote formulas and devices to reshape the body boundaries (Spitzack, 1990). Erving Goffman's *Gender Advertisements* (1979) asserts that relative size is one way in which power and authority are expressed. Female models in print advertisements are exceedingly thin and yet these women are the role models for young girls. Body images are closely linked with self-concept and since youngsters are in the midst of developing this self awareness, the nonverbal messages they receive from the media should have a heavy impact on their resultant self-concept. The fact that women ritually inhibit their appetites and reduce their bodily dimensions mean that they literally take up less space than before and, as always, less space than men (Caputi, 1983).
In summary, the literature review presented here shows that children today receive many messages from the mass media concerning nutrition, eating practices, and body types. The majority of these messages do not reflect the eating habits necessary for the nutritional health and optimal growth for the child nor do the images represent the typical and/or healthiest body types. Additionally, research shows that children are watching more television now than ever. The combination of these factors strongly suggests that more research needs to be conducted to explore any consequences that constantly being exposed to these misconceived messages and images has on the health and well-being of the child.

Research Questions

The research questions that I wish to address are ones concerned with the relationships among children's television viewing habits, their ideas about healthy bodies, and the associated nutritional knowledge and practices necessary to attain and maintain good health. From a cultivation viewpoint, I suggest that the more time children spend "living" in the television world, the more skewed their conceptions will be about healthy body images, and the more distorted will be their comprehension on how to get and stay nutritiously sound. Thus, children who reportedly spend much of their free time watching television will more likely give the "television" answers to questions about
nutrition. Heavy television viewing will be related to a view of the world that is misrepresentative of typical body images and nutritionally inadequate.

Past research has shown that television viewing is associated with nutritionally poor eating habits (National Institute for Mental Health Report, 1982). Television viewing is also often associated with snacking. Additionally, research has shown that the majority of television advertisements for children are for food, mostly sugared cereal and candy (Barcus, 1971; Condry, Bence, & Scheibe, 1988). Goldberg, Gorn, and Gibson's (1978) line of research showed that the children who watched advertisements for sugary snacks chose those types of snacks more often than children who watched advertisements for healthy snacks. In light of these (among others) findings, this thesis research sought to support the hypothesis that there is a relationship between watching television and exhibiting poor nutritional eating practices.

Wiman and Newman's (1989) research found that exposure to advertising targeted to children is associated with lower scores on nutritional knowledge tests. Signorielli (1988) compiled research findings that revealed that the majority of the television viewing respondents held misconceptions about basic nutritional knowledge such as the relative nutritional worth of fast foods and snacks. My thesis research explored the hypothesis that there is an inverse relationship between television viewing and nutritional knowledge.
The stream of research conducted by the cultivation theorists proposes that "living" in the television world cultivates notions and concepts based on television reality rather than the viewers' own real life experiences (Morgan & Signorielli, 1990). The present study examined children's beliefs about the nutritional habits of most other people. I am proposing that the majority of children will believe that the nonnutritious eating behaviors reflected on television correspond to the eating behaviors of most people (even when the particular behavior is not practiced by the child). My hypothesis is that there is a relationship between television viewing and the child's belief in the "television version of most people's nutritional habits."

Finally, Silverstein, Perdue, Peterson and Kelly's (1986) line of research asserts that the prevalent slim standard of bodily attractiveness in the mass media is promoted more heavily for women than men and is slimmer now than it has been in the past. These findings, among others, form the basis for my exploration into the relationship between television viewing and children's ideas about healthy bodies--what they are and how to attain and maintain them. I believe that the heavy viewers (especially the females because of their more distorted televised images) will wish to attain and maintain a slimmer body than is nutritionally healthy. For example, they will more likely choose the slimmest body as healthiest and most desirable even though that image reflects a body that is almost anorexic.
In light of the evidence from the previous research, four hypotheses are tested:

**Hypothesis One:** Television viewing is positively related to nutritionally poor eating practices.

**Hypothesis Two:** Television viewing is negatively related to nutritional knowledge.

**Hypothesis Three:** Television viewing is positively related to children's misconceptions about the nutritional habits of most people.

**Hypothesis Four:** Television viewing is positively related to misconceptions about which body types are healthy.
Studies testing hypotheses related to cultivation theory typically consist of two methods of research. First, a content or message system analysis is completed to assess the televised images and messages related to the area under examination. This step establishes the composition and structure of the symbolic television world (Gerbner & Gross, 1976). Second, a survey is administered to gather data on viewer beliefs, opinions, attitudes, behaviors, and/or viewing habits.

The survey asks questions about basic assumptions concerning the subject's values, beliefs, and norms in relation to the area of inquiry. These questions typically have a "television" answer, that is, the way things appear to be in the television world, and an answer that corresponds more to reality. In order to make it more readily apparent to the reader, all television answers are in bold print in this document. The survey also asks questions related to demographics of the respondents and television viewing times. All responses are examined in relation to television exposure time and other demographics.
Additionally, all responses are analyzed separately for four subgroups--boys, girls, whites, and minorities. The rationale for the subgroup analysis is twofold. First, as noted earlier, girls receive many more conflicting messages about food and body types than do boys; thus, a separate analysis could be significant and heuristic. Second, past cultivation analysis research has utilized such subgroups and found significant differences between the groups. The present study seeks to support, clarify and further this past research.

This research examined the relationships among television viewing and children's conceptions about nutrition, body types and how such body types are attained and maintained. The research involved two steps. First, the secondary analysis of existing content data from the Data Archives of the Cultural Indicators Project isolated the images relating to weight on television. Second, a survey was administered to a sample of children to ascertain their perceptions about good nutritional diets and healthy bodies. The results of the survey are the primary focus of the research.

A secondary content analysis was conducted on a data set collected as part of the Cultural Indicators Project (Gerbner, Gross, Morgan, and Signorielli, 1986). This analysis examined the bodyweight of characters on television. The sample consisted of four weeks of network dramatic program (including cartoons, situation comedies, and action adventure shows)
transmitted in evening prime time hours (8 to 11 P.M. each day) and weekend daytime hours (Saturday and Sunday between 7 A.M. and 2 P.M.) between 1984 and 1987.

The forty-five question survey was group-administered to fourth and fifth grade children. The sample consisted of 209 students in four Baltimore (Md.) County elementary public schools. Geographically, Baltimore County is a large area with five separate, diverse school districts (the sampled schools represented four of the five areas); this sampling procedure provided a good socioeconomic mix of respondents. The questionnaires were completed by the children in late January and early February, 1991, during classroom time. Under my supervision each question was read aloud to the children; the surveys took about a half hour to complete.

The sample was almost equally divided into fourth (47.4%) and fifth (52.6%) graders. There were considerably more female (60.3%) respondents than male (39.7%) in the sample. A possible explanation for this is that the children had to bring home and return a parental permission slip in order to take part in the survey. At this age, the girls may have been more likely than the boys to give the permission slips to their parents as well as return them to the teacher. The sample had a reasonable racial distribution: 78.7% were Caucasian and 21.3% were members of minority races.
The survey included questions that assessed the child's understanding of what foods constitute a nutritional diet, television viewing habits, demographics including their own height and weight, a rank ordering of where the children learned about healthy bodies and nutrition (e.g., school, home, television, books, peers, etc.), and the child's eating practices (see Appendix 1).

In addition, the survey contained composite drawings of different body types ranging from emaciated to obese (see Appendix 2). The respondents were instructed to label the body type that s/he perceived as healthiest and also the one that the child found most desirable and wished to attain. The answers were coded to indicate whether the response reflected the mass media female image or the body type that corresponded to the growth charts for children compiled by the National Center for Health Statistics in collaboration with the Center for Disease Control (1986).

The child's personal eating habits were ascertained through questions about what food and drinks constitute their typical snacks. Questions concerning the frequency of the consumption of sugared cereal for breakfast were addressed. The children were also asked to provide information about how often they snacked during each day. In addition, questions were asked about television viewing while eating and while snacking and general questions assessing the attitudes and values placed on food such as "Do you
eat when you are not hungry?" and "Do you eat when you are sad because you think it might make you feel better?"

One section of the survey sought to ascertain the relative nutritional worth of the eating practices of the child. Five questions were related to poor nutritional practices and the responses to these queries combined together to comprise an internally consistent additive index—the Bad Eating Habits Index (Cronbach's alpha = .66). This index was used to test the first hypothesis (television viewing is positively related to poor eating practices). The questions (television answers are in boldface print) were as follows:

1. How often do you eat sugared cereal for breakfast?
   a. only on weekends
   b. once or twice a week
   c. 3-4 times a week
   d. every day
   e. never

2. How often each week do you eat at a fast food restaurant (like McDonald's, Wendy's, Burger King etc.)?
   a. never
   b. 1-2 times
   c. 3-4 times
   d. 5 or more times

3. How often do you eat a snack each day?
   a. hardly ever
   b. 1-2 times
   c. 3-4 times
   d. 5 or more times
4) How likely are you to eat chips, cookies, candy, cupcakes, or fruit rollups (e.g., funfruits) for snacks?
   a. very likely
   b. somewhat likely
   c. likely
   d. not very likely
   e. not likely at all

5. During the day how likely are you to drink KoolAid, sodas, Hawaiian Punch, HiC, or Sipups when you are thirsty?
   a. very likely
   b. somewhat likely
   c. likely
   d. not very likely
   e. not likely at all

Several questions in the survey were concerned with basic nutritional concepts and notions about a balanced diet. These questions assessed the child's ability to define and give an example of a good nutritious breakfast as well as determine whether the child believed that a meal prepared at a fast food restaurant was as nutritious as a meal cooked at home. The questions concerning nutritional concepts were used to test the second hypothesis (television viewing is negatively related to nutritional knowledge). These questions were analyzed separately as they did not combine into an internally consistent index. The three questions focusing upon nutritional knowledge were as follows:

1. A "nutritious" breakfast is:
   a. a healthy meal that you should start your day with
   b. always a very big meal
   c. a meal that only tastes good
2. Which of the following is the best example of a nutritious breakfast?
   a. a glass of orange juice and a bowl of cereal with milk
   b.  three pancakes and three pieces of cinnamon toast
   c. a glass of apple juice and two pieces of toast

3. A meal at a fast food restaurant is as nutritious as a meal prepared at home.
   a. not likely at all
   b. not very likely
   c. likely
   d. somewhat likely
   e. very likely

A set of questions was developed that specifically assessed the children's ideas about what "most people do" and then looked at the relationship between these responses and television viewing times. The analysis of the responses to these questions were then used to test the third hypothesis (television viewing is positively related to children's misconceptions about the nutritional habits of most people). The rationale behind this is that cultivation theorists purport that children who watch a lot of television may believe that the behavior exhibited by people on television accurately reflects the behavior of people in reality (even if this television behavior conflicts with their own experiences in real life). Past research has determined that this first premise is not always so (television and real life experiences are not one and the same) e.g., the exaggerated number of violent crimes on television, the underrepresentation of women and minorities etc.
The seven statements used to assess the child's understanding about what most people do reflect nutritional practices commonly seen on both commercial and entertainment programming. The responses were recorded on five point Likert scales ranging from "very likely" to "not likely at all." The "television" answers for these statements were "likely," "somewhat likely," and "very likely." These questions did not combine into an internally consistent index so they were analyzed separately. The following seven statements represent the nutritional behaviors commonly presented on television:

1. Most people eat many of their meals on the run.
2. Most people can frequently snack on potato chips, candy, pretzels, etc. and not get fat.
3. Most children eat sugared, cold cereal for breakfast.
4. Most people can eat snack foods often during the day and still have a healthy diet.
5. Most people eat standing up.
6. Most people have fun while they are eating
7. Most people eat even when they are not hungry.

Viewing Measures

The exposure to televised messages was measured through a series of questions about the amount of television viewing on weekdays between the time the child gets home from school until dinner and the time the child watched between dinner and bedtime. The sum of the weekday viewing
periods provided sufficient material to estimate an average daily viewing time for each respondent.

**Control Variables**

A number of control variables were used throughout the study. They included gender, race, reading level, the occupational status of the parents, and the educational level of the parents. As stated earlier, the sample was separately analyzed for four subgroups--boys, girls, whites, and minorities. Past cultivation analysis research has utilized such subgroups and found significant differences between the groups and this study seeks to clarify and further this past research.

The children were asked if they were a boy or girl (one respondent did not answer), and to check off their racial group (white, Asian, African American, native American, Hispanic, or other). These groups were recommended by the Baltimore County Department of Education. For the purposes of data analysis, the groups were subsequently collapsed into two classifications, whites and nonwhites.

The children were asked open ended questions (What is your mom's occupation or job? and What is your dad's occupation or job?) to determine the occupational status of their parents. These answers were eventually recoded into three categories--professional, white collar, and blue collar. Approximately 26% of the mothers held professional positions, 16%
worked in white collar occupations, and 22% held blue collar jobs. For the fathers, about 19% held professional positions, 26% worked in white collar areas, and 26% held blue collar jobs. A large percentage of the children did not know what their parents did for a living (36% for the mothers and 29% for the fathers). Then, the combination of the mother's occupational status and the father's occupational status were combined to form a new variable with seven degrees of occupational status ranging from two parents working in blue collar jobs to both parents with professional occupations.

In order to determine the educational levels of the parents, the children were asked whether or not their mother attended college and the same for their father. Again, a scale was devised that ranged from (1) neither parent attended college, (2) one parent attended college, or (3) both parents went to college. The frequency distribution showed that 67.3% of the mothers attended college, 19.4% of them did not, and 13.3% of the respondents reported that they did not know whether or not their mother went to college. For the fathers, 66.8% of them attended college, 13.3% of them did not and 19.9% of the children did not know if their father attended college.

The reading level of the child was ascertained in the first question of the survey--"Which reader did you last use or are now using?" The children were given the choice of six readers utilized in the Baltimore County Public School System reflecting reading abilities ranging from the first semester of
third grade (3.1) to the second semester of sixth grade (6.2). This range was suggested by the reading specialist for Baltimore County to accurately cover the abilities of the majority of fourth and fifth graders.

One problem arose, however, from the operationalization of this variable. Midyear, most of the Baltimore County Elementary Schools switched to a new system for placing the children into reading groups. Unfortunately, the new system was not conducive to assessing the child's reading abilities outside of the classroom because most of the children read the same book, but analyzed the contents at different levels. To counteract this and not lose the variable, I added the clause "which reader did you last use?" and also added a seventh choice for the respondents to fill in their own answer. Many of the children (42.7%) were reading in the range of the fifth grade level, while 18% read at the sixth grade level, and approximately 4% of the respondents read at the fourth grade level. Many (35.5%) of the respondents did not answer this question. Only one child reported reading below grade level.

Data Analysis

The four hypotheses were tested by examining the children's overall responses to the questions as well as the relationship between television viewing and the responses to the relevant questions. Two methods were used. First, calculating zero-, first-, and fifth-order partial correlation coefficients, controlling for sex, race, gender, reading level (below grade, at grade, or above
grade level), the child's report on the level of parental education (one parent
had attended college, both had attended college, or no college for either
parent), and the child's report on the occupational status of the parent
(subsequently coded into three categories--blue collar (low), white collar
(medium), or professional (high)). Second, a stepwise regression analysis was
conducted for each of the dependent variables, including the control variables
mentioned above. The correlations and the regression analyses were then
calculated separately for girls, boys, whites, and minorities.

In the next section, I will examine the basic parameters of the
sample: the demographic information, viewing habits, and the questions relating
to where the children get their information about nutrition and health. The
research questions are examined individually and the data analyzed to show
either support or refutation of the hypotheses. The first hypothesis will be
examined to ascertain the existence and strength of a positive relationship
between viewing television and exhibiting poor eating behaviors. Second, I will
look at the hypothesis that suggests there is a negative relationship between
television viewing and nutritional knowledge. Next, I will analyze the data to
determine whether or not there is a relationship between television viewing and
children's misconceptions about the nutritional practices of most people.
Finally, I will determine whether or not there is a relationship between television
and misconceptions about which body types are healthy and desirous.
Essentially, the secondary data analysis substantiates results of previous analyses. Only 6% of the 806 prime time characters on television were labeled overweight and not one of these characters was a child. The research also examined children's weekend programming and found that of the 469 characters only 23 were overweight with only two of these being children. This misrepresentation of television obesity in children clearly does not even come close to approximating the prevalence of childhood obesity in real life.

As stated earlier, the sample was almost evenly divided with slightly more fifth graders (52.6%) than fourth graders (46.9%). Approximately three quarters of the respondents were white and there were considerably more girls (60.3%) than boys (39.7). Nearly all of the children were reading at or above grade level. Both parents attended college for the majority of the children and one quarter of the parents held professional positions, one quarter held blue collar jobs, and about one fifth of the parents had white collar occupations—the remaining responses could not be coded accurately. Slightly more than one
half (53.6%) of the children were ten years old; 26% said they were nine and almost 17% were eleven years old.

Overall, the children watched 2.7 hours of television each weekday, mostly between dinner and going to bed. The boys and girls watched about the same amount each day (boys watched 2.64 hours and girls watched 2.76 hours each day). The nonwhite children, however, watched considerably more television each day than the white children: the white children viewed 2.58 hours each day compared to 3.20 hours each day for the nonwhite children (t=2.55, df=204, p<.01).

Almost half (48.8%) of the boys reported television as a source of information about what kinds of food they should eat (28.0% said that sometimes they received information about food from television and 20.8% said that they often or always turned to television to learn about what foods to eat). Approximately one-third of the girls reported that they sometimes receive information about what kinds of food to eat from television and 20.2% said they often or always got this information from television.

More girls than boys reported that they got most of their information about how to get and keep a healthy body from television. Overall, 55.6% of the girls cited television as the source (34.1% said sometimes and 21.5% said they often or always got information about their bodies from television). In comparison, overall, 50% of the boys cited television as a source for healthy
body information (31.7% reporting sometimes and 18.3% said often or always television gives them most of their information about how to get and keep a healthy body). In light of the numbers of children who report that they get most of their information about what kinds of food to eat in order to get and keep a healthy body, the misrepresentation of obesity and the nonnutritious messages on television become critical issues. Obesity is virtually nonexistent on television, yet the nutritious messages on television promote an eating lifestyle that could lead to childhood and adolescent obesity.

Television and Children's Nutritional Habits

Inadequate nutritional intake can lead to a host of severe problems for children, including diseases and eating disorders. Too often, the cause of inadequate nutrients can be traced to poor eating habits rather than a malfunction in the person’s digestive system or some other medically based problem. Several scholars have examined television’s role in the promotion of unhealthy eating practices and the exploration of this relationship was of critical importance in the present study.

Although 84.8% of the respondents said they ate breakfast every day, only 31.7% of them said they ate cold, sugared cereal for breakfast more than twice a week. Almost three quarters of the children reported eating at a fast food restaurant 1-2 times per week or more. Most of the children (59.7%) claimed to snack 1-2 times each day, while 33.6% responded that they had
three or more snacks each day. A majority of the children (77.3%) stated that they were likely to eat the nutritious snacks listed in one question and 66.8% admitted to eating "junk foods" for snacks. More than half (61.6%) of the respondents drank sodas and sugary soft drinks when thirsty while 92.4% reported that they usually drank fruit juices and/or milk to satisfy their thirst.

The five questions (listed in the methodology section) related to poor eating practices were combined into an internally consistent additive index (Index of Bad Eating Habits). Scores on the Index of Bad Eating Habits ranged from a low score of three (excellent eating habits) to a high score of twenty-one (very poor eating habits), with an average of 11.6. The boys had significantly higher scores (denoting poorer eating practices) than the girls did (t=2.38, df=204, p<.02) and the minority children had significantly higher scores than the white children (t=2.74, df=202, p<.01).

The Bad Eating Habits Index was used to test the first hypothesis. This hypothesis essentially states that there would be a positive relationship between television viewing and poor eating habits. There was strong statistical support for this hypothesis (see Tables 1 and 2).

Table 1 revealed the strong positive correlation between television viewing and the scores on the Bad Eating Habits Index (r=.485, p<.001, N=104). This relationship retained statistical significance when simultaneously controlling for race, gender, reading level, parental occupational status, and
parental educational level \((r=.508, \ p<.001, \ N=104)\). In the subgroup analyses, this positive relationship between television viewing and scores on the Bad Eating Habits Index retained statistical significance overall and under conditions of simultaneous control for the boys (5th order \(r=.466, \ p<.001, \ N=43\)), girls (5th order \(r=.444, \ p<.001, \ N=58\)), whites (5th order \(r=.427, \ p<.001, \ N=82\)), and nonwhites (5th order \(r=.582, \ p<.001, \ N=19\)).

Additional statistical support was derived from the stepwise regression analysis for the index. Findings reported in Table 2 revealed that television viewing was an extremely strong predictor of scores on the index of bad eating habits (Beta\(=.508, \ p<.001; \) final \(F=36.55, \ df=1, \ p<.001; \) R-square\(=.26\)). As a matter of fact, for the entire sample, television viewing was the only predictor for a high score (poor eating practices) on this index. Television viewing alone accounts for approximately 25\% of the total variance. These findings support past research (National Institute of Mental Health, 1982; Dietz, 1990) and further accentuate the need to inform the general public about the relationship between television and their children's nutritional habits.

**Television's Impact on Nutritional Knowledge**

The child's knowledge about nutrition was assessed in three questions asking about basic nutrition concepts and the notions about a balanced diet. The majority of children answered these nutritional concept questions correctly. For example, 92\% of the children chose the correct
description of a "nutritious breakfast" and 68% responded correctly when asked to choose the best example of a nutritious breakfast. More than three quarters of the children did not believe that fast food was as nutritious as a meal prepared at home. There were no statistically significant differences between the boys and girls concerning nutritional concept knowledge, although more boys (28.9%) than girls (18.2%) believed that fast food was as nutritious as a meal prepared at home (see Table 3).

The second hypothesis tests whether "television viewing is negatively related to nutritional knowledge." Even though previous research has shown that children can learn nutritional concepts through television viewing (Goldberg and Gorn, 1982), content analyses have revealed that pronutrition televised messages are scarce. The questions I developed specifically assessed concepts important for growing children, for example, knowing what constitutes a healthy breakfast. Also, a majority of the commercials on children's programming promote consumption of sugared cereals as part of a "nutritious breakfast," so questions concerning the concept of a nutritious breakfast were included.

These questions concerning nutritional concepts were analyzed separately. Table 4 revealed some support for the hypothesis. There was a positive relationship between television viewing and inadequate nutritional knowledge--more viewing was related to poorer nutritional knowledge. Overall,
there was a significant positive relationship between viewing and giving the incorrect definition of a nutritious breakfast ($r = .148$, $p < .05$) which increased in size and remained statistically significant when simultaneous controlling for race, gender, reading level, parental education level, and parental occupational status ($r = .232$, $p < .01$). This relationship maintained statistical significance under simultaneous controls for the boys ($r = .451$, $p < .01$, $N=42$), but not for the girls, whites, or nonwhites.

There was also a significant positive relationship between television viewing and believing that fast food was as nutritious as food cooked at home ($r = .279$, $p < .01$). This relationship also maintained statistical significance under conditions of simultaneous controls for the group as a whole ($r = .236$, $p < .01$) and for the girls ($r = .348$, $p < .01$) and whites ($r = .184$, $p < .05$). The relationship between giving the best example of a nutritious breakfast and television viewing did not maintain statistical significance under the conditions of simultaneous controls.

The stepwise regression analysis (Table 5) for these variables also lent statistical support for the hypothesis. The regression analysis revealed that television viewing was a significant positive predictor for giving the incorrect answers for the questions concerning the description of a nutritious breakfast ($\text{Beta} = .28$, $p < .01$; final $F = 8.68$, $p < .01$; $df = 1,106$; R-square = .08) and the nutritional value of fast food vs. home cooking ($\text{Beta} = .25$, $p < .01$; final $F = 9.54$, $p < .01$).
p<.001; df=2,107; R-square=.10). Occupational status also emerged as a positive predictor in beliefs about the nutritional qualities of fast food. Children from lower socioeconomic class families tended to believe that fast food was as nutritious as a meal prepared at home. Television was not a predictor for giving the incorrect answer when asked about the best example of a nutritious breakfast. Occupational status, however, again emerged as a predictor for this question.

In summary, these analyses lent some support to previous findings concerning the effect television viewing has on understanding basic nutrition principles. The average child views approximately three hours of television per day and, generally, viewing times are not accompanied by parental commentary and discussion. If children are learning from television (and research appears to support this notion), then the messages about health and nutrition should be as accurate as possible and in the form conducive to understanding. The children are inundated with messages that are nonnutritious and perhaps misleading. It is not surprising that the children hold incorrect ideas about healthy eating behaviors and yet the implications for such misunderstandings are enormous.

**Children's Notions about What most People Do**

The next part of the research examined the third hypothesis which stated: television viewing is positively related to children's misconceptions about
the nutritional habits of most people. The set of questions assessed the children's beliefs about the eating habits of "most people." The data analysis offered some support for this hypothesis. I will present the statistical analysis of each statement individually.

**Most people eat many of their meals on the run**

Table 6 revealed that, with the exception of the two statements "most people eat even when they are not hungry" and "most people eat standing up," the majority of the children believed that other people have poor nutritional habits. For instance, 64.9% of the respondents believed that "most people eat many of their meals on the run." Significantly more girls (73.1%) than boys (53.1%) believed this statement to be true (N=207, Chi-square=13.054, p<.05). Even though the majority of the respondents believed that most people eat many of their meals on the run, the majority (62.1%) also responded that they "hardly ever" ate on the run. Obviously, the children somehow think that even though they do not eat on the run, most other people do. Past studies (Gerbner, Gross, Morgan and Signorielli, 198) have shown that eating on the run (grabbing a snack) is a common occurrence on television.

The correlational analysis showed that for the entire sample the relationship between television viewing and believing that most people eat many of their meals on the run was not statistically significant (see Table 7). However, this relationship was statistically significant under conditions of
simultaneous controls for the boys ($r=.338, p<.05, N=40$) and the whites ($r=.203, p<.05, N=82$). The multiple regression analysis also revealed that television viewing was not a predictor for the overall sample. Viewing did, however, enter the equation (along with race) when the boys were analyzed separately ($\beta=.30, p<.05, \text{Final } F=5.76; \text{df}=(2,43), p<.01$).

Most people can frequently snack on potato chips, candy, pretzels, etc. and not get fat

One half of the children believed that most people can frequently eat potato chips, candy, pretzels etc. and not get fat; the majority (64%) also believed that people can eat these snacks often during the day and still have a healthy diet. There was virtually no difference between the boys (48.8%) and girls (51.1%) in the responses to this question (see Table 6). The partial correlations (Table 8) revealed that the relationship between television viewing and believing this misconception for the entire sample was not statistically significant. The relationships attained statistical significance for the boys ($r=.223, p<.05, N=39$) and the whites ($r=.217, p<.01, N=81$). These relationships, however, did not maintain statistical significance when simultaneously controlled for sex, race, reading level, occupational status, and parental education. The regression analysis also revealed that television was not a predictor for believing that most people can frequently snack on junk foods and not get fat. The results of this analysis are presented in Table 8.
These misconceptions that the majority of children hold about snacking does not portend well for the adequate nutritional intake necessary for optimal growth and health for the child.

**Most children eat sugared, cold cereal for breakfast**

More than four-fifths (85.3%) of the children believed that "most children eat sugared cereal for breakfast." Yet less than one-third (31.7%) reported that they ate sugared cereal for breakfast more than twice a week. More boys (88.0%) than girls (84.2%) believed this to be true (Chi-square=13.658, p<.01, df=4) (see Table 6). The partial correlation analysis in Table 9 showed that there was a positive relationship between television viewing and the child's response that "most children" frequently consume sugared cereal for breakfast (r=.156, p<.05). This relationship retained statistical significance even when simultaneously controlling for race, sex, reading level, parental occupational status, and educational level of parents (r=.252, p<.001, N=102). The relationship also maintained statistical significance under simultaneous controls for boys (r=.379, p<.01, N=40), whites (r=.214, p<.05, N=81), and nonwhites (r=.404, p<.05, N=16).

Additionally, the stepwise regression analysis (see Table 9) revealed that for the entire sample, television was the only predictor in the equation (entering the above control variables) for believing that most children eat sugared cereal for breakfast (Beta=.235, p<.05, final F=6.26, df=1,107, p<.05;
r-square=.06). When the analysis was conducted separately for boys, girls, whites, and nonwhites, television viewing was the only predictor for the whites (Beta=.214, p<.05; Final F=4.077, p<.05; df=(1,85). It was not a predictor for the rest of the groups.

This portion of the analysis revealed that even though most children report that they do not often eat sugared cereal (their actual experience), they overwhelmingly believe that the majority of children eat it (the television version of reality). Scholars widely hold the belief that peer influence is a strong factor in the behavior of preadolescent and adolescent children. If these children perceive that their peers are all behaving in a certain fashion, they could be influenced to emulate them. It reflects the old adage "everybody else is doing it so why not me?"

**Most people can eat snack foods often during the day and still have a healthy diet.**

Snacking on nonnutritious, calorically dense foods is an extremely common eating occurrence on television both in advertising and dramatic programming. Additional misconceptions about nutrition that may be related to television viewing were reflected in the following findings. As stated earlier, 63.9% (virtually no difference between boys and girls) of the children responded that "it is likely that most people can eat snack foods often during the day and still have a healthy diet." This "television" response was correlated with the
measure of daily television viewing \((r=.165, p<.05)\) and it retained statistical significance even when simultaneously controlling for race, sex, reading level, parental occupational status, and educational level of parents \((r=.231, p<.01, N=103)\) (see Table 10). These relationships were also significant and retained statistical significance under simultaneous controls for the girls \((r=.278, p<.05, N=58)\) and whites \((r=.256, p<.01, N=82)\).

The stepwise multiple regression analysis (see Table 10) was performed entering the "snack often and still have a healthy diet" variable along with the other control variables (race, gender, reading level, educational level of parent, and occupational status of parent). For the entire sample, television was the sole predictor for believing this statement was true \((\text{Beta}=.268, p<.01, \text{final } F=8.40, \text{df}=1,108, p<.01; r\text{-square}=.06)\). Television viewing was also a predictor for the girls \((\text{Beta}=.290, p<.05; \text{Final } F=5.712, p<.05; \text{df}=1.62)\) and the white children \((\text{Beta}=.312, p<.01; \text{Final } F=9.261, p<.01; \text{df}=1.86)\). This variable was not a predictor for the boys or the minority children. In light of the severe consequences and stigma that are associated with childhood obesity and other eating disorders, the implications of believing such misconceptions about snack foods are alarming.

**Most people eat standing up**

Less than one third of the respondents (30.3%) believed that most people eat standing up. There were no significant differences between the
boys and girls. Partial correlations, however, did reveal a significant relationship between television viewing and this belief for the sample overall ($r=.139$, $p<.05$, $N=103$), for the boys ($r=.258$, $p<.05$, $N=40$) and whites ($r=.207$, $p<.05$, $N=82$). Except for the white children, these relationships did not retain statistical significance under simultaneous controls (see Table 11). The stepwise regression analysis revealed a significant relationship between television viewing and the above statement, but only for the white children ($Beta=.253$, $p<.01$, final $F=5.896$, $df=(1, 86)$, $p<.01$; $R$-square$=.064$).

Television appears to be related to beliefs in the children that espouse nutritionally unsound practices.

*Most people have fun while they are eating*

Past research has shown that eating on television is associated with the fun, social aspects of life. Rarely do people on television eat to satisfy hunger; instead, they eat for emotional and social purposes (Kaufman, 1980). The present data analysis revealed that 67.8% percent of the children responded that is is "likely that most people have fun while they are eating." More boys (73.5%) than girls (63.7%) believed this to be likely. There were, however, no significant relationships between television viewing and believing that most people have fun while they are eating (see Table 12).

The present research showed that 31.3% of the respondents themselves sometimes "eat when they are sad because they think it will make
them feel better." Such eating patterns for fulfilling emotional deficits (either happiness or sadness) may be the root of eating disorders. Eating (on television) is associated with emotions rather than the life sustaining, health maintaining behavior that it is. I am not suggesting that eating cannot be portrayed sometimes as a pleasurable activity, but it should not be presented on television as it is now—with fun and socialability as the primary functions.

Most people eat even when they are not hungry

Approximately one-fourth of the respondents thought that it was likely that most people ate even if they were not hungry (virtually no differences between the boys and the girls). Neither the partial correlations nor the regression analysis (see Table 13) revealed any significant relationships between television viewing and this variable.

Summary

The correlational analysis revealed that, for the entire sample, there were statistically significant relationships between television viewing and three of the seven "what most people do" variables. They were "most people can eat snack foods often and still have a healthy diet," "most people eat standing up," and "most children eat sugared cereal for breakfast." In the stepwise regression analysis, for the entire sample, television viewing was the only predictor for believing that "most children eat sugared cereal for breakfast" and "most people can eat snack foods often and still have a healthy diet." In
summary, both data analyses showed that there is some support for the hypothesis that there is a positive relationship between television viewing and children's misconceptions about the nutritional habits of most people.

**Television and Children's Notions about Body Images**

The fourth hypothesis states that there would be a positive relationship between television viewing and misconceptions about healthy body types. Specifically, I sought to ascertain the children's perceptions about healthy body types, and desirable (from the child's point of view) body types. The survey contained composite drawings of different body types ranging from emaciated to obese (see Appendix 2). The respondents were instructed to label the body type that s/he perceived as healthiest and also the one that the child found most desirable and wished to attain. The seven drawings for each sex depicted body types ranging from emaciated (almost anorexic--see figures #1 and #2 on the scale) to fairly obese (see figures #6 and #7). Additionally, statistical analyses were conducted on a question assessing the child's beliefs about the need for girls to diet more than boys.

The correlational analyses revealed a statistically significant relationship between television viewing and selecting a very slim body type as the healthiest for the entire sample ($r=.14, p<.05, N=102$), for the boys ($r=.23, p<.05, N=40$) and for the white children ($r=.24, p<.01, N=82$). This relationship maintained statistical significance for the boys controlling for race, reading level,
parental occupational status, and parental educational level (see Table 14).

- The relationship between television viewing and selecting skinny body types as healthiest lost significance under conditions of simultaneous control for the children overall and for the white children as a subgroup.

  The analysis did not reveal an overall significant positive relationship between television viewing and believing that girls need to watch their weight more than boys do. However, according to findings in the partial correlations, there was a statistically significant relationship (that failed to retain significance under conditions of simultaneous control) between boys watching television and the belief that girls need to watch their weight more than boys do ($r = .25$, $p < .05$, $N = 40$) (see Table 14). The data analysis did not reveal an overall relationship between television viewing and selecting unhealthy body types as desirous. The multiple regression analysis did not reveal statistically significant relationships between television viewing and the variables related to body image (see Table 15).

  Although few statistically significant relationships were found, the analyses did yield some interesting results. Past studies conducted by Silverstein, Peterson, and Perdue (1986) revealed that through televised images and messages, women receive considerably more televised messages to get slim and stay that way than do men. In light of these research findings, it is not surprising that the present study revealed that a majority of children (56.9%)
believed that "girls need to watch their weight more than boys do." More boys (63.8%) than girls (52%) believed this to be true (see Table 16). The fact that nine and ten year old boys already accept the cultural and media image of the typical female is a sad commentary and the direct relationship that this belief has with television viewing underscores the need to scrutinize the images on television and revamp them.

Even though 24% of the children chose the skinniest bodies (#1 and #2) as the ones that they desired, only 15.9% of them thought that these bodies were healthy. Even though many children may know that being very thin is not healthy, the slim look is so socially desirable (an image that is reinforced through the mass media) that having the "acceptable look" is preferable to good health. Conversely, of all the respondents in the subgroup analysis, 19.5% of the girls believed the thinnest bodies to be the healthiest compared to 11% of the boys (N=204, Chi square=27.584, df=4, p<.001) (see Table 16). When opting for the body that they wanted to have, 32% of the girls desired the slimmest bodies compared to 12% of the boys (N=205, Chi square=33.159, df=4, p<.001).

More than half (53.1%) of the children reported that they received information about "how to get and keep a healthy body" from television (see Table 17). Past research in conjunction with these recent findings (that most children believe girls need to watch their weight more than boys do and the
general tendency for more girls than boys to pick the skinniest bodies as desirous and healthy) clearly show that girls are socialized to get slimmer and stay that way more than boys. In addition, subsequent thesis findings (that television is positively related to boys believing that girls need to watch their weight more than boys do, and the positive relationship between television viewing and selecting the skinniest bodies as healthiest) support the notion that television viewing contributes to this socialization.

Results also showed that more than one third of the girls believed that they needed to lose weight (with 24.6% on a diet) compared to one fourth (16.9% on a diet) of the boys. Also, more than one third of the girls said that they sometimes refrained from eating so that they would not gain weight. Past research (Cash & Brown, 1989; Silverstein et al., 1986; Silverstein & Perdue, 1988) has shown that gender based stereotypes of body images are common distorted messages on television. The children would appear to be buying into these messages.
CHAPTER FOUR

TV AND COUNTERNUTRITIONAL MESSAGES - HEALTH IMPLICATIONS

Importance

The results of this research have implications for both the physical and emotional health of our children. Among other factors, good health depends upon adequate nutritional practices. Additionally, whether one experiences good health can affect one’s emotional well being. The present research has shown that television viewing is significantly associated with inadequate nutritional practices among fourth and fifth grade children. Additionally, the amount of television viewing and misconceptions about basic nutritional principles are positively related to several important variables for the children in this age group. In the following section, I will address the concerns that this analysis generates, relate the results of the present study to past research, discuss the limitations of this research, offer some possible solutions to alleviate the problems, and discuss new directions for future research.
Summary of Findings

The results generated by the data analysis of the research showed at least partial support for all four of the hypotheses. The first hypothesis (television viewing is positively related to poor eating practices) received the strongest statistical support. There was a strong positive correlation between television viewing and poor eating practices (as ascertained by high scores on the Bad Eating Habits Index). This relationship retained statistical significance when simultaneously controlling for race, gender, reading level, parental occupational status, and parental educational level. In the subgroup analyses, this positive relationship between television viewing and poor eating practices retained statistical significance overall and under conditions of simultaneous control for all the subgroups.

Additional support was derived from the stepwise regression analysis for the index. Findings revealed that television viewing was an extremely strong predictor of scores on the index of bad eating habits. As a matter of fact, for the entire sample, television viewing was the only predictor for a high score (poor eating practices) on this index. Television viewing alone accounts for approximately 25% of the total variance.
Implications

In recent research, medical scholars (Dietz, 1990; Dietz & Gortmaker, 1985) strongly suggested that a causal relationship exists between television viewing and obesity in children and adolescents. Studies have shown that there has been a recent increase of adolescent obesity; Dietz (1990) proposes that perhaps 25% of this increase may be attributable to television viewing. Because the dietary factors that contribute to obesity precede the onset of the disease by months or even years, it is necessary to consider the effects of television viewing on eating behaviors in childhood. The eating practices of the fourth and fifth grade respondents in my study were examined in light of this reasoning.

Dietz and Gortmaker (1985) suggest that television viewing by children may affect energy expenditure and energy intake. According to the authors, the relationship between obesity and television viewing exists due to reduced energy expenditure and increased food intake while watching television. These two variables combined could lead to obesity. Obviously, watching television for hours each day requires very little energy expenditure (in actuality, no energy in excess of resting metabolic rates). In addition, because television consumes so much of the average child’s free play time, there is little left over to engage in more vigorous and physically challenging experiences. This is referred to by Dietz and Gortmaker as the displacement factor.
The present research, along with past studies, has shown that there is a strong association between television viewing and an increase in eating calorically dense, nonnutritious snacks. According to my results, not only are the heavy television viewers eating snacks more often each day, but these same children more often chose to snack on the nonnutritious "junk foods." The difference is important. Snacking on nutritious foods can be a healthy part of a child's diet. However, results show that the snack foods consumed most often fall into the category of "junk food." My study dealt with 9, 10, and 11 year old children. The habits that they are developing now could lead to adolescent obesity. Gerbner, Morgan, and Signorielli (1982) found that snacking in front of television increases with age and Carruth, Goldberg, and Skinner (1991) found that the snacks of choice for adolescents are potato chips, corn chips, sodas, popcorn, and cookies. These findings do not portend well that fourth and fifth grade children have already adopted these nutritionally unsound eating practices.

Increased food intake alone does not necessarily preclude obesity because the snacking could be balanced out by a reduction in intake at other meals. However, since children are watching television for such extended periods each day (and often during meals), they may not be able to balance out their food intake. Simply stated, there is not enough non-television viewing
time in the average child's day to restore the balance between energy intake and expenditure.

The strong statistical support for the positive relationship between television viewing and poor eating practices found in the present study lends additional credence to Dietz and Gortmaker's research showing the association between obesity and television viewing. Although my research did not examine the relationship between actual weight and television viewing, a strong relationship between television viewing and eating practices that are conducive to childhood obesity was revealed.

According to the present study, children who are watching three or more hours per day (the average child) have significantly poorer nutritional habits than children who watch television less each day. These children are fulfilling both factors cited by Dietz that could culminate in childhood obesity—reduced energy expenditure and increased caloric intake. The present research found that these viewers also have skewed notions about nutritional concepts. If a child believes that most people can snack all day long and still have healthy diets, the child may model this behavior. My research provides support for this scenario. Frequent snacking on nonnutritious foods is prevalent on television and is also a prevalent habit in the real life of the heavy television viewer.
The fact that television viewing may be contributing to childhood obesity forebodes severe consequences. Physical as well as emotional problems are associated with obesity. A study reported in the New England Journal of Medicine in March, 1990 revealed that 40% of the coronary events—nonfatal myocardial infarction, fatal coronary heart disease, and angina pectoris—in 115,886 middle aged women followed over an eight year period were attributable to excessive body weight (Vanltalie, 1990). Obesity in childhood often leads to adult obesity and, usually, obesity prevents many children from engaging in strenuous physical exertion and play. These activities are necessary for optimal heart and other muscle buildup and strength.

Physical activity and play have socializing functions for the child as well. Obesity often limits physical exertion and may affect the child psychologically. The social stigmatization that accompanies obesity is widely known and well documented. Past studies have shown that 10 and 11 year old respondents rank obese children the lowest when asked “which girl or boy do you like best?” They even prefer drawings of children without limbs or in wheelchairs rather than obese children (Feldman, Feldman, & Goodman, 1988). Additional results revealed that 6 to 9 year old children, when asked to ascribe temperamental and behavioral characteristics to the three body types (endomorph fat, mesomorph normal, and ectomorph thin), liked the "normal" figures best and described them as friendly, kind, happy, polite, etc. The
children rated the fat figure as lazy, lying, cheating, and other negative terms (Feldman, Feldman, & Goodman, 1988). One study of college admission rates revealed that overweight women have one third the chance of admission than do normal weight women with identical school records (Caputi, 1983) and several law suits have been successfully argued based on weight discrimination (Dietz, 1990).

Data from the 1980 census estimates that there are approximately 3,500,000 obese adolescents in the United States. I have only named a few of the psychological, social, and physical problems that can be associated with obesity. Obviously, obesity is neither a desirable nor a healthy trait for anyone much less growing children. Any activity that appears to contribute to the prevalence of obesity needs to be critically examined. This research has shown a relationship between television viewing and the habitual practice of eating behaviors that are conducive to reduced physical activity, and weight gain as well as inadequate nutrient intake. All of these factors combined contribute to obesity as well as other diseases.

**Nutrition Principles**

**Summary of Findings**

The second hypothesis (television viewing is negatively related to nutritional knowledge) also received strong statistical support. This research has shown that there is an inverse relationship between television viewing and
nutritional knowledge--more viewing was related to poorer nutritional knowledge. For the entire sample, television was a factor in answering incorrectly two of the three questions assessing the child's knowledge about basic nutritional concepts.

Overall, there was a significant positive relationship between viewing and giving the incorrect definition of a nutritious breakfast. This correlation increased in size and remained statistically significant when simultaneous controls for race, gender, reading level, parental education level, and parental occupational status were included. There was also a significant positive relationship between television viewing and believing that fast food was as nutritious as food cooked at home.

Additional support for the link between television and skewed notions about sound nutritional practices was found in the data analysis of the statements addressing the third hypothesis (television viewing is positively related to children's misconceptions about the nutritional habits of most people). The responses to these statements assessed the child's perceptions about "what most people do." There were significant relationships between television viewing and children believing that "most people can eat snack foods often and still have a healthy diet," "most people eat standing up," and "most children eat sugared cereal for breakfast."
Implications

Past research has shown that even though the child's understanding of nutritional concepts are enhanced by parental commentary on the topic during the viewing or right afterwards (Wiman & Newman, 1989), too few parents are aware of this influence and do not watch or discuss television with their children. As a consequence, the child is left to view numerous, televised, nonnutritious messages daily without parental guidance.

Wiman and Newman’s research also revealed that exposure to children’s programming and its advertisements is associated with lower scores on nutritional knowledge tests. The present research further supports the notion that viewing television (with its plethora of mixed messages concerning food and eating patterns) leads to misconceptions about basic nutritional principles.

The consequences of ignorance and/or misunderstanding of these basic nutrition principles are grave. Both the fourth and fifth graders (within this specific sample) had already completed nutrition units as part of the school curriculum that year. According to the teachers, the questions devised for the survey should not have posed problems for the children. I am not suggesting that television is the sole culprit for the confusion about nutritional concepts on the part of the respondents. However, television does appear to play a part in misleading the children and this role needs to be examined further. Joan Gussow (1972) states that even adults are learning about nutrition through
television. Perhaps the eating practices of adults should be assessed using the same methodology of this research to ascertain the extent of the problem and then seek solutions.

In order to expand our understanding of the complex role that television does play, Peterson, Balfour, Bridgwater, and Dawson's (1984) line of research that shows that television could possibly be a viable medium for teaching nutritional concepts should be further explored. Additionally, more research needs to be done in the area examining the differences between learning concepts and changing consumptive behavior. As noted before, the nutritious messages on television should be critically examined to ascertain if they are presented in a form conducive to understanding from the viewpoint of the target audience (the child). Inadequate nutritional intake and ill health are often closely related. The "television" world touting misconceptions about nutrition could be a factor in compromising our children's health and well-being.

**Body Images**

**Summary of Findings**

The present study revealed some support for the fourth hypothesis: television viewing is positively related to misconceptions about which body types are healthy. The correlational analyses revealed a statistically significant relationship between television viewing and selecting an extremely slim body type as the healthiest for the entire sample. The analysis did not reveal an
overall positive relationship between television viewing and believing that girls need to watch their weight more than boys do. However, partial correlations indicated a statistically significant relationship between boys watching television and the belief that girls need to watch their weight more than boys do.

More than half (53.1%) of the children reported that they received information about "how to get and keep a healthy body" from television. My findings (that most children believe girls need to watch their weight more than boys do and the general tendency for more girls than boys to pick the skinniest bodies as desirous and healthy) clearly show that girls are socialized to get slimmer and stay that way more than boys. Additional thesis findings (that television is positively related to boys believing that girls need to watch their weight more than boys do, and the positive relationship between television viewing and selecting the skinniest bodies as healthiest) support the notion that television viewing contributes to this socialization.

Results also showed that more than one third of the girls believed that they needed to lose weight compared to one fourth of the boys. Additionally more than one third of the girls said that they sometimes refrained from eating so that they would not gain weight. As noted before, the attitudes and behaviors associated with eating disorders often precede the onset of the disorder by months and even years. The children in the present research are at the critical preadolescent age where they are forming ideas and attitudes
about what is a healthy body. The fact that many of the children (especially the girls) are already forming opinions and practicing behaviors that reflect abnormal and unhealthy attitudes about their bodies is indicative of our culture's obsession with weight.

**Implications**

The recent increase in eating disorders such as bulimia and anorexia reflect our culture's obsession with the thin female body. Post and Crowther (1985) identified variables that discriminate bulimic from nonbulimic adolescent females. They suggest that the cognitive and attitudinal components of bulimia precede its development and that these components have developed partially from the societal pressure for females to be thin. The fourth and fifth grade girls in the present study are at the age where these cognitive and attitudinal components are forming. Results indicate that the attitudes toward body images in this sample reflect the cultural ideal of thinness.

Even though strong relationships among eating disorders and television viewing are thus far unsupported, any correlation between the increase of obesity, bulimia, and anorexia among adolescents and the pervasiveness of distorted nutrition messages and misrepresentative body images in the mass media needs to be explored. Dietz (1990), among others, believes that due to the increased numbers of advertisements for food targeted
to women (either eating or having fun while preparing food) compared to the fact that women receive more messages to get slim and stay that way than do men, the implicit message that we are sending to young girls and women is to stay in shape and diet, but at the same time, think about, prepare and enjoy food. Furthermore, this implicit message, based on the lack of fatness in female screen characters, is that they will never become fat. Consequently, Dietz believes that in this respect the only answer for the adolescent is bulimia, because only a bulimic can eat all the food she wants and not gain weight.

The present study lends some support to this notion in three different ways. First, the literature review affirms the fact that both television programming and commercials reflect eating behaviors that are nutritionally poor. Furthermore past research shows that the majority of commercials on children's programming are for food--most often sweetened cereal and candy. Clearly, the children are receiving many messages (often distorted) about food. Second, the secondary content analysis concerning the weights of television characters revealed the virtual nonexistence of obese characters on television. Third, the data analysis of the responses concerning body images (that most children believe girls need to watch their weight more than boys do, the positive relationship between television viewing and selecting the skinniest bodies as healthiest, and the general tendency for more girls than boys to pick the skinniest bodies as desirous and healthy) suggest that the preadolescent
children in this sample have already been socialized to accept the culture's stereotyped beliefs about "attractive" female bodies.

Other research (Silverstein, Perdue, Peterson, and Kelly 1986) supports the notion that the prevalent slim standard of body images of women on television may lead to eating disorders. The mass media promote a slimmer, more weight conscious standard for women than for men, and this standard of bodily attractiveness is slimmer now than it has been in the past. Women who wish to adhere to this extreme standard must diet frequently to become or remain slim. A study conducted by Ogletree, Williams, Raffeld, Mason, and Fricke (1990) suggested that children's commercials (with their emphasis on food and female attractiveness) may be one factor in the differential rate of eating disorders in males and females. Silverstein et al. assert that in the 1920's, the only other time that models were as noncurvaceous as they are now, an epidemic of eating disorders appeared among young women.

Some research (Blyth, Simmons, and Zakin, 1985) states that a comparison to cultural ideals is one way that early adolescent females evaluate their physical attractiveness. Television, with its consistently portrayed prepubertal female image, plays a key role in this "cultural ideal" comparison. The researchers avow that the clearest, single finding in their research is that the cultural ideal of thinness is strong and pervasive. My findings (significantly
more girls than boys choosing the skinniest bodies as both healthy and
desirable) support this notion of the pervasiveness of the thin "cultural ideal"
female body.

These images send contradictory messages about the socialization
process that children undergo when developing self-concepts about their body
image. The fear of becoming fat is more strongly socialized in females in our
culture, and television and the print media emphasize women's physical
appearance to a greater extent than it does men. This presents conflicting
viewpoints: men can be heavy, but women cannot. Kim Chernin, author and
consultant to women with eating disorders, believes that a woman obsessed
with the size of her body (wishing to reduce it and make it less apparent) may
actually be expressing her discomfort about being female in our culture (1982).

Past research (Blyth, Simmons, and Zakin, 1985; Cash & Brown,
1989; Silverstein et al., 1986; Silverstein & Perdue, 1988)) has shown that
gender based stereotypes of body images are common distorted messages on
television. Television, as a socializing agent, has presented images to the
viewers that are misrepresentative of typical body types. The present study
showed that girls (significantly more so than boys) chose the skinniest bodies
as healthiest and desirable. Additionally, the correlational analysis revealed a
relationship between television viewing and selecting the skinniest bodies as
the healthiest bodies. These results seem to reflect those distorted televised
images and lend some support to past research. Men can be heavy, but women must stay slim to be socially acceptable. It appears that the children are buying into this myth.

Limitations

As in most research, this study certainly has limitations. First, ideally, the sample would be larger. Two hundred students is ample for detecting large effects in research; however, perhaps some of the relationships between television viewing and the dependent variables would be statistically significant with a larger sample. The television viewing population is so large (and thus any effects are potentially far reaching) that even small effects become critical to ascertain.

Another problematic factor with the sample is the racial distribution. The minority sample population was far too small for generalizability to the minority population at large. Ideally, the content analysis data would be more recent than 1987. Television content analyses studies have shown that the images on television have remained fairly stable over the years. However, to be positive that these persistent images still dominate, a 1991 content analytic study would be preferable.

The parental occupational status and parental education level variables were ascertained through responses that the children gave to certain questions. Anytime that children report this type of information problems are
bound to occur. For instance, many children did not know their parents occupation or level of education. Additionally, many of their answers to these questions could not be accurately recoded into the three categories/levels. Thus the portion of the sample that could be analyzed decreased considerably.

Ideally, there would be more nutritional concept questions and they would more closely reflect nutritional concepts presented often on television, e.g. questions concerning the ideas about a "balanced breakfast." Perhaps these additional questions would comprise an internally consistent index. Finally, I would reevaluate assessing the child's ideas about body types through the method of selecting drawings of different body types. If selection of drawings was utilized again, the pictures of the body types could have been larger (and thus easier to detect subtle differences).

What Now?

This research has revealed that there is a positive relationship between viewing unhealthy nutrition-related messages on television and poor-health behaviors and nutritional misconceptions. Since good nutrition and good health are so closely dependent upon one another, we owe it to our children to afford them every opportunity to learn and practice healthy nutritional habits. Incidental learning from televised messages and portrayals appear to be contributing to unhealthy lifestyles. Obviously, a medium that reaches
millions of children for hours each day would be an ideal place to present more accurate health-related images and nutritional information.

I believe that the mass media have some responsibility, especially in the case of impressionable youngsters. The media realize how powerful their role is and yet they continue to promote the myth of the female image--be beautiful, be slim, have fun (Caputi, 1983). This may socialize girls and boys to accept and expect this image--a potentially harmful practice for both sexes. Children (as a group) are among the heaviest viewers of television; the constant bombardment of the mass media's ideal body images has to be a source of confusion for them at a time when the formulation of their self-concept is crucial.

Who is responsible for a child's nutritional habits and perceived body image. Clearly, parents shoulder a large portion of the responsibility. I would argue that the family is still the primary factor in the socialization process; however, the role of all the mass media (television in particular) needs to be critically examined. The responsibility for presenting realistic and healthy images falls on both the shoulders of the parents and the broadcast industry. Parents must teach their children "how to" watch television critically. Children need to understand that the programming is mostly fantasy and entertainment and we need to ensure that our children can differentiate between the television world and reality.
If television is teaching our children social skills, values, beliefs, and a global picture of our culture, then obviously the need to assess these images and possibly adapt them is crucial. Television is a phenomenon that is here to stay. There is no reason to believe that it will not only remain popular, but viewing times will most likely increase if it follows the trend since its inception. The potential from learning from television has never been fully realized. The brief literature review that I presented in the beginning of this paper as well as the results of my research show that children do model televised behaviors and are socialized to some extent through the media.

Gerbner and Gross (1976), among others, propose that since children spend more time watching television than any other activity, these images may be more real to them than their actual experiences. These television images may also be construed as being more desirable and rewarding to the child, thus reinforcing the modeling behavior. Numerous findings in research support this notion. Obviously, one cannot assess the influence that television has on children in a vacuum. How the televised images affect them depends on their social relationships in real life. My concern is that if the average child is now spending approximately three to four hours a day in front of the television, then their "televised perceptions" may be more influential than their everyday reality. Because the mass media appear to be a major factor in the socialization of our children as regards body image and nutrition,
their role as promoters of constant dieting, obsession with weight, and obsession with preparing and eating mostly nonnutritious food for emotional satisfaction deserves further study.
TABLES
### TABLE 1 Correlational Analysis for the Index of Bad Eating Habits

<table>
<thead>
<tr>
<th>Overall</th>
<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>.485**</td>
<td>.578**</td>
<td>.434**</td>
<td>.435**</td>
</tr>
<tr>
<td>Controlling For:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.521***</td>
<td>------</td>
<td>------</td>
<td>.482***</td>
</tr>
<tr>
<td>Race</td>
<td>.498***</td>
<td>.547***</td>
<td>.481***</td>
<td>------</td>
</tr>
<tr>
<td>Reading Level</td>
<td>.521***</td>
<td>.519***</td>
<td>.491***</td>
<td>.476***</td>
</tr>
<tr>
<td>Occ. Status</td>
<td>.508***</td>
<td>.536***</td>
<td>.461***</td>
<td>.440***</td>
</tr>
<tr>
<td>Parent Educ.</td>
<td>.477***</td>
<td>.517***</td>
<td>.496***</td>
<td>.433***</td>
</tr>
<tr>
<td>5th Order Partial</td>
<td>.508***</td>
<td>.466***</td>
<td>.444***</td>
<td>.427***</td>
</tr>
<tr>
<td>N=</td>
<td>(104)</td>
<td>(43)</td>
<td>(58)</td>
<td>(82)</td>
</tr>
</tbody>
</table>

### TABLE 2 Regression Analysis for the Index of Bad Eating Habits

- **All Children**
  - R-square = .26
  - Variable entered: Beta: TV Viewing .51***
  - Final F = 36.55***; df = (1, 105)

- **Boys**
  - R-square = .31
  - Variable entered: Beta: TV Viewing .55***
  - Final F = 19.34***; df = (1, 44)

- **Girls**
  - R-square = .30
  - Variable entered: Beta: TV Viewing .45***
  - Occ. Status -.24*
  - Final F = 19.43***; df = (1, 59)

- **Whites**
  - R-square = .22
  - Variable entered: Beta: TV Viewing .47***
  - Final F = 19.43***; df = (1, 59)

- **Nonwhites**
  - R-square = .64***
  - Variable entered: Beta: TV Viewing .64***
  - Final F = 13.75***; df = (1, 20)

*p < .05; **p < .01; ***p < .001*
TABLE 3 Frequency Tables for Dependent Variables by Sex

<table>
<thead>
<tr>
<th>Index of bad eating habits</th>
<th>Boys</th>
<th>Girls</th>
<th>Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweet Cereal</td>
<td>38.6%</td>
<td>37.8%</td>
<td>6.933</td>
</tr>
<tr>
<td>N=209</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fast Food</td>
<td>17.1%</td>
<td>16.0%</td>
<td>5.514</td>
</tr>
<tr>
<td>N=207</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snacks daily(3+)</td>
<td>41.0%</td>
<td>28.4%</td>
<td>9.548*</td>
</tr>
<tr>
<td>N=210</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junk Food</td>
<td>67.5%</td>
<td>66.1%</td>
<td>8.603</td>
</tr>
<tr>
<td>N=210</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft Drinks</td>
<td>63.9%</td>
<td>59.9%</td>
<td>6.104</td>
</tr>
<tr>
<td>N=210</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutritional Knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutritious breakfast</td>
<td>93.9%</td>
<td>93.7%</td>
<td>3.235</td>
</tr>
<tr>
<td>N=208</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Best example</td>
<td>71.1%</td>
<td>68.0%</td>
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</tr>
<tr>
<td>N=208</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fastfood (nutritious)</td>
<td>28.9%</td>
<td>18.2%</td>
<td>5.448</td>
</tr>
<tr>
<td>N=210</td>
<td></td>
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</table>
TABLE 4 Correlational Analysis for Variables Relating to Nutritional Knowledge

<table>
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<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
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<tbody>
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<td><strong>Nutritious Breakfast</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Overall</td>
<td>.148*</td>
<td>.215</td>
<td>.103</td>
<td>.097</td>
<td>.172</td>
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<tr>
<td>Controlling for:</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.269**</td>
<td>---</td>
<td>---</td>
<td>.177*</td>
<td>.385</td>
</tr>
<tr>
<td>Race</td>
<td>.256**</td>
<td>.343**</td>
<td>.196</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Reading Level</td>
<td>.279**</td>
<td>.448***</td>
<td>.211*</td>
<td>.179*</td>
<td>.348</td>
</tr>
<tr>
<td>Occ. Status</td>
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<td>.338**</td>
<td>.183</td>
<td>.150</td>
<td>.357</td>
</tr>
<tr>
<td>Parent Educ.</td>
<td>256**</td>
<td>.449*</td>
<td>.218*</td>
<td>.181*</td>
<td>.344</td>
</tr>
<tr>
<td>5th Order Partial</td>
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<td>.451**</td>
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<td>.155</td>
<td>.218</td>
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<td>(42)</td>
<td>(60)</td>
<td>(83)</td>
<td>(19)</td>
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<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Best Example of Nutritious Breakfast</strong></td>
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<td></td>
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</tr>
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<td>.129</td>
<td>.190*</td>
<td>.170</td>
<td>.082</td>
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<td></td>
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<td></td>
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<tr>
<td>Sex</td>
<td>.080</td>
<td>-----</td>
<td>-----</td>
<td>.081</td>
<td>.059</td>
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<td>.073</td>
<td>.080</td>
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<td>.057</td>
<td>.005</td>
<td>.037</td>
<td>.084</td>
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<td>.069</td>
<td>.062</td>
<td>.015</td>
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<td>.010</td>
<td>.053</td>
<td>.048</td>
<td>.184</td>
</tr>
<tr>
<td>N=</td>
<td>(101)</td>
<td>(43)</td>
<td>(59)</td>
<td>(83)</td>
<td>(19)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fast Food Nutrition</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>.279**</td>
<td>.206</td>
<td>.351**</td>
<td>.259**</td>
<td>.271</td>
</tr>
<tr>
<td>Controlling for:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.310***</td>
<td>-----</td>
<td>-----</td>
<td>.244**</td>
<td>.337</td>
</tr>
<tr>
<td>Race</td>
<td>.264**</td>
<td>.128</td>
<td>.382***</td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>Reading Level</td>
<td>.305***</td>
<td>.236</td>
<td>.454***</td>
<td>.225*</td>
<td>.454*</td>
</tr>
<tr>
<td>Occ. Status</td>
<td>.244**</td>
<td>.031</td>
<td>.418***</td>
<td>.177*</td>
<td>.350</td>
</tr>
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<td>Parent Educ.</td>
<td>.294***</td>
<td>.075</td>
<td>.455***</td>
<td>.206*</td>
<td>.350</td>
</tr>
<tr>
<td>5th Order Partial</td>
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<td>.348**</td>
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</tr>
<tr>
<td>N=</td>
<td>(103)</td>
<td>(43)</td>
<td>(61)</td>
<td>(85)</td>
<td>(19)</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01; ***p<.001
### TABLE 5  Regression Analysis for Nutrition Related Questions

<table>
<thead>
<tr>
<th></th>
<th>Nutritious Breakfast Exam</th>
<th>Nutritious Breakfast</th>
<th>Fastfood Nutrition</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Children</td>
<td>R-square = .08</td>
<td>R-square = .05</td>
<td>R-square = .10</td>
</tr>
<tr>
<td>Variable entered:</td>
<td>TV Viewing - .28**</td>
<td>Occ. Status .27*</td>
<td>Occ. Status .25**</td>
</tr>
<tr>
<td></td>
<td>Final F=8.68**;</td>
<td>df=(1,106)</td>
<td>Final F=9.54***;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>df=(2,107)</td>
</tr>
<tr>
<td>Boys</td>
<td>R-square = .22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable entered:</td>
<td>TV Viewing - .47**</td>
<td>none</td>
<td>Reading Level .20*</td>
</tr>
<tr>
<td></td>
<td>Parent Educ. - .31*</td>
<td></td>
<td>Final F=5.69**;</td>
</tr>
<tr>
<td></td>
<td>Final F=5.89**;</td>
<td>df=(1,43)</td>
<td>df=(2,44)</td>
</tr>
<tr>
<td>Girls</td>
<td>R-square = .10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable entered:</td>
<td>none</td>
<td>Occ. Status .32*</td>
<td>TV Viewing - .38***</td>
</tr>
<tr>
<td></td>
<td>Final F=6.94*;</td>
<td>df=(1,60)</td>
<td>Final F=10.53***;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>df=(2,61)</td>
</tr>
<tr>
<td>Whites</td>
<td>R-square = .08</td>
<td></td>
<td></td>
</tr>
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<td>Variable entered:</td>
<td>Reading Level .20**</td>
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<td>Occ. Status .29**</td>
</tr>
<tr>
<td></td>
<td>Final F=7.27**;</td>
<td></td>
<td>Final F=7.64**;</td>
</tr>
<tr>
<td></td>
<td>df=(1,84)</td>
<td></td>
<td>df=(1,86)</td>
</tr>
<tr>
<td>Nonwhites</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>none</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05; **p<.01; ***p<.001
### TABLE 6 What most people do

<table>
<thead>
<tr>
<th>Activity</th>
<th>Boys</th>
<th>Girls</th>
<th>Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eat on the run</td>
<td>53.1%</td>
<td>73.1%</td>
<td>13.054*</td>
</tr>
<tr>
<td>N=207</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snack and not get fat</td>
<td>48.8%</td>
<td>51.1%</td>
<td>5.095</td>
</tr>
<tr>
<td>N=209</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eat sugared cereal</td>
<td>88.0%</td>
<td>84.2%</td>
<td>13.658**</td>
</tr>
<tr>
<td>N=209</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snack often</td>
<td>60.2%</td>
<td>67.1%</td>
<td>3.309</td>
</tr>
<tr>
<td>N=210</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eat standing up</td>
<td>27.7%</td>
<td>32.2%</td>
<td>7.195</td>
</tr>
<tr>
<td>N=210</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fun eating</td>
<td>73.5%</td>
<td>63.7%</td>
<td>5.946</td>
</tr>
<tr>
<td>N=210</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eat (not hungry)</td>
<td>20.5%</td>
<td>25.2%</td>
<td>1.372</td>
</tr>
<tr>
<td>N=210</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 7  Correlational Analysis for Variables Related to Children’s Beliefs About What Most People Do

<table>
<thead>
<tr>
<th>Eat on the Run</th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>.111</td>
<td>.245*</td>
<td>-.001</td>
<td>.119</td>
<td>.017</td>
</tr>
<tr>
<td>Controlling for:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.158</td>
<td>-----</td>
<td>-----</td>
<td>.193*</td>
<td>-.004</td>
</tr>
<tr>
<td>Race</td>
<td>.146</td>
<td>.319*</td>
<td>.014</td>
<td>.197*</td>
<td>-.065</td>
</tr>
<tr>
<td>Reading Level</td>
<td>.179*</td>
<td>.366*</td>
<td>-.003</td>
<td>.220*</td>
<td>-.057</td>
</tr>
<tr>
<td>Occ. Status</td>
<td>.189*</td>
<td>.354**</td>
<td>-.017</td>
<td>.200*</td>
<td>.031</td>
</tr>
<tr>
<td>Parent Educ.</td>
<td>.171*</td>
<td>.330*</td>
<td>.005</td>
<td>.203*</td>
<td>.095</td>
</tr>
<tr>
<td>5th Order Partial</td>
<td>.137</td>
<td>.338*</td>
<td>.021</td>
<td>.203*</td>
<td>.095</td>
</tr>
<tr>
<td>N=</td>
<td>(103)</td>
<td>(40)</td>
<td>(58)</td>
<td>(82)</td>
<td>(16)</td>
</tr>
</tbody>
</table>

Regression analysis for Children’s Beliefs About What Most People Do

<table>
<thead>
<tr>
<th>Eat on the Run</th>
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</tr>
</thead>
<tbody>
<tr>
<td>All Children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable entered: Beta:</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-square=.211</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable entered: Beta:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TV Viewing</td>
<td>.30</td>
<td></td>
</tr>
<tr>
<td>Final F=5.76**;df=(2,43)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable entered: Beta:</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-square=.097</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TV Viewing</td>
<td>.311**</td>
<td></td>
</tr>
<tr>
<td>Final F=9.20**;df=(1,86)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whites</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable entered: Beta:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonwhites</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable entered: Beta:</td>
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<td>none</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01; ***p<.001
TABLE 8 Correlational Analysis for Variables Related to Children’s Beliefs About What Most People Do

**Snack on Junk Foods and not Get Fat**

<table>
<thead>
<tr>
<th>Snackfat</th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>.131</td>
<td>.223*</td>
<td>.072</td>
<td>.217**</td>
<td>-.226</td>
</tr>
<tr>
<td>Controlling For:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.079</td>
<td>-----</td>
<td>-----</td>
<td>.206*</td>
<td>-.321</td>
</tr>
<tr>
<td>Race</td>
<td>.084</td>
<td>.213</td>
<td>.002</td>
<td>.215*</td>
<td>-.411*</td>
</tr>
<tr>
<td>Reading Level</td>
<td>.087</td>
<td>.205</td>
<td>.000</td>
<td>.166</td>
<td>-.302</td>
</tr>
<tr>
<td>Occ. Status</td>
<td>.053</td>
<td>.213</td>
<td>-.059</td>
<td>.143</td>
<td>-.275</td>
</tr>
<tr>
<td>Parent Educ.</td>
<td>.046</td>
<td>.169</td>
<td>-.302</td>
<td>.119</td>
<td>-.236</td>
</tr>
<tr>
<td>5th Order Partial</td>
<td>.025</td>
<td>.136</td>
<td>-.011</td>
<td>(102)</td>
<td>(39)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(58)</td>
<td>(81)</td>
</tr>
<tr>
<td>N=</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(102)</td>
<td>(39)</td>
<td>(58)</td>
<td>(81)</td>
<td>(16)</td>
</tr>
</tbody>
</table>

Regression analysis for Children’s Beliefs About What Most People Do

**Snack on Junk Food and not Get Fat**

<table>
<thead>
<tr>
<th>All Children</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable entered:</td>
<td>Beta:</td>
</tr>
<tr>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Boys</td>
<td></td>
</tr>
<tr>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Variable entered:</td>
<td>Beta:</td>
</tr>
<tr>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Whites</td>
<td></td>
</tr>
<tr>
<td>R-square-.081</td>
<td></td>
</tr>
<tr>
<td>Variable entered:</td>
<td>Beta:</td>
</tr>
<tr>
<td>Parent Educ.</td>
<td></td>
</tr>
<tr>
<td>Final F=7.469*;df=(1,85)</td>
<td></td>
</tr>
<tr>
<td>Nonwhites</td>
<td></td>
</tr>
<tr>
<td>Variable entered:</td>
<td>Beta:</td>
</tr>
<tr>
<td>none</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05; **p<.01; ***p<.001
TABLE 9  Correlational Analysis for Variables Related to Children’s Beliefs About What Most People Do

Most Children Eat Cold, Sugared Cereal for Breakfast

<table>
<thead>
<tr>
<th>Eat Sugar</th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>.156*</td>
<td>.185</td>
<td>.140</td>
<td>.149</td>
<td>.213</td>
</tr>
<tr>
<td>Controlling for:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.243**</td>
<td>-----</td>
<td>-----</td>
<td>.217*</td>
<td>.396*</td>
</tr>
<tr>
<td>Race</td>
<td>.242**</td>
<td>.271*</td>
<td>.233*</td>
<td>.210*</td>
<td>.375*</td>
</tr>
<tr>
<td>Reading Level</td>
<td>.236*</td>
<td>.312*</td>
<td>.215*</td>
<td>.202*</td>
<td>.392*</td>
</tr>
<tr>
<td>Occ. Status</td>
<td>.230**</td>
<td>.314*</td>
<td>.182</td>
<td>.202*</td>
<td>.305</td>
</tr>
<tr>
<td>Parent Educ.</td>
<td>.243**</td>
<td>.298*</td>
<td>.222*</td>
<td>.223*</td>
<td>.305</td>
</tr>
<tr>
<td>5th Order Partial</td>
<td>.252**</td>
<td>.379**</td>
<td>.200</td>
<td>.214*</td>
<td>.404*</td>
</tr>
<tr>
<td>N</td>
<td>(102)</td>
<td>(40)</td>
<td>(57)</td>
<td>(81)</td>
<td>(16)</td>
</tr>
</tbody>
</table>

Regression analysis for Children’s Beliefs About What Most People Do

Most Children Eat Cold, Sugared Cereal for Breakfast

All Children
R-square=.055
Variable entered: Beta: TV Viewing .235*
Final F=6.259*; df=(1,1107)

Girls
Variable entered: Beta: none

Boys
Variable entered: Beta: none

Whites
R-square=.046
Variable entered: Beta: TV Viewing .214*
Final F=4.077*; df=(1,85)

Nonwhites
Variable entered: Beta: none

*p<.05; **p<.01; ***p<.001
TABLE 10 Correlational Analysis for Variables Related to Children’s Beliefs About What Most People Do

**Eat Snack Food Often and Have Healthy Diet**

<table>
<thead>
<tr>
<th>Snack Often</th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>.165*</td>
<td>.203</td>
<td>.132</td>
<td>.180*</td>
<td>.085</td>
</tr>
<tr>
<td>Controlling For:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.253**</td>
<td>-----</td>
<td>-----</td>
<td>.307**</td>
<td>.020</td>
</tr>
<tr>
<td>Race</td>
<td>.253*</td>
<td>.206</td>
<td>.267*</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>Reading Level</td>
<td>.269**</td>
<td>.162</td>
<td>.286*</td>
<td>.311**</td>
<td>.045</td>
</tr>
<tr>
<td>Occ. Status</td>
<td>.268**</td>
<td>.177</td>
<td>.312**</td>
<td>.298**</td>
<td>.135</td>
</tr>
<tr>
<td>Parent Educ.</td>
<td>.251**</td>
<td>.152</td>
<td>.287*</td>
<td>.262**</td>
<td>-.041</td>
</tr>
<tr>
<td>5th Order Partial</td>
<td>.231**</td>
<td>.096</td>
<td>.278*</td>
<td>.256**</td>
<td>-.067</td>
</tr>
<tr>
<td>N=</td>
<td>(103)</td>
<td>(40)</td>
<td>(58)</td>
<td>(82)</td>
<td>(16)</td>
</tr>
</tbody>
</table>

Regression analysis for Children’s Beliefs About What Most People Do

**Eat Snack Food Often and Have Healthy Diet**

All Children
R-square = .07
Variable entered: Beta:
TV Viewing .268*
Final F=8.395**; df=(1,108)

Girls
R-square = .084
Variable entered: Beta:
TV Viewing .290*
Final F=5.712*; df=(1,62)

Boys
Variable entered: Beta:
none

Whites
R-square = .097
Variable entered: Beta:
TV Viewing .312*
Final F=9.261**; df=(1,86)

Nonwhites
Variable entered: Beta:
none

*p<.05; **p<.01; ***p<.001
TABLE 11 Correlational Analysis for Variables Related to Children’s Beliefs About What Most People Do

**Most People Eat Standing Up**

<table>
<thead>
<tr>
<th>Eat Stand</th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>.139*</td>
<td>.258*</td>
<td>.039</td>
<td>.186*</td>
<td>-.039</td>
</tr>
<tr>
<td>Controlling For:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.131</td>
<td>-----</td>
<td>-----</td>
<td>.247*</td>
<td>-.179</td>
</tr>
<tr>
<td>Race</td>
<td>.152</td>
<td>.215</td>
<td>.110</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Reading Level</td>
<td>.141</td>
<td>.240</td>
<td>.039</td>
<td>.249*</td>
<td>-.238</td>
</tr>
<tr>
<td>Occ. Status</td>
<td>.134</td>
<td>.217</td>
<td>.053</td>
<td>.240*</td>
<td>-.192</td>
</tr>
<tr>
<td>Parent Educ.</td>
<td>.120</td>
<td>.178</td>
<td>.049</td>
<td>.222*</td>
<td>-.191</td>
</tr>
<tr>
<td>5th Order Partial</td>
<td>.126</td>
<td>.184</td>
<td>.090</td>
<td>.207*</td>
<td>-.111</td>
</tr>
<tr>
<td>N=</td>
<td>(103)</td>
<td>(40)</td>
<td>(58)</td>
<td>(82)</td>
<td>(16)</td>
</tr>
</tbody>
</table>

Regression analysis for Children’s Beliefs About What Most People Do

**Most People Eat Standing Up**

<table>
<thead>
<tr>
<th>Eat Stand</th>
<th>All Children</th>
<th>Girls</th>
<th>Whites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable entered: Beta:</td>
<td>none</td>
<td>Variable entered: Beta:</td>
<td>none</td>
</tr>
<tr>
<td>Boys</td>
<td>Variable entered: Beta:</td>
<td>none</td>
<td>R-square=.064</td>
</tr>
<tr>
<td>Variable entered: Beta:</td>
<td>TV Viewing</td>
<td>.253*</td>
<td></td>
</tr>
<tr>
<td>Final F=5.896*; df=(1,86)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonwhites</td>
<td>Variable entered: Beta:</td>
<td>none</td>
<td></td>
</tr>
</tbody>
</table>

*p*.05; **p*.01; ***p*.001
TABLE 12 Correlational Analysis for Variables Related to Children’s Beliefs About What Most People Do

<table>
<thead>
<tr>
<th>Fun Eating</th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>-.073</td>
<td>-.019</td>
<td>-.016</td>
<td>-.049</td>
<td>-.106</td>
</tr>
<tr>
<td>Controlling For:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>-.104</td>
<td>-----</td>
<td>-----</td>
<td>-.125</td>
<td>.072</td>
</tr>
<tr>
<td>Race</td>
<td>-.102</td>
<td>-.133</td>
<td>-.040</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Reading Level</td>
<td>-.123</td>
<td>-.156</td>
<td>-.087</td>
<td>-.129</td>
<td>-.026</td>
</tr>
<tr>
<td>Occ. Status</td>
<td>-.105</td>
<td>-.124</td>
<td>-.054</td>
<td>-.133</td>
<td>.063</td>
</tr>
<tr>
<td>Parent Educ.</td>
<td>-.114</td>
<td>-.135</td>
<td>-.080</td>
<td>-.126</td>
<td>-.078</td>
</tr>
<tr>
<td>5th Order Partial</td>
<td>-.071</td>
<td>-.172</td>
<td>-.018</td>
<td>-.119</td>
<td>.111</td>
</tr>
<tr>
<td>N=</td>
<td>(103)</td>
<td>(40)</td>
<td>(58)</td>
<td>(82)</td>
<td>(16)</td>
</tr>
</tbody>
</table>

Regression analysis for Children’s Beliefs About What Most People Do

Most People Have Fun Eating

- All Children
  - Variable entered: Beta: none
  - Girls
    - Variable entered: Beta: none

- Boys
  - Variable entered: Beta: none
  - Whites
    - Variable entered: Beta: none
  - Nonwhites
    - Variable entered: Beta: none

*p<.05; **p<.01; ***p<.001
TABLE 13 Correlational Analysis for Variables Related to Children’s Beliefs About What Most People Do

Most People Eat Even When They are not Hungry

<table>
<thead>
<tr>
<th>Not Hungry</th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>-.047</td>
<td>-.062</td>
<td>-.032</td>
<td>-.090</td>
<td>.143</td>
</tr>
<tr>
<td>Controlling For:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>-.014</td>
<td>-----</td>
<td>-----</td>
<td>-.073</td>
<td>.231</td>
</tr>
<tr>
<td>Race</td>
<td>-.012</td>
<td>.096</td>
<td>-.079</td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>Reading Level</td>
<td>-.023</td>
<td>.053</td>
<td>-.085</td>
<td>-.079</td>
<td>.205</td>
</tr>
<tr>
<td>Occ. Status</td>
<td>-.005</td>
<td>.191</td>
<td>-.092</td>
<td>-.055</td>
<td>.252</td>
</tr>
<tr>
<td>Parent Educ.</td>
<td>.022</td>
<td>.216</td>
<td>-.065</td>
<td>-.001</td>
<td>.125</td>
</tr>
<tr>
<td>5th Order Partial</td>
<td>.045</td>
<td>.250</td>
<td>-.106</td>
<td>.006</td>
<td>.002</td>
</tr>
<tr>
<td>N=</td>
<td>(103)</td>
<td>(40)</td>
<td>(58)</td>
<td>(82)</td>
<td>(16)</td>
</tr>
</tbody>
</table>

Regression analysis for Children’s Beliefs About What Most People Do

Most People Eat Even When They are not Hungry

<table>
<thead>
<tr>
<th>All Children</th>
<th>Variable entered: Beta: none</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>R-square = .142</td>
</tr>
<tr>
<td></td>
<td>Variable entered: Beta:</td>
</tr>
<tr>
<td></td>
<td>Parent Educ. = .376</td>
</tr>
<tr>
<td></td>
<td>Final F = 7.262**; df = (1,44)</td>
</tr>
</tbody>
</table>

Girls

<table>
<thead>
<tr>
<th>Variable entered: Beta: none</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent Educ. = .261*</td>
</tr>
<tr>
<td>Final F = 6.261*; df = (1,86)</td>
</tr>
</tbody>
</table>

Whites

<table>
<thead>
<tr>
<th>Variable entered: Beta: none</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent Educ. = .261*</td>
</tr>
<tr>
<td>Final F = 6.261*; df = (1,86)</td>
</tr>
</tbody>
</table>

Nonwhites

| Variable entered: Beta: none |

*p<.05; **p<.01; ***p<.001
TABLE 14 Correlational Analysis for Variables Relating to Body Images

**Girls Need to Diet More Than Boys Do**

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>-.103</td>
<td>.248*</td>
<td>.001</td>
<td>-.051</td>
<td>-.132</td>
</tr>
<tr>
<td>Controlling For:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>-.084</td>
<td>-----</td>
<td>-----</td>
<td>-.067</td>
<td>-.187</td>
</tr>
<tr>
<td>Race</td>
<td>-.067</td>
<td>.144</td>
<td>-.052</td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>Reading Level</td>
<td>-.081</td>
<td>.206</td>
<td>.029</td>
<td>-.064</td>
<td>-.094</td>
</tr>
<tr>
<td>Occ. Status</td>
<td>-.090</td>
<td>.208</td>
<td>-.006</td>
<td>-.087</td>
<td>-.049</td>
</tr>
<tr>
<td>Parent Educ.</td>
<td>-.080</td>
<td>.222</td>
<td>-.001</td>
<td>-.064</td>
<td>.007</td>
</tr>
<tr>
<td>5th Order Partial</td>
<td>-.084</td>
<td>.208</td>
<td>-.001</td>
<td>-.063</td>
<td>-.206</td>
</tr>
<tr>
<td>N</td>
<td>(103)</td>
<td>(40)</td>
<td>(58)</td>
<td>(82)</td>
<td>(16)</td>
</tr>
</tbody>
</table>

**Selecting Skinny Bodies as Ones Children Want to Have**

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
<th>Whites</th>
<th>Nonwhites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>.045</td>
<td>.009</td>
<td>.099</td>
<td>.066</td>
<td>.095</td>
</tr>
<tr>
<td>Controlling For:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.033</td>
<td>-----</td>
<td>-----</td>
<td>.009</td>
<td>-.079</td>
</tr>
<tr>
<td>Race</td>
<td>-.034</td>
<td>-.027</td>
<td>.014</td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>Reading Level</td>
<td>-.008</td>
<td>-.031</td>
<td>.084</td>
<td>-.008</td>
<td>-.153</td>
</tr>
<tr>
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<td>.059</td>
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<td>(40)</td>
<td>(57)</td>
<td>(82)</td>
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**Selecting Skinny Bodies as Healthiest**

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<th></th>
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<th>Girls</th>
<th>Whites</th>
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<td>(102)</td>
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*p<.05; **p<.01; ***p<.001
### TABLE 15 Regression Analysis for Variables Relating to Body Images

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* p<.05; ** p<.01; *** p<.001
TABLE 16 Body Images

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<td>Desires skinny body</td>
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*p<.05; **p<.01; ***p<.001
TABLE 17 Where Children Receive Information about What Kinds of Food to Eat

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<td>Television</td>
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<tr>
<td>Friends</td>
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Where Children Receive Information about Healthy Bodies

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<td>32.7%</td>
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APPENDICES
APPENDIX 1

Nutrition Survey

This questionnaire is part of a research project to find out your opinions about nutrition and health. This is not a test. The questions do not have a right or wrong answer. If you do not know an answer,, just take a guess or use your imagination. Put an "X" in the space next to the answer you have chosen or write down an answer. No one at school will see any of your answers. You do not have to answer a question if you do not want to. Thank you very much for answering these questions.

1. Which reader did you last use or are using now
   ___ Sketches
   ___ Uncharted Waters
   ___ Ride the Sunrise
   ___ Bright Wonders
   ___ Copper Sky
   ___ Landscapes
   ___ no readers this year

2. Are you a boy or a girl?
   ___ boy  ___ girl

3. Do you eat breakfast every school morning?
   ___ yes, every school day
   ___ about 3-4 times a week
   ___ about 1-2 times a week
   ___ hardly ever

4. How often do you eat sugared cereal for breakfast?
   ___ every day
   ___ once or twice a week
   ___ 3-4 times a week
   ___ only on weekends
   ___ never

5. A "nutritious" breakfast is:
   ___ always a very big meal
   ___ a meal that only tastes good
   ___ a healthy meal that you should start your day with

6. A "balanced" diet means:
   ___ a group of foods that weigh the right amount
   ___ a group of foods that gives you body everything that it needs
   ___ a meal that only has one kind of food
7. Which one of the following is the best example of a "nutritious" breakfast?
   ___ a glass of orange juice and a bowl of cereal with milk
   ___ three pancakes and three pieces of cinnamon toast
   ___ a glass of apple juice and two pieces of toast

Next are some questions asking what you think most people do

8. Most people eat many of their meals on the run.
   ___ very likely
   ___ somewhat likely
   ___ likely
   ___ not very likely
   ___ not likely at all

9. Most people can frequently snack on potato chips, candy, pretzels, etc. and not get fat.
   ___ very likely
   ___ somewhat likely
   ___ likely
   ___ not very likely
   ___ not likely at all

10. Most children eat sugared, cold cereal for breakfast.
   ___ very likely
   ___ somewhat likely
   ___ likely
   ___ not very likely
   ___ not likely at all

11. Most people can eat snack foods often during the day and still have a healthy diet.
    ___ very likely
    ___ somewhat likely
    ___ likely
    ___ not very likely
    ___ not likely at all

12. Most people eat standing up.
    ___ very likely
    ___ somewhat likely
    ___ likely
    ___ not very likely
    ___ not likely at all

13. Most people have fun while they are eating.
    ___ very likely
    ___ somewhat likely
    ___ likely
    ___ not very likely
    ___ not likely at all

14. How often each week do you eat at a fast food restaurant (like McDonald's, Wendy's, Burger King's, etc.)?
    ___ never
    ___ 1-2 times
    ___ 3-4 times
    ___ 5 or more times

15. A meal at a fast food restaurant is as nutritious as a meal prepared at home.
    ___ very likely
    ___ somewhat likely
    ___ likely
    ___ not very likely
    ___ not likely at all
16. Girls need to watch their weight more than boys do
   ___ very likely
   ___ somewhat likely
   ___ likely
   ___ not very likely
   ___ not likely at all

17. Do you have a snack while watching television?
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always

18. Do you eat a meal while watching television?
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always

19. How often do you eat a meal sitting down with your family?
   ___ never
   ___ 1-2 times a week
   ___ 3-4 times a week
   ___ 5-6 time a week
   ___ once every day

20. How often do you eat a snack each day?
   ___ hardly ever
   ___ 1-2 times
   ___ 3-4 times
   ___ 5 or more times

21. How likely are you to eat carrots, fruit, cheese, or yogurt for snacks?
   ___ very likely
   ___ somewhat likely
   ___ likely
   ___ not very likely
   ___ not likely at all

22. How likely are you to eat chips, cookies, candy, cupcakes, or fruit rollups (e.g. funfruits) for snacks?
   ___ very likely
   ___ somewhat likely
   ___ likely
   ___ not very likely
   ___ not likely at all

23. During the day, how likely are you to drink milk, water, fruit juices, or Juicy Juice when you are thirsty?
   ___ very likely
   ___ somewhat likely
   ___ likely
   ___ not very likely
   ___ not likely at all

24. During the day, how likely are you to drink Kool-Aid, sodas, Hawaiian punch, Sip Ups, or Hi-C when you are thirsty?
   ___ very likely
   ___ somewhat likely
   ___ likely
   ___ not very likely
   ___ not likely at all
25. Have you ever been on a diet to lose weight?
   ___ yes   ___ no

26. Have you ever not eaten something because you did not want to gain weight?
   ___ yes   ___ no

27. Please look at the drawings below and put the number of the one that you think is the healthiest.
   ___

28. Please put the number of the body that you would like to have.
   ___

29. How important is it to you to have a well balanced diet?
   ___ not very important
   ___ a little important
   ___ important
   ___ very important

30. Do you eat when you are feeling sad because you feel better?
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always

31. Do most people eat even when they are not hungry?
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always

32. How often do you eat while standing up or running around?
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always

33. On a school day about how many hours do you usually watch television?
   Between the time you get home and dinner
   ___ none
   ___ less than one half hour
   ___ less than one hour
   ___ between one and two hours
   ___ between two and three hours
   ___ more than three hours
   After dinner and before bedtime
   ___ none
   ___ less than one half hour
   ___ less than one hour
   ___ between one and two hours
   ___ between two and three hours
   ___ more than three hours
34. During the weekend, about how many hours of television do you watch each day?
   ___ none
   ___ less than one hour
   ___ between one and two hours
   ___ between two and three hours
   ___ between three and four hours
   ___ more than four hours

35. How much do you weigh?
   ___ pounds

36. How tall are you?
   ___ feet  ___ inches

37. Do you think that you need to...
   (check one space)
   ___ lose weight
   ___ stay the same weight
   ___ gain weight

38. Where do you get your information about what kinds of food you should eat?
   school
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always
   parents
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always
   television
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always
   books
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always

39. Where do you get most of your information about how to get and keep a healthy body?
   school
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always
   parents
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always
   television
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always
   books
   ___ hardly ever
   ___ sometimes
   ___ often
   ___ always
friends

hardly ever
sometimes
often

40. What is your mother's job?


41. What is your father's job?


42. Did your mother attend college?

yes
no

43. Did your father attend college?

yes
no

44. What is your racial group?

white
Asian
African American
native American
Hispanic
other

45. How old are you?


REFERENCES


