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Nan Elizabeth Daniels
Iowa State University

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Women, weight and the media: A study of media uses and effects
among female Iowa State University first-year students

by

Nan Elizabeth Daniels

A Thesis Submitted to the
Graduate Faculty in Partial Fulfillment of the
Requirements of the Degree of
MASTER OF SCIENCE

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Signatures have been redacted for privacy

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Ames, Iowa

1993

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INTRODUCTION

This introductory chapter will present an overview of weight concern and preoccupation in America, particularly among females, as well as the destructiveness of such concern and the role the media plays in promoting overvaluation of thinness. It will also present a justification of this study's examination of weight concern and associated media use among young female college students.

Millions of Americans, primarily women, are pouring money, time and energy into a 33 billion-dollar-a-year, unregulated weight-control industry that did not exist 20 years ago, whose aggressively marketed diets are not all based on a thorough understanding of scientific research (Coles & Ganguzza, 1990; Kilbourne, 1993). Sixty-five million Americans are unhappy about the size of their bodies ("Smart losers' guide," 1990). One in two women, along with one in four men in America—approximately 20 million people—are presently trying to lose weight ("An IQ test," 1992). Surveys show that one out of two women go on a diet at least twice a year, but only one out of four women needs to lose weight ("At what price," 1991).

Researchers have found that women are far more likely than men to be concerned about dieting and weight, to display more depression and self-consciousness related to weight, and to diet more often (Dyrenforth, Wooley, & Wooley, 1980; Klesges, 1983; Rodin, Silberstein, & Striegel-Moore, 1984). Women are also more likely than men to want to lose weight for reasons of appearance rather than health (Schwartz, Thompson, & Johnson, 1982).

Connor-Greene (1988) has suggested that for women, the purpose of weight

loss is not to avoid obesity or to stay within normal weight limits, but to pursue slenderness.

Ninety to 95 percent of the individuals with eating disorders are women. It is estimated that one to two percent of teenaged girls are anorexic (American Anorexia/Bulimia Association, Inc., 1992). Young women are at high risk for developing eating disorders, partially because of societal pressures to be slim, and partially because of the changes they undergo during adolescence. Included in these developmental changes are rapid weight changes and the need for increased self control. Female adolescents, in particular, may perceive weight gain as threatening to their need for self control, as they attend to messages about the social importance of thinness in females (Bruch, 1978; Garner & Garfinkel, 1982; Hawkins, Turell, & Jackson, 1983; Silverstein, Peterson, & Perdue, 1986). Along with the need to belong and be accepted by peers, adolescent preoccupation with and critical self-examination of appearance can lead young women to engage in dangerous weight-control measures ("When growing pains hurt," 1991).

Weight concern is not confined to women and female adolescents, however. Two out of three pre-teen and adolescent females believe they would be happier if they were thinner (American Anorexia/Bulimia Association, Inc., 1992). Reports have been made of high percentages of normal-weight fourth-grade girls who diet, and of nine to 12 year olds, especially girls, who are excessively concerned about weight and becoming fat (Kilbourne, 1987; Voss, 1991; Zaslow, 1986). Eating disorders have even been identified in five- to eight-year-old children (American Anorexia/Bulimia Association, Inc., personal communication, March 10,

1992). Considering the apparent relationship between restrained eating and eating disorders, "dieting itself might be the 'eating disorder' that should be the focus of prevention and treatment" (Polivy & Herman, 1985).

Some researchers suspect that disordered eating might be proliferated by women who teach their friends how to diet, binge and purge (Rodin et al., 1984; Thompson & Schwartz, 1987). Schwartz et al. (1982) found that most female college students who purged had a close friend who also purged, but that those who did not purge seldom had met or even heard of another woman who purged. According to the American Anorexia and Bulimia Association, five percent of college-aged women exhibit bulimic behavior; three in 10 women and nearly all teenagers know someone with symptoms of anorexia nervosa (1992). In Shefer's 1987 study of female undergraduates, many of the students "reported feeling envious of anorexics or bulimics" (p. 420). Positive attitudes toward anorexics, and, in some cases, admiration of their emaciated appearances have been found among their friends and families (Branch & Eurman, 1980; Shefer, 1987).

Researchers have found considerable overlap among women with clinically identified eating disorders and normal women, in terms of eating behaviors and attitudes toward body and weight (Rodin et al., 1984). Schwartz et al. (1982) found that the conversations of normal-weight college women were difficult to distinguish from those of anorexic subjects. They comment: "We are impressed by the tendency of some normally-functioning, normal-weight women to organize their thinking, their emotional distress and their social lives around anorexic-like concerns" (p. 34). This may indicate that body weight distortions, particularly in females, might be very common

in non-clinical populations (Klesges, 1983).

In studies of college students, researchers found that females failed to see themselves as underweight when they were and perceived themselves to be overweight when they were not (Connor-Greene, 1988; Klesges, 1983). Many of those who did not even think of themselves as overweight still wanted to lose weight (Connor-Greene, 1988). In a recent study of Tufts University freshman and sophomore women, 85 percent reported that they were dissatisfied with their weight, yet 85 percent of them were at or below their ideal weight. Sixty percent said that they were currently on or had just previously been on a diet ("Forget the freshman 10," 1990).

Some researchers feel that there is a 'normative discontent' among women regarding weight, and that eating disorders are the consequence of 'normative' behavior taken to extremes (Rodin et al., 1984). They contend that eating disorders simply lie on a continuum with "normal" concerns about weight and eating. Interestingly, physicians have identified gradations of the "classic" eating disorders, in which subjects imitate behaviors of the patient with anorexia nervosa, exhibit symptoms similar to those of anorexia nervosa and bulimia nervosa, or have serious problems of eating and weight concern (Button & Whitehouse, 1981; King, 1986; Silber, 1987).

Some researchers contend that American society's attitudes and behaviors related to food, eating and body weight are similar to those of the anorexic (Polivy, Garner, & Garfinkel, 1986). Our society has developed a view of fatness as pathologic; we fear it and are obsessed with it. We have become so preoccupied with thinness that we have institutionalized our weight concern (Polivy et al., 1986). Commercialization of weight concern and

communication about thinness is so pervasive that marketers are even promoting greeting cards that pertain to weight and body shape.

"Diet/Fitness" and "Diet Humor" now have a slot beside the birthday and get well greeting card sections. However, the "humor" primarily consists of negative, deprecating and demeaning sentiments referring to "forbidden foods" and shame related to food consumption, weight and bodily appearance.

Through the media, Americans are exposed to negative images of fatness, and to thin female images that society associates with positive qualities such as attractiveness, success and intelligence (Dyrenforth et al., 1980; Gagnard, 1986; MacKenzie, 1987¹; Smith, 1985). The thin standard of attractiveness for American women is a cultural imperative that has been the norm in the media for the last 20 to 30 years, yet content analyses reveal that the media's portrayals of women do not reflect reality (Gagnard, 1987; Garner, Garfinkel, Schwartz, & Thompson, 1980; Silverstein, Perdue, Peterson, & Kelly, 1986). Fashion and the media reinforce the unrealistically thin "ideal" female figure; the media teach women what the ideal body looks like and how to attain it (Bruch, 1978; Rodin et al., 1984; Smith, 1985), often via unhealthy practices. Since there has been a slim standard of attractiveness in the media at least since the early 1960s (Gagnard, 1987; Garner et al., 1980; Silverstein et al, 1986b; Silverstein et al., 1986c), most of today's young women have grown up under its standards.

First-year female college students may be among those particularly at risk for developing eating disorders (Bruch, 1978; Garfinkel & Garner, 1982; Shefer, 1987; Thompson & Schwartz, 1982; "When growing pains hurt,"

¹ The exact publication year of this reference was unavailable from any known source.

1991). The first year student's transition from home to college brings stresses and adjustments and a concomitant shift from her primary reference group (family) to a reference group of peers. During times in which people are rapidly changing reference groups, their values, attitudes and beliefs are more apt to change (Hunter, 1983; K. A. Smith, personal communication, February 7, 1990). At this particular transition in their lives, these women may be vulnerable to the lure of disordered eating patterns as a way to achieve the thin ideal, given the female norms of dietary restraint and the social and academic pressures surrounding new college students (Connor-Greene, 1988). Social concerns about dating and peer acceptance may influence young women, who have been socialized to perceive attractiveness and slimness as necessary for interpersonal success (Hawkins & Clement, 1980). Residence hall living allows for interpersonal communication and easy exposure to new ideas. At the same time, these women are able to make their own food choices readily and more consciously than they perhaps did at home. College dining hall fare may differ in content and variety from what they have been accustomed to eating. In addition, increased scholastic demands may mean a change in their sleeping and activity patterns, and may mean a more sedentary lifestyle. The "freshman 10", the 10 pounds that a first-year female college student is said to gain during the first year of college, is just a myth ("Forget the freshman 10," 1990). Nevertheless, it may represent one of many concerns and fears about bodily appearance that young women bring with them to college. If female first-year students' attitudes, beliefs and behaviors regarding appearance, weight and dieting can be understood, interventions targeted to these young women might be better designed.

Statement of Purpose

The primary purpose of this study is to understand first-year female college students' attitudes, beliefs and behaviors regarding weight, and to determine to what degree their purposeful media use is associated with those attitudes, beliefs and behaviors. Secondary purposes are (a) to answer the call of previous researchers for more studies of normal female populations regarding weight issues, (b) to contribute to the body of research that has examined relationships between media use and appearance issues, and (c) to explore general trends in this population regarding media use habits, bodily appearance, weight concern and weight control techniques.

Significant findings may further elucidate the normal late-adolescent weight milieu, and may determine a connection between the use of the media and issues regarding bodily appearance. Findings may indicate a need for balancing of media content, in terms of their presentation of women, in order that healthy attitudes, beliefs and behaviors can be fostered in young American female consumers of the media.

An examination of the weight milieu will begin in the next chapter with a review of pertinent literature.

LITERATURE REVIEW

Overview

This literature review will familiarize the reader with the weight milieu, focusing on societal beliefs, practices and institutions as well as physiological, biological and anthropological considerations. Following presentation of the literature, the need for the study will be justified. Definitions of variables will then follow, and finally, research hypotheses will be proposed.

The Normative Discontent Among Women About Weight

Weight and body shape are the primary criteria by which women evaluate their own attractiveness (Rodin et al., 1984). Weight may determine a woman's perception of her ability to participate in the world. If a woman perceives her weight to be a problem, achieving thinness may be her first priority among life-improvement issues (Dyrenforth et al., 1980). For women, weight issues are often a central core around which other issues revolve. Thus, weight may be an indicator of self-worth and value as a woman. It also can be an indicator of the way in which a woman compares herself to, even competes with, other women (Rodin et al., 1984).

For many women, their weight history is a handle on their past and their hoped-for future; weight is the lens through which experience is viewed. A bad day or a bad year is one in which they felt fat; a New Year's resolution to lose weight is virtually the same as a wish for a happy year, for thinness and happiness are nearly synonymous. (Rodin

et al., 1984, p. 291).

For men, weight and body shape are important but are not central to perceived attractiveness (Rodin et al., 1984). Men tend to perceive their current, ideal and most attractive physiques as almost identical; women tend to perceive their ideal figures more often as thinner than both their current figures and the figure they think is most attractive to men (Britton, 1988; Fallon & Rozin, 1985). Men's self-perceptions allow them to be generally satisfied with their own bodies, while women's self-perceptions encourage dissatisfaction and put pressure on women to lose weight (Fallon & Rozin, 1985). Women are more likely than men to want to lose weight for reasons of appearance, but the reasons are not always related to pride or conceit. Shame and social pressure are the reasons (Kilbourne, 1993), and they lead to women's preoccupation with their own appearances. In response to a cultural imperative that women be attractive—that is thin—and given that thinness is not, for many women, their natural body build, women appear vain because they persistently expend much effort and attention in the pursuit of the svelte ideal (Rodin et al., 1984, p. 294).

The Alteration of Body Weight

According to medical statistics, one out of four Americans is obese. Americans put more effort into weight loss than any other generation, yet we are twice as obese as our ancestors at the turn of the century. According to Kelly D. Brownell, prominent author in the field of eating disorders, over a five year period, a person stands a better chance of recovering from most forms of cancer than from obesity (Coles & Ganguzza, 1990).

American Board of Nutrition's C. Wayne Callaway, M.D., who testified in recent congressional hearings on the weight loss industry, has expressed concern that many of the popular commercial weight-loss programs reflect the old notion that weight loss is a matter of self-control; if one just eats less, one will lose weight (Coles & Ganguzza, 1990). However, constitutional factors may be the major determinants of weight (Wooley & Wooley, 1982). Obesity may result from a genetic predisposition; some racial groups are predisposed to obesity due to a lower-than-normal metabolic rate ("At what price," 1992; Coles & Ganguzza, 1990). Some people are more efficient at depositing calories as adipose tissue, rather than losing calories as heat. But eating too much or being too inactive are probably the etiologies most commonly noted as causes of obesity (Coles & Ganguzza, 1990; Dyrenforth et al., 1980). A widely held belief among the general public and some health professionals (Coles & Ganguzza, 1990) is that body weight is a function of calories taken in versus calories expended in bodily functions (Wooley & Wooley, 1982), with exercise being the activity most recognized as a calorie burner. But this concept does not take into consideration that there are metabolic differences between people, and indeed, within any one individual. Studies of human subjects have shown that eating and exercise are not linearly associated in all people in the same way (Bennett & Gurin, 1982; MacKenzie, 198?). Yet commercial weight loss programs do not consider basal metabolic rate differences important enough to make allowances for those differences in their programs (MacKenzie, 198?).

The setpoint theory of weight

According to setpoint theory, each person has a point, or more accurately, a weight range that his or her body tries to maintain, and regardless of over- or under-eating the body will compensate via metabolic rate to try and maintain this weight range (Bennett & Gurin, 1982). If a person overeats, his or her body will gain some weight, but after about two weeks will begin to burn off the excess calories as a function of raised metabolic rate. Conversely, if a person diets, he or she will lose some weight, but his or her body will soon see the situation as starvation and in order to protect the fat stores, will lower metabolism. This interpreted starvation prepares the body to store calories more effectively. In long-term caloric deprivation then, calories are burned more slowly, so that even very few calories will maintain a particular weight. When the individual returns to eating normally, he or she will gain weight. Thus, dieting becomes less and less effective for normal-weight and obese individuals. Because a decreased metabolic rate does not permit a person to keep slim on a normal diet, he or she gains weight very easily, and begins a long struggle to live normally under impossible conditions (Bennett & Gurin, 1982; Freedman, 1984).

The setpoint is not a rigid, automatic device, but is somewhat adjustable. It is influenced by environmental changes and the history of one's ancestors. It is also influenced by the quality and nature of food, such as flavor, texture, smell, greasiness and sweetness. Sugar and fat composition as well as variety of food are major triggers that raise the setpoint (Bennett & Gurin, 1982). It has been reported that three out of five calories that Americans consume are either sugar or fat (Coles & Ganguzza, 1990). Perhaps this society's increased

use of prepared and fast foods with high sugar and fat content has contributed to obesity by raising setpoints.

Physical activity and weight

Physical activity has been found to have some effect on lowering the setpoint. A certain amount of exercise can assist an individual in reaching a minimum weight and minimum food intake, but beyond a certain threshold, more exercise may not lead to a significant decrease in body fat. When a low setpoint is maintained by very high levels of activity, such as marathon running, an individual can remain thin on a high caloric intake. This has the added advantage of a higher intake of vitamins and minerals. Despite a limited effect and little hard evidence that activity lowers the setpoint, physicians do find that those individuals who succeed in weight loss (measured by long-term maintenance of that weight loss) are those who increase and maintain a higher level of activity during and after the weight loss program (Bennett & Gurin, 1982; Coles & Ganguzza, 1990).

Whether physicians and researchers agree with the tenets of the setpoint theory, or just consider exercise as expending calories, exercise does, in practice, play a valuable role in weight loss and maintenance. Physicians say that behavior change is a central component for weight-loss success and that exercise is an essential component of behavior change (Coles & Ganguzza, 1990). So why in America, is dieting, rather than exercise, seen as the way to adjust body weight (Bennett & Gurin, 1982; Millman, 1980)? One reason is the common subscription to the "calories in, energy out" concept of weight, which implies that the basal metabolic rate remains constant (Bennett & Gurin,

1982). If this is true, then there is no reason to emphasize exercise as a way to increase the basal metabolic rate. Another reason for not emphasizing exercise is that it is difficult to monitor and quantify (Bennett & Gurin, 1982). The third reason is that exercise takes time and energy in an age in which people are leading very busy lives. Diets appear to be easier than exercise; merely avoiding certain foods and eating others takes less effort and time than does exercise (Bennett & Gurin, 1982). But Margaret MacKenzie, medical anthropologist, notes that some popular diets require excessive amounts of time to measure and record everything that is eaten (198?). Perhaps our society focuses on dieting as a means of weight management because it requires control of bodily urges.

Control and Society

In Western society, and particularly in America, there is an intense focus on control. The Western concept of human nature is that the mind is superior to the body; the body is potentially dangerous and cannot be trusted. It is the duty of the mind to control the body. We fear letting the body get out of control because something that is considered unacceptable in our society might be the result (MacKenzie, 198?).

The Western concept of human nature also embraces virtues that are the hallmark of a good human being. In addition to self control, these are self discipline, willpower, moral responsibility, rationality and competence. And these qualities are the very things that people talk about when they discuss weight and weight loss (MacKenzie, 198?).

If we accept the genetic and metabolic role in regulating weight, to

which we may or may not have access, then we feel a sense of powerlessness, a sense of lack of freedom and a lack of choice....Self control is very important, and you can't get control over your genetics. So we have sacrificed the data about biological variation, partly because we want to believe it's environmental reasons, those we can change, and not genetic reasons that may be affecting our weight gain. (MacKenzie, 198?)

When societies industrialize, there is an associated shift from external social control to internal social control. Western society developed a concept of character that involves the conscience, the duty of and responsibility for internal control (MacKenzie, 198?). The idealization of thinness may be a method of imposing internal control in a society in which there is reduced external control (Polivy et al., 1986). Perhaps the obsession with dieting is really the maintenance of social order. If social control means conformity and deviance, fatness is deviance (MacKenzie, 198?). Western culture is obsessed with body weight, because being fat means being a social outcast (Garner, Garfinkel, & Goldbloom, 1987; Polivy et al., 1986; Wooley & Wooley, 1982).

Fatness as the responsibility of the individual

If controlled body weight is the virtue of a good, moral person, fatness becomes the responsibility of the individual and is assumed to be under control of the individual (Dyrenforth et al., 1980; MacKenzie, 198?; Rodin et al., 1984). People are blamed for what they weigh, and regardless of medical evidence, being overweight is fundamentally viewed as an intentional act

(MacKenzie, 1987; Millman, 1980).

Even health professionals may consider the individual who does not achieve and sustain weight loss as non-compliant, rather than suspecting the weight loss regime itself (MacKenzie, 1987). Maddox and Liederman (1969) showed that a group of physicians and medical students judged their fat patients to be slow, stupid, unsuccessful, passive (lazy), not nice, unhappy, weak-willed, ugly and awkward (cited in Wooley & Wooley, 1982). These professionals may be ignoring metabolic variations in and among people, because the medical paradigm that governs treatment has been tainted by cultural values. Steeped in the culture, even professionals are subject to moral judgments of weight issues. Treating a patient for a sprained ankle just does not evoke the same moral judgments as does obesity (MacKenzie, 1987). Commenting on the prevalent attitudes toward fatness, Wooley and Wooley (1982) cite a medical journal advertisement in which a physician, being told by a fat patient that she "eats like a bird", imagines a large bird of prey flying with a pig in its talons. In a content analysis of medical journal advertisements, Hawkins and Aber (1988) found negative, outdated images, demeaning language, and recurrent themes of failure, compliance and simplicity in advertisements that depicted women. They maintain that these advertisements can have a negative effect on the health care women receive. The medical world, by designing medical equipment for thin people, seldom attributing health problems to thinness, and blaming illness on being fat, defines fat people as abnormal (MacKenzie, 1987). MacKenzie (1987) comments that The University of California's refusal to accept fat people's donation of their bodies for medical study has important consequences, as does

surgical training primarily being performed on thin people, since medical students are denied the experience of working with fat bodies.

Prejudice against fat people

Studies show that fat people are not equally given the benefits and opportunities that others in the general population receive (Dyrenforth et al., 1980). Margaret MacKenzie (198?) contends that prejudice against fat people is far worse than racial prejudice; people cannot be blamed for being born with a certain skin color. But since people are believed to be responsible for the fat on their bodies, it is acceptable to voice prejudice against fat people. Overweight people are thought to be less intelligent, have difficulty gaining admission into college, have more difficulty in getting jobs and getting promoted in jobs, have trouble obtaining life and health insurance and have difficulty in adopting children (Dyrenforth et al., 1984; MacKenzie, 198?; Millman, 1980).

Even children as young as three years old are able to recognize differences in body types and make value judgments based on body type (Dyrenforth et al., 1980; Zaslow, 1986). The director of a Philadelphia eating disorders treatment center says that children are put into social situations much earlier than previous generations were, due to the use of day care centers. Several years earlier, children are making the connection that "body weight is related to food", and armed with cultural attitudes about obesity, are judging peers on the basis of weight (Zaslow, 1986, p. 1). Research psychologist Susan Wooley has noted that many studies indicate that fat children are 'hated at a very early age'. In one such study, six-year-olds used

words such as 'lazy', 'stupid' and 'ugly' to describe silhouettes of an obese child (Zaslow, 1986, p. 1). It is interesting to note that these are some of the very words physicians and medical students used to describe their fat patients in Maddox and Liederman's 1969 study.

Children show clear preferences for a mesomorph body type (muscular, athletic build) over ectomorph (long, slender build) and endomorph (round, fleshy build) body types, regardless of their own body types (Dyrenforth et al., 1980; Staffieri, 1967). Lerner, Karabenick and Meisels (1975) found that children wanted to, and did, keep more distance from endomorphs than from the other two body types, ectomorphs and mesomorphs. When evaluating body types, children and adults assign negative qualities to endomorphs. This finding has been found across age, race, sex, socioeconomic status and geographical region of the United States, and among children in rural Mexico (Dyrenforth et al., 1980). In a study of kindergarten children, Dyrenforth, Freeman and Wooley (1978) found that 91 percent of subjects with a preference preferred a thin rag doll over a fat one. Sherman, Seeman and Berch (1979) found that prospective parents, when presented with a drawing of a chubby child, judged the child to be less friendly, less likeable, less desirable, more stupid, more immature, lazier and dirtier than drawings of a thin and a "medium" child (cited in Wooley & Wooley, 1982). When Wooley and Wooley attempted to photograph both male and female children, they found that parents refused to let them photograph fat children, and would block a fat child from camera range, or would push a thin child in front of a fat child, asking the researchers to photograph "this one" (Wooley & Wooley, 1982, p. 67).

Parents and other adults who are significant in a child's life can easily contribute to overemphasis of body image and thinness (Voss, 1991). Children need a supportive family environment in which they can feel loved and can develop a sense of self-worth, regardless of what they weigh ("Parent talk shapes," 1992; Voss, 1991). Evidence indicates that frequent critical or negative comments and responses from parents may be central to the development of personality traits such as feelings of ineffectiveness, interpersonal mistrust, fears of maturity, perfectionism, body dissatisfaction and drive for thinness that lead to inappropriate feelings about food and body image ("Parent talk shapes," 1992). And these personality traits are among the predisposing factors for the development of eating disorders (Garfinkel & Garner, 1982).

Fatness and stereotyping

Social stereotypes are often built around visible and distinctive personal characteristics that are usually the first things noticed in social interaction. These stereotypes serve to influence information processing in ways that strengthen and confirm the stereotypes (Snyder, Tanke, & Berscheid, 1977).

Feminists feel that a woman must internally categorize her gender that is externally validated by others through appearance—an appearance that is interpreted by cultural norms (Michelman, in press). Others respond to her as attractive or unattractive based on stereotypes (Snyder et al., 1977). Since other people continue to look for, call upon and interpret information that will be consistent with those stereotypes, she receives consistent external validation of attractiveness or unattractiveness, and internally categorizes this information.

If an individual's self concept develops from the observation of what others think about that individual, and if children learn early in life that fatness is bad and unattractive, such awareness must contribute significantly to the developing self-concept (Dion, Berscheid, & Walster, 1972; Dyrenforth et al., 1980; Staffieri, 1967; Zaslow, 1986). Thus, the overweight girl internalizes the idea that fat is ugly, and she must lose weight or deal with the consequences. The normal-weight girl internalizes the idea that she must avoid being overweight at all costs (Dyrenforth et al., 1980).

Is it any wonder that shame occupies a central place in women's relationships to their bodies? "In shame, one experiences one's self, rather than merely one's behavior, as faulty; one's self concept plummets, and one feels worthless" (Lewis, 1971, cited in Rodin et al., 1984, p. 293). Women's scrutiny, evaluation and criticism of their bodies, which seldom match the ideal, result in "painful, derogatory conclusions about the adequacy of the self" (Rodin et al., 1984, p. 293).

According to feminists, stereotypes of attractiveness are, to some degree, presented and labeled by the media. These media images of attractiveness and the positive qualities associated with those images do not reflect the incidence of thin, model-like body types found among women in the general public (Kilbourne, 1993; Smith, 1985). Yet they have the power to create social reality and influence perceptions of reality (Michelman, in press). Linda Lazier Smith, researcher of women's images in advertising, found that "normal" and anorexic college women and female high school students all had a thin ideal body image and felt that the media had influenced their formation of that image. All three groups indicated that success was

directly related to thinness, but this belief was most pronounced among the anorexics (Smith, 1985). Smith (1985) and Peterson (1987) found anorexics to be significantly more influenced by media images. According to Peterson (1987), advertisements created strong images of the desirability of being thin, which encouraged the female college subjects to keep their weight down.

Society and Media Use

Cultivation theory

Cultivation theory proposes that the media produce a generally uniform picture of social reality that is not consistent with the real world (McQuail, 1987), and that repeated exposure to this content can influence the consumer's perceptions of social reality to reflect the media portrayals of the world (Wimmer & Dominick, 1983). The consumer may make incorrect generalizations to his or her social environment based on observations he or she makes of the media (Wimmer & Dominick, 1983). According to cultivation research, cultivation effects are generally considered to be cumulative; media-user perceptions of reality are more likely to be affected when the media user has been exposed to images and messages repeatedly over time (Tan, 1979).

In an experimental research design using magazines, Ritchins (1991) found that after viewing advertisements containing beautiful models, female college students rated average women as less attractive and were less satisfied with their own attractiveness. Despite post-viewing lowered satisfaction with self-attractiveness, subjects found the advertisements appealing and liked the products featured in them (Ritchins, 1991). Ritchins (1991) concluded that

exposure to idealized images might possibly have a cumulative effect on feelings about the self. Using an experimental research design, Tan (1979) showed that high school girls who were exposed to a single, saturated exposure of beauty commercials exhibited evidence of cultivation effects in their responses regarding sex appeal, youth and beauty, rating beauty as important in their personal roles and in their popularity with men. If cause-and-effect results can be found in a single experiment, stronger, lasting effects are likely to occur in reality, where long-term, repeated exposure of media content occurs (Tan, 1979).

Cultivation research has primarily been focused on television; researchers contend that TV has powerful effects and shapes society (McQuail, 1987). More frequent viewers, therefore, are thought to perceive the world differently from less frequent viewers, and are more likely to believe that television is a reflection of the real world (Wimmer & Dominick, 1987). Researchers have found evidence that television can cultivate fear, alienation and interpersonal mistrust in more frequent TV viewers. Frequent viewers have been found to have lower self esteem, to adopt stereotypical gender roles and to choose stereotypical career roles (Beuf, 1974; Morgan et al., 1982; Rubin, Perse, Hahn, & Taylor, 1987; Tan & Tan, 1979).

However, critics of cultivation effects research have questioned its assumptions, conceptualization, methodology and strength of research findings. Some feel that potential cultivation effects can occur, not from inordinate exposure levels, but from content selection as determined by audience differences, attitudes, perceptions and activities (Potter, 1986; Rubin et al., 1987). According to Potter (1986), viewers who believe that television

content is real are more likely to be influenced by it than are those who believe the content is very different from real life.

Researchers suggest that some adaptations be made in the testing of cultivation theory to include other influencing variables (Rubin et al., 1987). They say that demographics, program exposure and audience activity explain only a small portion of cultivation, and suggest that personality traits, personal experience variables and regional diversity can add to the explanation of personal perceptions (Rubin et al., 1987). It has also been suggested that a viewer's program selection, perceived program realism, attitudes and goal-directed, selective use of specific program content as well as active interpretation of media messages are valuable in the testing of cultivation theory (Rubin et al., 1987; Wimmer & Dominick, 1983). Several of these socio-psychological influencing variables are components of the uses and gratifications theory of media use. For this reason, uses and gratifications theory is a logical adjunct to cultivation theory in the study of cultivation effects.

Uses and gratifications theory

According to uses and gratifications theory, the audience's choices of and exposure to media content is motivated by their social and psychological needs, wants and requirements. The use of the media is based on gratification of those needs, many of which are related to the individual's social environment (Palmgreen, 1984). "Members of mass audiences do not experience the media as anonymous and isolated individuals, but rather as members of organized social groups and as participants in a cultural milieu"

(Johnstone, 1974, cited in Palmgreen, 1984, p. 25).

Central to uses and gratifications theory is the concept of active, goal-directed audience members who make media choices and take what they want from the media based on gratifications they seek and the degree to which they believe the media source can meet their needs (Katz, Blumler, & Gurevitch, 1974; Palmgreen, 1984). The media consumer is able to identify his or her interests, goals and motivations in choosing the media, and the media are considered to be an option among other sources of need satisfaction (Katz et al., 1974).

Most of the research that addresses motivated media use has focused on societal structures like economics, education and available media choices, and social processes like social contacts, integration into the community and family communication patterns (Palmgreen, 1984). Researchers have identified a lack of understanding of the role that psychological needs, wants and requirements play in motivation for media use, and have suggested that psychological theories be applied to the exploration of psychological motives for media choice and use (Palmgreen, 1984). Katz, Blumler and Gurevitch (1974) called for the exploration of social factors and individual conditions under which media users have needs or uses for media content that is intended to change their impressions of reality, or expose them to new cultural ideas.

Women and Media Content

Thinness in the media and in reality

Gagnard (1987) found discrepancies between body types in the media and actual incidence of thinness in society. However, in a content analysis of

Ladies' Home Journal and Vogue from 1901 to 1981, researchers found a correlation between media images and actual weights of women (Silverstein et al., 1986c). In that 80-year period, the standard of curvaceousness twice reached low curvaceousness points; during the mid-1920s, and from 1965 to 1981. During the mid-1920s the proportion of very thin college-aged women increased. At the same time, the proportion of periodical articles dealing with obesity increased, but with a one-year delay (Silverstein et al., 1986c). This is not uncommon, considering the fact that mass media coverage of health issues typically follows, rather than precedes public concern (K. A. Smith, personal communication, April 6, 1990). During the mid-1920s, organizations such as the American Medical Association, American Dietetic Association and the United States Government expressed concern that the slim standard was leading women to use unhealthy methods of weight reduction in order to achieve the stylish silhouette (Silverstein et al., 1986c).

In a study of 30 years of Ladies' Home Journal, McCall's and Woman's Day, Gagnard (1987) found a higher percentage of thin models in 1980 than over the previous decades. Average models outnumbered the thin models throughout the three decades, but in 1950, 85 percent of the models were average and only three percent were thin; by 1980, 50 percent of the models were average and 46 percent were thin. In a content analysis of photographs of film actresses, researchers concluded that the portrayed standard of attractiveness is less curvaceous now than it has been in the past (at least since the 1930s) (Silverstein et al., 1986b). A magazine content analysis revealed that from 1959 to 1979, there was a trend toward a thinner standard among Playboy centerfolds (Garner, Garfinkel, Schwartz, & Thompson, 1980). At

the same time, there was a trend toward a slimmer standard in Miss America Pageant contestants, and from 1970 to 1979, the winners were thinner than the average contestant. However, over that 20 year period (1959 to 1979), the average female was becoming heavier, as a result of improved nutrition (Garner et al., 1980). It is interesting to note that in several women's magazines (Good Housekeeping, Harper's Bazaar, Ladies' Home Journal, Vogue and Woman's Day), from 1959 to 1978, there was an increase in the number of diet articles, with the most significant number occurring from 1970 to 1978, when the Miss America pageant winners were thinner than the average contestant (Garner et al., 1980).

Mixed media messages

Even today, magazines that hail the accomplishments of women also present thin models and diets (Kilbourne, 1993; Rodin et al., 1984). Linda Lazier Smith comments, "...Magazines are our friends....We believe the articles, and we believe the ads" ("Women's image in ads," 1988, p. 6). She says that women get the latest diets from their magazines and follow them. In Lazier Smith's opinion, there has been a move toward "normalcy" in advertising, so that women are "not quite so young, not quite so perfect, and not quite so thin, but they're still very, very thin by readers' standards" ("Women's image in ads," 1988, p. 6). She adds, "Women have to understand that they are being manipulated by messages and those messages aren't well connected to reality." ("Women's image in ads," 1988, p. 6). Men have grown up with a different self-confidence level about their bodies, seeing them as functional, and not central to their perceptions of attractiveness. Thus, they

are not as significantly affected as are women, in terms of messages about appearance (Kilbourne, 1993; Smith, 1985; "Women's image in ads," 1988).

The media also differentially reinforce messages about dieting. Women receive many more messages about eating than do men, and those messages tell women to be slim and stay in shape, while at the same time think about food and cooking (Kilbourne, 1993; Silverstein et al., 1986b). In a content analysis of television characters, women were found to be slimmer than men, and the difference was not due to age differences (Silverstein et al., 1986b).

Body shape and perceived capability

In yet another content analysis, Silverstein, Perdue, Peterson, Vogel and Fantini (1986) found that in periods of rapidly increasing proportions of professional women in the work force, the standard of bodily attractiveness in the media becomes noncurvaceous. Women who are concerned with the way in which others view their intelligence tend to prefer slim, noncurvaceous bodies, perhaps because curvaceousness is associated with femininity and femininity has been associated with a lack of intelligence and professional incompetence (Silverstein et al., 1986a). Beck, Ward-Hull and McLearn (1976) found that women who valued nontraditional roles and options for women preferred smaller, thinner bodies. These women associated a larger, more ample form with the view of a woman as a wife and mother. Kleinke and Staneski (1980) found that women depicted as having large busts were judged to be less intelligent and less competent. "It may be that dissatisfaction with weight and striving for achievement are positively related, and that women who have a high need to be professionally successful also have a great need to

experience success in weight control" (Rodin et al., 1984, p. 293). Margaret MacKenzie (198?) wonders what women might be able to achieve if they could eliminate the time they spend and the amount of pain and low self esteem they live with as a result of being preoccupied with body size and weight.

A trend toward muscularity

A recent Gallup poll designed and administered for American Health magazine revealed a correlation between college education and a woman's desire to be "fit". Women in the poll felt that they were not quite in shape, and wanted to be stronger, regardless of what men wanted them to be (Britton, 1988). The media has begun to use more "fat-free", muscular-looking models, communicating the idea that strong is beautiful ("At what price," 1991; Freedman, 1984). Despite a possible trend toward a more muscular, less emaciated "ideal look", the thin ideal is not completely out; women still weigh 10 pounds more than they would like to, and want to be one to two dress sizes smaller. However, only 35 percent of women would like a thin body type and 50 percent think that an average body type is preferable (Britton, 1988).

Some researchers speculate that women may aspire to a masculine-looking physique because they identify with it as a symbol of the power that men have in our society (Polivy et al., 1986). Having a muscular, mesomorphic body type that is characteristic of males may be a way for a woman to look less feminine while competing in the workplace, and may be related to her desire to be "more like a man" in her professional achievements (Britton, 1988, p. 70; Rodin et al., 1984). According to American Health, the

trend for muscularity "still allows women to keep their natural curves" (Britton, 1988, p. 70). Researcher Brett Silverstein speculates that "baby boomers" who entered the work force in the late 1970s are now having babies, and are finding that femininity and motherhood are not threatening their income; thus the curves are acceptable (Britton, 1988). But the case may be different for females in late adolescence who likely have not had the experience of a career.

Biological and Anthropological Considerations

Women and body fat

For the average woman, achieving a body type other than endomorph is against her nature. Women are born with more fat than men, and normally accumulate more body fat as they grow older ("At what price," 1991; Coles & Ganguzza, 1990; Rodin et al., 1984). Medical studies show that a higher percentage of women are overweight than men at every age group; in every race, women have a higher percentage of body fat than the men of the race (Beller, 1977; Coles & Ganguzza, 1990). Throughout life, women undergo developmental changes that serve to put more fat on their bodies ("At what price," 1991; Beller, 1977; Rodin et al., 1984). Men do not have comparable developmental milestones throughout their lifespans, so there is less variation in male physiques in society. Men come closer to maintaining their early body shapes and thus, come closer to attaining their ideal body image than do women (Beller, 1977). Historian Roberta Pollack Seid says that fashion decrees that womens' biological destiny is unappealing, and instead presents them with athletic, boyish images to emulate ("At what price," 1991).

Researcher David Garner notes that "'our culture's shape-expectations for women are inconsistent with their biological endowments'" (Zaslow, 1986, p.1).

Beller (1977) theorizes that endomorphism is an adaptive genetic tendency, dating back to prehistoric humans who had to survive in cold climates with unstable food supplies. Despite the relatively plentiful American food supply and far more temperate climate of the modern world, women still require enough fat to carry out all the processes of childbearing. In fact, girls do not even begin to menstruate until their bodies are at least 17 percent fat by weight ("At what price," 1991). The physiological changes that occur during all of the developmental milestones—puberty, pregnancy and menopause—have the potential to add more fat to a woman's body ("At what price," 1991; Cederlöf & Kaij, 1970; Rodin et al., 1984).

Body weight and health

The pursuit of thinness is not necessarily equated with the quest for improved health, as the media and weight-loss industry have proclaimed (Rodin et al., 1984; Wooley & Wooley, 1982). The idea that body weight is directly related to heart attack and death (Keys, 1980; Sorlie, Gordon, & Kannel, 1980) has been disputed by Sorlie et al. (1980) in their "Framingham Study", which raised questions about the standards of ideal weight used by the insurance industry. Sorlie et al. (1980) found that in the middle 60 percent of weight distribution for women, there is no relationship between relative weight and mortality. Dr. C. Wayne Callaway, who was instrumental in the development of revised dietary guidelines for Americans, contends that weight

alone does not determine risk for health problems, and so should be considered along with body shape, blood pressure and blood cholesterol ("The dietary guidelines," 1992). He says that a woman could, without compromising her health, weigh even more than the federal government's latest suggested weight guidelines. This is because the distribution of extra weight in women is typically located on the hips and thighs, and not in the abdomen, where weight gain has been linked to greater risk of health problems ("At what price," 1992; Coles & Ganguzza, 1990). Interestingly, the male fat distribution pattern is typically located in the abdominal area, and therefore, fatness in men should be of greater concern in our society than is fatness in women. However, it is women who are sent earnest messages about the importance of weight control, and who dutifully attend to those messages ("At what price," 1991; Coles & Ganguzza, 1990; Polivy et al., 1986; "The dietary guidelines," 1992).

Need for This Study

Researchers have called for further study of normal female populations of varying ages in regard to (a) sociocultural factors that contribute to the development of eating disorders, (b) feelings and concerns about bodily appearance, and (c) the role of the media both as an information source and as influential in promoting weight concern, chronic dieting and eating disorders (Rodin, 1984; Schwartz, 1982; Silverstein et al., 1986b; Smith, 1985).

Research is particularly needed in the area of media uses and effects, in determining how women use the media as sources of information about appearance and to what degree they believe in and are influenced by that

information. The results of this study may have implications for researchers in related fields of study, as well as for mass media curriculum educators, media producers, media-monitoring organizations, public health professionals, and women's and human-rights organizations. If the following hypotheses are supported, results may indicate that cultivation effects are occurring in the population studied. Significant results may help to justify a call for modification of media content in order that more reality based messages can be presented, perpetuation of stereotypical associations of body type, weight and thinness can be avoided, and body dissatisfaction and the drive for unrealistic thinness can be diminished.

Definition of Variables

For the purposes of this study, goal-directed media use is defined as a respondent's (a) purposeful use of magazines and TV to find out about appearance, (b) use of information sources to find out about weight and dieting, and (c) belief in what those information sources say about weight and dieting. Body dissatisfaction is defined as a respondent's negative attitude toward her midsection body parts and bodily appearance. Drive for thinness is defined as a respondent's feelings and behaviors regarding her pursuit of thinness. Belief in cultural ideals is defined as a respondent's agreement with (a) empirically identified media themes regarding weight, (b) socially prevalent beliefs about weight and appearance, and (c) biological theories about weight.

Research Hypotheses

1. Those women who report more frequent goal-directed media use will also report higher body dissatisfaction.

2. Those women who report more frequent goal-directed media use will also report higher drive for thinness.

3. Those women who report more frequent goal-directed media use will also report stronger agreement with cultural attitudes and beliefs about weight.

A detailed discussion of the methodological elements of this study will be presented in the upcoming chapter.

METHODOLOGY

This chapter will address the survey design, sampling procedures, survey implementation, participants and setting, creation of indices and data analysis.

Preparatory Procedures

Survey design

The design and implementation of this survey was heavily based on Dillman's (1978) *Total Design Method* (TDM) of constructing and implementing mail surveys, which emphasizes the following:

1. A social utility approach, which emphasizes the recipient's importance to the study's success, and the study's benefit to a group with which the recipient identifies.
2. Personalization of materials and appeals, such as use of real signatures in blue ink, individually typed names and addresses, first-class mail and conversational statements in the survey which further persuade the recipient that the study is important and that his or her participation is important to its success.
3. Visual design of materials that foster subject participation, clarity and readability, such as a booklet format with specific page and question ordering and use of lower case type for questions and upper case type for answers.
4. Use of specific materials and packaging procedures, including business stationery and specific "mailout package" assembly procedures that

convey the message that the materials are not bulk mail and are worthy of attention.

5. Critically timed mailings, including mailing all materials on the same day of the week, early in the week, so as to insure delivery within the week that materials are mailed.

6. Proven-successful follow-up procedures, including three precisely scheduled follow-ups, each with differing purposes and increasingly persuasive appeals.

Prior to the initiation of this study, the Iowa State University (ISU) Human Subjects Review Committee reviewed the project and determined that informed consent would be properly obtained, and that the rights and welfare of the participants would be sufficiently protected (see Appendix A). Discomfort and risk to the subjects was determined to be minimal. It was expected that because many women commonly discuss weight issues, subjects would not find questions about this topic to be irregular. It was acknowledged that subjects might consider some of the weight control questions to be uncomfortable. However, subjects were informed that participation was voluntary, and thus, could choose not to answer any question, or refuse to complete the survey altogether. Throughout the research project, confidentiality was maintained.

Survey pretest

An original version of the survey was pretested in the winter of 1991 on a group of 27 female students who were enrolled in a clothing and textiles class. The group was comprised of subjects ranging in age from 17 to 26

years old, with 17 to 20-year-old women constituting 78 percent of the sample. Forty-four percent of the pretest group was comprised of first-year women, and 92 percent of the first-year women were between the ages of 17 and 19. Forty-one percent of the pretest group was comprised of first-year women who were between the ages of 17 and 19.

In a monitored session, pretest subjects were introduced to the fact that information gleaned from the pretest would be used to develop a final version of the survey, and were instructed to approach the survey booklet as though it had been delivered by mail. Subjects were asked to note any questions that were unclear, to offer suggestions, and to record the time needed to complete the survey.

Pretest results indicated that subjects were able to complete the survey in an average of 10 minutes. Based on the pretest results, several modifications were made to the survey: (a) the survey-completion time question was removed, as its information-gathering function was met in the pretest; (b) the university classification question was removed, as it was no longer needed in the final survey due to stratified sampling procedures which ensured that all subjects would be classified as female first-year students; (c) the response scale of the Drive for Thinness measure was reversed so as to maintain consistency in the polarity of survey response scales; (d) the *Self-Help* magazine category was replaced by a *Fitness* category; and (e) one question regarding interpersonal communication about *weight and dieting* was changed to be consistent with the other two questions in the series, which only addressed *weight*.

Several other modifications were made to the survey to improve its

appeal and effectiveness. These included: (a) removal of the word *media* from the survey title, so as to avoid subject bias; (b) rearrangement and re-numbering of the questions, with placement of the demographic and most objectionable questions last; (c) revision of survey instructions; (d) addition of conversational transition statements; (e) addition of two TV use questions, one quantitative and the other qualitative, to parallel the magazine use questions; and (f) broadening of the quantitative magazine use questions to include all types of magazines rather than just fashion magazines.

Study population

The population was defined as female ISU first-year students who were citizens of the United States and between the ages of 17 and 20, inclusive. First-year students were selected because they are proposed to be at risk for developing eating disorders in the transition from home to college, during which they are likely changing reference groups, values, attitudes, beliefs and lifestyles in a setting of easy access to interpersonal communication and new ideas (Bruch, 1978; Garfinkel & Garner, 1982; Hunter, 1983; Shefer, 1987; K. A. Smith, personal communication, February 7, 1990; Thompson & Schwartz, 1982; "When growing pains hurt," 1991).

The population was limited to U.S. citizens because (a) research hypotheses were derived from the review of research that has been focused primarily on American mass media and subjects, and (b) the inclusion of subjects from other cultures who have been exposed to potentially different societal and mass media messages could weaken the homogeneity of the population studied.

Seventeen- to 20-year-olds were studied, because it was expected that the majority of first-year students would be no younger than 16 and that most females older than 20 years and classed as first-year students would most likely have already (a) made an identificatory transition to a primary reference group of peers, and (b) made changes to their attitudes, values, beliefs and lifestyles as a part of experimentation with their individuality.

Sampling procedures

Multivariate studies, which examine the combined contribution of several independent and dependent variables in the explanation of a phenomenon, require larger samples than univariate studies (Wimmer & Dominick, 1987). With respect to financial limitations, a minimum sample of approximately 200 respondents (completed surveys) was desired in order to achieve a reasonable sampling error and *'fair* acceptability (Comrey, 1973).

Because the average response rate for a mail survey is 20 to 40 percent, it was estimated that under average conditions, a sample of approximately 600 subjects was needed to generate 200 completed surveys (Wimmer & Dominick, 1987). However, as Dillman (1978) has shown, the Total Design Method (TDM) of mail surveys has gleaned response rates far higher than the average mail survey, up to approximately 72 percent. Because this study's research design heavily incorporated TDM techniques, it was anticipated that response rates might be higher than average, and that a sample of fewer than 600 subjects could likely generate the needed 200 completed surveys.

In order to reduce sampling error, a stratified sampling design was used. The ISU Registrar's Office located the population of students who met

the previously described parameters, and using a sampling rate of one out of three, drew a systematic sample of 477 subjects.

Survey Implementation

Final survey procedures

As discussed earlier, the design and implementation of this survey was heavily based on the TDM approach to mail surveys. Some of the personalization procedures that Dillman (1978) advises (i.e. individually-typed addresses) were not instituted, due to the convenience of having computer-addressed envelopes and mailing labels produced in conjunction with the random sample. However, whenever possible, and as closely approximated as possible, TDM personalization procedures were followed, as in the case of the individually-applied, pressed signature. Minor adjustments were made to the prescribed size of materials, due to prohibitive costs involved in using the recommended monarch envelopes and non-standard paper sizes. However, TDM assembly instructions for the survey booklet and the "mailout package" were followed precisely. In accordance with TDM procedures, materials were always mailed on a Tuesday, to optimize likelihood of delivery within the same week as they were mailed.

Subjects chosen in the stratified sample were contacted via mail on February 19, 1991, and the data were collected during the ensuing seven weeks. Each student in the sample was mailed a survey booklet and individually-signed cover letter by first-class mail (see Appendix B). Those subjects who lived off campus were provided with stamped, self-addressed, letter-sized return envelopes for confidential return of the completed surveys.

On-campus subjects were provided with return envelopes, but neither received, nor required postage to return their surveys as instructed, via residence hall post offices, where uniform survey collection boxes had been placed. [Prior to the mailing of the surveys, ISU residence hall postal workers were instructed in appropriate survey collection procedures.] Modified informed consent was obtained by the act of a participant's returning a completed survey. The survey return rate one week after the initial mailing was 26.6 percent, which is in alignment with the typical 19- to 27-percent response rates achieved at the same point in the TDM time line.

Exactly one week after the initial mailing of the survey materials, a postcard follow-up (see Appendix C) was mailed first-class to all subjects. This follow-up was used for the purpose of thanking those who had returned their completed surveys and reminding those who had not returned their surveys to do so. Postcards bore individually-applied, pressed signatures; computer-generated mailing labels were used. The return rate after this first follow-up paralleled the typical response rates at the same point in the TDM time line, and raised the cumulative return rate to 48 percent.

Three weeks after the initial mailing of the survey, an individually-signed letter (see Appendix D) and replacement questionnaire (see Appendix B) were mailed first-class, in an envelope with an individually-typed name and address, to each subject who had not returned a completed survey. Subjects were told that their surveys had not yet been received, were reminded of their importance to the usefulness of the study, and were encouraged to complete and return their surveys.

According to TDM follow-up procedures, a postscript may be added to

the second follow-up letter for the dual purposes of (a) answering questions that non-responding subjects may have, and (b) indicating that the researcher is examining returns in an attempt to address respondent concerns. Although no questions on which to base a postscript were generated from first-week returns, a postscript to the cover letter was included as a direct-mail marketing technique, because a postscript has high readership and can offer an inducement (Moriarty, 1986). Information regarding the ten-minute average survey completion time was used in the postscript to remind subjects that a minimal investment of time was needed to complete the survey. After the second follow-up, the cumulative return rate rose to 64.9 percent.

Traditional TDM procedures include a third follow-up via certified mail, seven weeks after the original mailing of the survey. This third follow up has been shown to produce greater relative return than any of the previous mailings (Dillman, 1978). A third follow-up was not carried out in this study, due in part to the ISU residence hall mail delivery system, which would have unreasonably required subjects to make a trip to a U.S. post office to pick up a certified letter.

At the end of the seven-week data collection period, the survey response rate was 64.9 percent.

Participants

Three hundred and ten subjects (64.9 percent of those surveyed) participated in the study. Despite their first-year university classification, two of the respondents had completed more than two semesters at ISU, and thus were eliminated from the data analysis, as they did not fully meet the study

population parameters. Consequently, the number of respondents was reduced to 308, or 64.8 percent of the sample, significantly surpassing the minimum desired of 200 and achieving a *good* rating of sample size acceptability (Comrey, 1973). The 64.8 percent return rate surpassed average mail survey response rates, exceeded expectations, and contributed to reduced sampling error, which was calculated to be ± 4.5 percent at the 95 percent level of confidence.

Demographically, the respondent group was made up of the following: 1 percent 17-year-olds, 42.9 percent 18-year-olds, 51.9 percent 19-year-olds, and 4.2 percent 20-year-olds. Eighteen and 19-year-old respondents comprised 94.8 percent of the sample. Two hundred and seventy respondents, or 87.7 percent, resided in ISU residence halls, and 38 respondents, or 12.3 percent, resided in Ames and surrounding communities.

Data Examination

Prior to the development of indices and data analysis, the data were cleaned and frequencies were run. So as to strengthen the accuracy of the data analysis, several variables were excluded from statistical procedures due to excessive (250 or more, in most instances) missing cases. All nine excluded variables pertained to media use and specifically addressed the category *other*.

Variables that related to *goal-directed* media use included the following: (a) magazines and TV used to find out about *other* facets of appearance; (b) *other* magazines and *other* sources of information used to find out about weight and dieting; and (c) *other* magazines, *other* books and *other* likely-to-be-believed sources of information about weight and dieting. Although they

were not needed in hypothesis testing, two additional variables that pertained to *frequency* of media use were also eliminated due to excessive missing cases. These variables were (a) use of *other* magazines, and (b) use of *other* TV programs.

The reader is referred to Appendix B for actual survey questions.

Description of Instrument

The questionnaire was arranged in a booklet format, in accordance with Dillman's (1978) Total Design Method of mail survey construction. The booklet was made up of three 8 1/2 x 11-inch pages which were oriented in a landscape fashion, printed front and back, folded in half and stapled (see booklet cover illustration in Appendix B). Through the use of photographic reduction, each booklet page accommodated one vertically oriented, full-scale 8 1/2 x 11-inch page; full-scale pages were reduced to approximately three-quarters of their original size (see Appendix B for full-scale pages). The use of this format made it possible to print twelve pages of material on six pages, significantly reducing costs and impressions of the investment of time needed to complete the survey.

The questionnaire contained 67 questions, eight of which were open-ended, and 59 of which were close-ended. Close-ended questions contained multiple choice and rating scale answer choices. Sixty-one of the 67 questions were used in the final data analysis.

Operationalization of Variables

Media use habits

The examination of this respondent group's media use habits was focused on frequency of magazine and TV use and was assessed by six open-ended and the following close-ended questions, to which subjects responded using five-point scales ranging from *never* to *almost always*:

1. How often do you read/look at these types of magazines?
 - Diet
 - Fashion
 - Fitness
 - News
 - Sports

2. How often do you watch these general types of TV programs?
 - Comedies
 - Commercials
 - Daytime talk shows
 - Dramas
 - News
 - Nighttime talk shows
 - Soap operas

Subjects were then asked to write in responses to the following open-ended questions:

1. How many hours of TV do you usually watch each weekday?
2. How many hours of TV do you usually watch each week?
3. How many magazines do you read/look at each week?
4. How many magazines do you read/look at each month?

Finally, subjects were asked to list the magazines they used most often

and the TV programs they watched most often, and were given space to name four titles of each.

Concern about bodily appearance

Concern about bodily appearance was assessed by the following five questions related to weight and dieting awareness, behaviors aimed at weight or body shape alteration, and exercise:

1. At what age did you first become aware of your weight and dieting? [Subjects were asked to write in a response.]

2. What things have you done to change your weight or the shape of your body? [Subjects were allowed to choose more than one answer, and were asked to specify a response if they chose the *Other* category.]

- Emphasize/conceal parts with clothing
- Diet
- Exercise
- Food substitutes
- Diet pills
- Laxatives/purging
- Plastic surgery
- Nothing
- Other

3. How many times do you exercise per week?

- None
- One to two times per week
- Three to four times per week
- Five to seven times per week

4. What are your reasons for exercising? [Subjects were allowed to choose more than one answer, and were asked to specify a response if they chose the *Other* category.]

- Enjoyment
- Socialization
- Weight loss/weight control
- Muscle toning
- Cardiovascular fitness
- Stress reduction
- Other

5. Out of the reasons listed above, which is your *main* reason for exercising? [Subjects were asked to record one of the answer choices from question 4 above.]

Creation of indices

Prior to factor analysis of the following variables, a standard was established for the inclusion of items in a factor, requiring a minimum factor loading of .50 with concurrent loading of no greater than .35 on any other factors. The mean was substituted in the case of missing data.

Goal-directed media use

This tri-faceted construct was examined using 10 questions that assessed the respondents' (a) purposeful use of magazines and TV to find out about appearance, and (b) *use of* and *belief in* information sources about weight and dieting. These questions and the eight indices that were eventually created from them will now be discussed.

Media used for appearance information This facet of goal-directed media use was assessed via eight questions regarding purposeful use of magazines and TV to obtain information about dieting, exercise, fashion, hair and makeup. Subjects responded to the following questions using five-point scales that ranged from *never* to *almost always*.

1. How often do you use magazines to find out about dieting?
2. How often do you use magazines to find out about exercise?
3. How often do you use magazines to find out about fashion?
4. How often do you use magazines to find out about hair and makeup?

A simple, summed index was created from these four questions that pertained to magazine use, and was so labeled *Magazine Use*. Cronbach's alpha reliability coefficient for this index was .80. A second simple, summed index was created from the following four questions regarding TV use, to which subjects responded using five-point scales ranging from *never* to *almost always*. Factor analysis was not used in the creation of these two indices.

1. How often do you use TV to find out about dieting?
2. How often do you use TV to find out about exercise?
3. How often do you use TV to find out about fashion?
4. How often do you use TV to find out about hair and makeup?

This second index was labeled *TV Use*; Cronbach's alpha reliability coefficient for this index was .78.

Media sources used The second facet of goal-directed media use was assessed by a multi-item question that addressed use of information sources about weight and dieting. Subjects responded to the following question using five-point scales that ranged from *never* to *almost always*.

1. Please indicate how often you use the following sources to find out about weight and dieting.

- Diet magazines
- Fashion magazines
- Fitness magazines
- News magazines

- Sports magazines
- TV comedies
- TV commercials
- TV dramas
- TV news programs
- TV soap operas
- TV talk shows
- Newspapers
- Diet books
- Other books
- Diet organizations
- Sports organizations
- School-sponsored programs
- Health professionals
- Friends
- Family

Using factor analysis with varimax rotation, two-, three-, four- and five-factor solutions were performed. As Table 1 shows, the three-factor solution provided the most reasonable solution, both conceptually and statistically. Factor one, labeled *Personal Appeal*, appears to measure use of information sources that have an element of informality, such as interpersonal communication and media that address interpersonal issues and human interaction. Factor two, labeled *Diet Resources*, appears to primarily measure use of printed information that addresses dieting. Factor three, labeled *Reputable Resources*, appears to measure knowledgeable, trained interpersonal sources and news media, which generally offer factual, scientific information.

Based on the three-factor solution, three simple summed indices were formed. Cronbach's alpha reliability coefficients for the *Personal Appeal*, *Diet Resources*, and *Reputable Resources* indices were .88, .85, and .76, respectively.

Media sources believed The last facet of goal-directed media use was assessed by a multi-item question that addressed belief in information sources about weight and dieting. Subjects responded to the following question using five-point scales that ranged from *never* to *almost always*.

Table 1. Three-factor-solution factor analysis loadings of media sources used items

Item	Factor 1	Factor 2	Factor 3
	Personal Appeal	Diet Resources	Reputable Resources
TV soap operas	.85	-.02	-.00
TV dramas	.84	-.01	.15
TV commercials	.80	.13	.05
TV comedies	.80	-.09	.16
TV talk shows	.70	.15	.15
Friends	.63	.31	.22
Family	.55	.28	.28
Fashion magazines	.50	.33	.13
Diet books	.06	.92	.09
Other books	.06	.92	.09
Diet magazines	.22	.73	.21
Diet organizations	.05	.57	.22
Sports organizations	.05	.15	.66
News magazines	.17	.10	.64
Sports magazines	.17	.12	.64
Health professionals	-.15	.32	.60
Newspapers	.41	-.04	.59
School-sponsored programs	.14	.22	.54
TV news programs	.46	.00	.52
	n = 308	308	308
Percent of total variance explained	32 %	15 %	8 %
Total variance explained	55 %		

1. Please indicate how often you are likely to believe these sources of information about weight and dieting.

- Diet magazines

- Fashion magazines
- Fitness magazines
- News magazines
- Sports magazines
- TV comedies
- TV commercials
- TV dramas
- TV news programs
- TV soap operas
- TV talk shows
- Newspapers
- Diet books
- Diet organizations
- Sports organizations
- School-sponsored programs
- Health professionals
- Friends
- Family

Using factor analysis with varimax rotation, two-, three-, four- and five-factor solutions were performed. As shown in Table 2, the three-factor solution provided the most reasonable solution. Factor one, labeled *Appearance Resources*, appears to measure magazines, books and interpersonal communication sources that deal with bodily appearance. Factor two, *Interpersonal Communication Sources*, very closely parallels the *Personal Appeal* factor, and appears to primarily measure live and televised interpersonal communication. Factor three, *News Media Sources*, clearly measures news media sources of information.

Based on this three-factor solution, three simple summed indices were formed. Cronbach's alpha reliability coefficients for the *Appearance Resources*, *Interpersonal Communication Sources*, and *News Media Sources* indices were .87, .85 and .86, respectively.

Table 2. Three-factor solution factor analysis loadings of media sources believed items

Item	Factor 1 Appearance Resources	Factor 2 Interpersonal Communication Sources	Factor 3 News Media Sources
Diet books	.82	.13	.07
Diet organizations	.80	.12	.05
Diet magazines	.74	.20	.16
Fitness magazines	.72	.11	.34
Sports organizations	.64	.07	.34
Fashion magazines	.59	.43	.12
TV dramas	-.02	.84	.30
TV soap operas	-.02	.83	.27
TV comedies	-.09	.80	.30
TV commercials	.20	.72	.18
Friends	.33	.66	-.11
Family	.29	.54	-.10
TV talk shows	.34	.47	.42
News magazines	.24	.11	.80
TV news programs	.19	.24	.79
Newspapers	.23	.27	.74
n =	308	308	308
Percent of total variance explained	39%	14%	8%
Total variance explained	61%		

Body dissatisfaction

Body dissatisfaction was assessed by 10 items that made up a slightly modified version of the midsection and weight component of the Littrell, Damhorst, and Littrell (1990) body cathexis instrument. Instructions were given to subjects as follows:

Please use this seven-point scale. On this scale, (1) means that you are very dissatisfied with the item, and (7) means that you are very satisfied with

the item. Circle the number that best describes the way you feel about the following items.

- The way clothes look on my body
- Body build and proportions
- Weight
- Weight distribution
- Waist
- Tummy
- Hips
- Behind or bottom
- Thighs
- Leg shape

Internal reliability of the Littrell et al. (1990) midsection and weight component is .92, and the measure is highly correlated ($-.81; p < .0001$) with the Body Dissatisfaction subscale of Garner, Olmstead, and Polivy's (1983) Eating Disorder Inventory (EDI) (Littrell et al., 1990). [The EDI Body Dissatisfaction subscale, along with the Drive for Thinness and Bulimia subscales, assess attitudes and/or behaviors related to eating and body shape which are relevant to patients with anorexia nervosa, but may also be present in others who diet.] The EDI has been determined to have high internal consistency (Wear & Pratz, 1987).

The item *tummy* was added to the original Littrell et al. measure as an exploration of the value of including this midsection body part in the measure. The seven-point reporting scale of this modified measure was recoded prior to both index development and data analysis so as to facilitate clarity in the discussion of results (the higher the score, the more dissatisfied the subject with her midsection and weight).

Using factor analysis with varimax rotation, one- and two-factor

solutions were performed. As shown in Table 3, the one-factor solution clearly provided the best solution. This factor, labeled *Body Dissatisfaction*, appears to measure dissatisfaction with weight and the midsection of the body. Based on this one-factor solution, a simple summed index was created. Cronbach's alpha coefficient of reliability for this index was .93.

Table 3. One-factor solution factor analysis loadings of body dissatisfaction items

Item	Factor 1
Weight	.85
Hips	.85
Thighs	.83
Behind or bottom	.82
Weight distribution	.82
The way clothes look on my body	.81
Body build and proportions	.80
Leg shape	.73
Waist	.70
Tummy	.67
	n = 308
Total variance explained	62%

Drive for thinness

Drive for thinness was assessed by eight items that represented a slightly modified version of the Drive for Thinness subscale of the EDI. The instructions given to the subjects and the six-point columnar response scale, *never, rarely, sometimes, often, usually* and *always* were taken directly from the EDI. Instructions were stated as follows:

This is a scale that measures attitudes, feelings and behaviors. There are no right or wrong answers, so try very hard to be completely honest in your answers. Please read each question and place an (X) under the column that applies best for you.

1. I think about dieting.
2. I am preoccupied with the desire to be thinner.
3. I eat sweets and carbohydrates (bread, potatoes, rice, etc.) without feeling nervous.
4. I exaggerate or magnify the importance of weight.
5. If I gain a pound, I worry that I will keep gaining.
6. I feel extremely guilty after overeating.
7. I am terrified of gaining weight.
8. I have the thought of trying to vomit in order to lose weight.

Garner et al. (1983) found the Drive for Thinness subscale to have high internal consistency (.85) in a group of female patients with anorexia nervosa and in a female comparison group. The item-total correlation of the single item from the Bulimia subscale was .70 in the anorexia nervosa patients and .42 in the female comparison group (Garner et al., 1983).

The original six-point EDI response scale was reversed in this study so as to maintain consistency in the polarity of the survey response scales. All of the items from the Drive for Thinness subscale, plus one item from the Bulimia subscale were used in this study, patterned after the development of said measure by Littrell et al., in their 1990 examination of female adolescent body satisfaction, eating behaviors and clothing interests. [Using principle components analysis, Littrell et al. (1990) found the vomiting item from the EDI Bulimia subscale to be more strongly related to the Drive for Thinness factor than to their *Binging* factor, which included all other EDI Bulimia

subscale items.] Cronbach's alpha coefficient of reliability for the Littrell et al. measure was .90. One item in the drive for thinness instrument ("I eat sweets and carbohydrates [bread, potatoes, rice, etc.] without feeling nervous") was recoded because it reflects an attitude about food and eating that is in contrast to those reflected in other items in the scale.

Using factor analysis with varimax rotation, one-, two-, three- and five-factor solutions were performed. As shown in Table 4, the one-factor solution provided the best solution. This factor, labeled *Drive for Thinness*, appears to measure concern about weight gain and preoccupation with weight control. Based on this one-factor solution, a simple, summed index was formed; Cronbach's alpha coefficient of reliability for this index was .92.

Table 4. One-factor solution factor analysis loadings of drive for thinness items .

Item	Factor 1
I am preoccupied with the desire to be thinner	.87
I feel extremely guilty after overeating	.85
If I gain a pound, I worry that I will keep gaining	.85
I think about dieting	.82
I am terrified of gaining weight	.82
I exaggerate or magnify the importance of weight	.77
I eat sweets and carbohydrates (bread, potatoes, rice, etc.) without feeling nervous	.71
I have the thought of trying to vomit in order to lose weight	.68
	n = 308
Total variance explained	64%

Attitudes and beliefs about weight

Attitudes and beliefs about weight were assessed by respondents' agreement with 19 statements concerning appearance and weight. These statements were derived from (a) empirically identified media themes regarding weight, (b) socially prevalent beliefs about weight and appearance, and (c) biological theories about weight (Bennett & Gurin, 1982; Coles & Ganguzza, 1990; Dyrenforth et al., 1980; Gagnard, 1986; MacKenzie, 1987; Millman, 1980; Ritchins, 1991; Rodin et al., 1984; Smith, 1985.) Subjects responded to the following statements using a seven-point scale that ranged from *strongly disagree* to *strongly agree*:

1. The models and people in magazines and TV look good.
2. People should try to look like the models and people in magazines and TV.
3. I try to look like the models and people in magazines and TV.
4. People are responsible for what they weigh.
5. Overweight people are unattractive.
6. Slender people are happier than overweight people.
7. Slender people are more successful than overweight people.
8. Slender people are more intelligent than overweight people.
9. Anyone who tries to be slim should be able to be slim.
10. Some people can't accept what they weigh.
11. Weight is determined by calories consumed and calories used.
12. Weight can be genetically determined.
13. Women are born with more fat than men are.
14. A person has a natural weight range that his or her body tries to maintain, regardless of the calories consumed.
15. It is possible to control what you weigh.
16. Generally, women are fatter than men.
17. Some races of people are naturally fatter than others.

18. Whether I feel attractive or not is based on my weight and/or body shape.

19. Whether I feel good about myself or not is based on my weight and/or body shape.

Using factor analysis with varimax rotation, two-, three-, four- and five-factor solutions were performed. As shown in Table 5, the two-factor solution provided the most reasonable solution. Factor one, labeled *Cultural Beliefs*, appears to measure the degree to which a respondent subscribes to

Table 5. Two-factor solution factor analysis loadings of attitudes and beliefs about weight items

Item	Factor 1 Cultural Beliefs	Factor 2 Weight Facts
People should try to look like the models and people in magazines and TV	.70	-.15
I try to look like the models and people in magazines and TV	.69	-.22
Slender people are happier than overweight people	.69	-.10
Slender people are more successful than overweight people	.64	-.11
Overweight people are unattractive	.61	-.22
People are responsible for what they weigh	.60	.15
Anyone who tries to be slim should be able to be slim	.57	.04
The models and people in magazines and TV look good	.55	-.20
Slender people are more intelligent than overweight people	.53	.06
Women are born with more fat than men are	.01	.68
Generally, women are fatter than men	-.21	.67
A person has a natural weight range that his or her body tries to maintain, regardless of the calories consumed	.06	.62
Weight can be genetically determined	-.02	.62
Some races of people are naturally fatter than others	-.12	.57
	n = 308	308
Percent of total variance explained	25.5 %	10.6 %
Total variance explained	36.1 %	

media themes and images and to socially prevalent attitudes and beliefs about weight and appearance. Factor two, labeled *Weight Facts*, appears to measure the degree to which a respondent agrees with biological tenets and scientific facts about weight and fitness.

Based on this two-factor solution, two simple summed indices were formed. Cronbach's alpha reliability coefficient for the *Cultural Beliefs* index was .82 and was .67 for the *Weight Facts* index.

Data Analysis

The data were analyzed using simple frequencies, Pearson correlations, multiple regression analysis and the Increment to R^2 test. The mean was substituted in the case of missing data. Results of the data analysis and hypothesis testing will be addressed in the upcoming chapter.

RESULTS

This chapter will address the results of data analysis and hypothesis testing. Univariate and bivariate data analyses will be presented prior to the discussion of hypothesis testing.

Sample Characteristics

The following discussion of sample characteristics is based on data derived from open- and close-ended questions regarding (a) frequency of media use and (b) behaviors related to weight awareness, exercise and alteration of weight or body shape. The reader is referred to Appendix B for the actual survey questions (see questions 11, 12, 14–19, 41–44, and 66).

The data were analyzed using frequencies. The five-point numerical rating scale used in the actual questions was converted to a word scale after data analysis, so as to facilitate clarity in reporting results. The five-point scale and its corresponding labels were as follows: 1= never; 2= rarely; 3= sometimes; 4= often; and 5= almost always.

Media use habits

The majority of respondents often or almost always used fashion magazines, and based on the titles they reported, primarily used magazines whose content focused on appearance and related issues. All of the most frequently watched TV programs (a soap opera, situation comedies, news programs and a daytime talk show) depicted interpersonal interaction and/or issues related to people.

Magazine use The respondents read and/or looked at an average of two magazines per week and five magazines per month. Fifty-five percent of respondents reported that they often or almost always used fashion magazines and 27 percent reported that they sometimes used them; 18 percent of respondents reported rare to no use of fashion magazines. Thirty-six percent of respondents indicated that they often or almost always used news magazines, 30 percent reported that they sometimes did so, and 34 percent of respondents indicated that they never or rarely used them. Eighty-one percent of respondents indicated that they rarely or never used diet magazines. Fifty-seven percent of respondents reported rare to no use of fitness magazines.

Among the magazines respondents used most often were the following, listed according to percentage of use: Glamour, 30 percent; Cosmopolitan, 29 percent; Seventeen, 23 percent; Vogue, 20 percent; Mademoiselle, 19 percent.

TV use Respondents watched an average of 2 hours of TV per weekday and 14 hours per week. Three-quarters of the group often or almost always watched TV comedies, and nearly half (47 percent) of the respondents often or almost always watched soap operas. Twenty-one percent of the respondents indicated that they sometimes watched soap operas and 33 percent rarely or never watched them. Thirty-one percent of respondents reported that they often or always watched TV commercials, 28 percent stated that they sometimes did so, and 41 percent of respondents reported that they rarely or never watched TV commercials.

Regarding TV news programs, 45 percent of respondents reported that they often or almost always watched TV news; 30 percent sometimes did so, and 24 percent rarely or never watched TV news programs. Thirty percent

of the respondents often or always watched daytime talk shows and about that many sometimes watched them. Thirty-nine percent of respondents rarely or never watched daytime talk shows.

Among the most often watched TV programs were the following: "Days of Our Lives", 26 percent; "Cheers", 23 percent; "Simpsons", 18 percent; news programs (network and cable news broadcasts), 18 percent; and "Oprah Winfrey", 17 percent.

Concern about bodily appearance

Preliminary investigation of the data revealed that as a whole, this group of female ISU first-year students was very concerned with bodily appearance, and primarily used exercise, dieting and clothing to alter weight and/or body shape. The respondents exercised an average of three times per week, and their purpose in exercising appeared not to be focused on the health benefits it offered, but rather clearly on the manipulation of body weight and/or shape. Nearly three-quarters of the respondents reported that they had become aware of weight and dieting between the ages of 12 and 16 (inclusive).

Methods used to change weight or body shape Almost all of the respondents (92 percent) engaged in some form of behavior for the purpose of manipulating weight and/or body shape. Eleven percent of respondents reported the use of clearly dangerous means (starving, fasting, purging and laxative use) of altering weight or body shape (AABN, 1992; Rees, 1992; Sansone, 1984). Another 10 percent of respondents reported the use of potentially dangerous means of weight reduction and weight control (diet pills) (Food & Drug Administration, 1992; Sansone, 1984).

Ninety-four percent of the respondents indicated that they used exercise

to change weight or body shape; two-thirds of the group reported the use of diet to do so, and just over two-thirds of respondents reported the use of clothing to emphasize or conceal body parts. Twenty-seven percent of respondents indicated that they used food substitutes, such as Slim-Fast® to change their weight or body shape, and 10 percent of respondents reported the use of diet pills for that purpose. Eight percent of respondents reported the use of laxatives and/or purging to alter weight or body shape, a figure that surpasses the American Anorexia and Bulimia Association's 5-percent estimate of college-aged women who exhibit bulimia nervosa, which is typified by purging and laxative abuse.

Eight percent of respondents reported that they did nothing to alter weight or body shape. None of the respondents reported having undergone plastic surgery as a means of altering weight and/or body shape. Of the 9 percent of respondents who reported use of methods to change weight or body shape other than those provided as choices, approximately 6 percent specified *healthy eating*, and approximately 3 percent reported *fasting* and *starving*.

Reasons for exercising Large numbers of respondents indicated that five of the seven offered choices were among their reasons for exercising, namely, enjoyment, weight loss/weight control, muscle toning, cardiovascular fitness, and stress reduction. Sixty-two percent of the respondents indicated that their primary reason for exercising was related to bodily appearance.

Approximately 72 percent of respondents reported weight loss and/or weight control as among their reasons for exercising; 39 percent of respondents indicated that it was their *main reason* for exercising. Seventy-seven percent of respondents cited muscle toning as a reason for exercising

and 24 percent reported it as the main reason they exercised.

Fifty-six percent of respondents cited stress reduction as one of their reasons for exercising, but only 10 percent indicated that it was the main reason; 49 percent of respondents indicated that cardiovascular fitness was among their reasons for exercising, yet only 3 percent of the respondents cited it as their main reason.

Bivariate Analyses

Intercorrelations among goal-directed media use indices

As shown in Table 6, Pearson product moment correlations among goal-directed media use indices revealed positive and significant correlations between all variables. The strongest and weakest of these relationships will now be addressed.

Strongest relationships A correlation with a coefficient of .65 ($p < .01$) was found between the *Personal Appeal* index and the *Interpersonal Communication Sources* index. The *Personal Appeal* index reflected use of sources of information about weight and dieting, and the *Interpersonal Communication Sources* index reflected belief in sources of information about weight and dieting. The strong correlation might be a result of the respondents' dual use of and belief in these particular information sources, and is not surprising, because a person's beliefs and behaviors are likely to be consistent with each other.

A correlation coefficient of .50 ($p < .01$) was found between the *Interpersonal Communication Sources* index and the *News Media Sources* index, which might be expected, because both indices contained believed

Table 6. Intercorrelations among goal-directed media use indices

	X1	X2	X3	X4	X5	X6	X7	X8
X1 Magazine Use	—							
X2 TV Use	.55 **	—						
X3 Personal Appeal	.42 **	.46 **	—					
X4 Diet Resources	.38 **	.26 **	.29 **	—				
X5 Reputable Resources	.29 **	.34 **	.47 **	.40 **	—			
X6 Appearance Resources	.37 **	.23 **	.33 **	.38 **	.24 **	—		
X7 Interpersonal Communication Sources	.23 **	.26 **	.65 **	.23 **	.29 **	.44 **	—	
X8 News Media Sources	.17 **	.14 *	.35 **	.14 *	.37 **	.47 **	.50 **	—

* p < .05

** p < .01

sources of information about weight and dieting. The correlation might also reflect a similarity in index items that could be described as a sort of person-to-person dissemination of information.

A correlation with a coefficient .55 ($p < .01$) was found between the *TV Use* and *Magazine Use* indices, which is perhaps reflective of the fact that both indices contained items related to appearance and adornment of the body.

Weakest relationships The most weakly correlated indices all involved the *News Media Sources* index, which contained *believed* news sources of information about weight and dieting. This index was correlated weakly with the *Magazine Use*, *TV Use* and *Diet Resources* indices, all of which contained media or information source items that respondents indicated they used.

The *News Media Sources* index was weakly correlated at .17 ($p < .01$) with the *Magazine Use* index. This might be explained by the fact that only one magazine item was included in the *News Media Sources* index. It is also possible that the magazines the respondents used were not particularly news oriented, or that they were not necessarily those they believed.

The *News Media Sources* index was also weakly correlated at .14 ($p < .05$) with the *TV Use* index. Again, this might be explained by the fact that only one TV item was included in the *News Media Sources* index. It is also possible that the TV programs these respondents watched did not contain much news content.

Finally, the *News Media Sources* index was found to be weakly correlated at .14 ($p < .05$) with the *Diet Resources* index. This might be explained by speculating that the diet resources the respondents used were not

necessarily factual, or that the respondents did not consider the news-oriented sources to contain highly believable information about weight and dieting.

Intercorrelations among body dissatisfaction, drive for thinness and attitudes and beliefs indices

As shown in Table 7, Pearson product moment correlations among these dependent-variable indices revealed significant correlations in all but one case, which was the correlation between the Body Dissatisfaction and Weight Facts indices. The strongest correlations involved the Drive for Thinness index.

Table 7. Intercorrelations among body dissatisfaction, drive for thinness and attitudes and beliefs about weight (cultural beliefs and weight facts) indices

	X1	X2	X3	X4
X1 Body Dissatisfaction	—			
X2 Drive for Thinness	.60 **	—		
X3 Cultural Beliefs	.11 *	.46 **	—	
X4 Weight Facts	-.07	-.17 **	-.25 **	—

* $p < .05$

** $p < .01$

Strongest relationships A positive relationship with a correlation coefficient of .60 ($p < .01$) was found between the *Body Dissatisfaction* index and the *Drive for Thinness* index, indicating that higher body dissatisfaction was associated with higher drive for thinness. This finding is consistent with

those of other researchers who have found a positive relationship between adolescent females' dissatisfaction with the midsection of the body and their restricted eating, dieting and binging (Garner et al., 1983; Littrell et al., 1990). The *Drive for Thinness* index was correlated at .46 ($p < .01$) with the *Cultural Beliefs* index, one of the two indices that made up the attitudes and beliefs about weight variable. This result indicated that stronger agreement with prevalent cultural themes about weight and thinness was associated with higher drive for thinness.

An inverse relationship with a correlation coefficient of $-.25$ ($p < .01$) was found between the *Cultural Beliefs* index and the *Weight Facts* index, the second portion of the attitudes and beliefs about weight variable. This is not surprising, due to the fact that the *Weight Facts* index contained items regarding scientific tenets about weight and fatness, which were basically in opposition to those items included in the *Cultural Beliefs* index. It seems likely that respondents subscribed to either one or the other camps of thought regarding weight.

Weakest relationships The weakest correlations involved the attitudes and beliefs about weight indices. A positive relationship with a correlation coefficient of .11 ($p < .05$) was found between the *Cultural Beliefs* index and the *Body Dissatisfaction* index, indicating that stronger agreement with cultural ideals about weight was associated with higher body dissatisfaction. An inverse relationship with a correlation coefficient of $-.17$ ($p < .01$) was found between the *Weight Facts* index and the *Drive for Thinness* index, indicating that stronger agreement with factual information about weight was associated with lower drive for thinness.

In summary, it can be said that higher drive for thinness was associated with higher body dissatisfaction, stronger agreement with cultural beliefs about weight, and little agreement with factual information about weight.

Correlations between body dissatisfaction, drive for thinness, attitudes and beliefs about weight and goal-directed media use indices

As shown in Table 8, correlations between the goal-directed media use indices and the *Body Dissatisfaction* index were all positive. Correlations between the goal-directed media use indices and the *Weight Facts* index were all negative. None of the weight facts item correlations was significant.

Goal-directed media use and body dissatisfaction The highest correlation among goal-directed media use indices and the *Body Dissatisfaction* index involved the *Diet Resources* index. This positive relationship with a correlation of .30 ($p < .01$) indicates that more frequent use of printed information concerning dieting was associated with higher body dissatisfaction.

The weakest correlations between the goal-directed media use indices and the *Body Dissatisfaction* index involved the *TV Use* index (.17; $p < .01$) and the *Interpersonal Communication Sources* index (.17; $p < .01$).

Goal-directed media use and drive for thinness Generally speaking, the strongest correlations were found between the goal-directed media use indices and the *Drive for Thinness* index. The following correlations were found between said indices: *Magazine Use* (.34; $p < .01$), *TV Use* (.35; $p < .01$), *Personal Appeal* (.37; $p < .01$), and *Diet Resources* (.40; $p < .01$). These goal-directed media use items measured media and interpersonal communication that deal with appearance, dieting, and human interest issues.

Table 8. Correlations between body dissatisfaction, drive for thinness, attitudes and beliefs about weight and goal-directed media use indices

	BODY DISSATISFACTION	DRIVE FOR THINNESS	CULTURAL BELIEFS	WEIGHT FACTS
GOAL-DIRECTED MEDIA USE				
Media for Appearance Information	.23 **	.34 **	.27 **	-.07
Magazine Use	.17 **	.35 **	.25 **	-.11
TV Use				
Media Sources Used				
Personal Appeal	.27 **	.37 **	.31 **	-.11
Diet Resources	.30 **	.40 **	.26 **	-.10
Reputable Resources	.03	.24 **	.08	-.00
Media Sources Believed				
Appearance Resources	.21 **	.30 **	.32 **	-.07
Interpersonal Communication Sources	.17 **	.28 **	.37 **	-.07
News Media Sources	.11	.22 **	.27 **	-.05
	n = 308	308	308	308

* p < .05

** p < .01

More frequent use of these particular sources of information was associated with higher drive for thinness.

The weakest correlation (.22; $p < .01$) between goal-directed media use indices and the *Drive for Thinness* index involved the *News Media Sources* index. This relationship may indicate that respondents who had higher drive for thinness did not rely very heavily on the news media as sources of information about weight and dieting. It may also be a reflection of limited coverage of weight issues in the news media.

Goal-directed media use and cultural beliefs about weight The most notable correlations between the goal-directed media use indices and the *Cultural Beliefs* index involved the *Appearance Resources* (.32; $p < .01$) and *Interpersonal Communication Sources* (.37; $p < .01$) indices, which both pertained to *believed* sources of information about weight and dieting. It is likely that both indices contained information sources that presented messages consistent with prevalent cultural themes about weight and appearance.

In summary, then, it can be said that more frequent goal-directed media use was associated with higher body dissatisfaction, higher drive for thinness and stronger agreement with cultural beliefs about weight.

Multivariate Analyses

Several independent variables in this study were identified as contributing to the prediction of the dependent variables, and most of those independent variables were intercorrelated. Therefore, a means of examining the separate relationships between dependent and independent variables was needed. Because multiple regression analysis simultaneously examines the

influences of more than one independent variable on a dependent variable, controlling for all other variables in the equation, it was suitable for such an examination of the data (Stempel & Westley, 1981; Wimmer & Dominick, 1983). The discussion will now turn to the results of hypothesis testing using multiple regression.

Hypothesis one

The hypothesis was stated as follows: Those women who report more frequent goal-directed media use will also report higher body dissatisfaction.

This hypothesis was supported, as indicated by the results of regression analysis seen in Table 9. As evidenced by four out of five significant ($p < .01$) standardized beta weights in the equation, there was a positive relationship between goal-directed media use and body dissatisfaction. The *Reputable Resources* index was the only variable to predict a significant negative relationship between goal-directed media use and body dissatisfaction. This regression equation explained 16 percent of the variance ($p = .0002$). Although the equation did not account for a large percentage of the variance, it is worthy of mention, given the fact that there are other variables that might logically contribute to the explanation of body dissatisfaction, such as cultural influences, family communication patterns, peer group identification, social acceptance and past experiences.

Hypothesis two

This hypothesis was stated as follows: Those women who report more frequent goal-directed media use will also report higher drive for thinness.

Table 9. Standardized regression coefficients for body dissatisfaction, drive for thinness and attitudes and beliefs about weight and beliefs about weight indices regressed on goal-directed media use indices

	BODY DISSATISFACTION	DRIVE FOR THINNESS	Cultural Beliefs	Weight Facts
GOAL-DIRECTED MEDIA USE				
Media for Appearance Information				
Magazine Use	.20 **	.21 **	.19 **	-.01
TV Use	.06	.22 **	.15 *	-.10
	R ² .05 **	R ² .15 **	R ² .09 **	R ² .01
Media Sources Used				
Personal Appeal	.27 **	.29 **	.31 **	-.12
Diet Resources	.30 **	.32 **	.23 **	-.11
Reputable Resources	-.21 **	-.03	-.16 *	.10
	R ² .15 **	R ² .22 **	R ² .15 **	R ² .02
Media Sources Believed				
Appearance Resources	.17 **	.20 **	.18 **	-.05
Interpersonal Communication Sources	.10	.17 *	.26 **	-.05
News Media Sources	-.03	.05	.05	-1.9
	R ² .05 **	R ² .11 **	R ² .17 **	R ² .01
	Total R ² .16 **	Total R ² .26 **	Total R ² .23 **	Total R ² .03
n =	308	308	308	308

* p < .05

** p < .01

This hypothesis was supported, as indicated by the regression analysis results in Table 9. Six of the eight variables (indices) predicted a positive and significant relationship between goal-directed media use and drive for thinness. Five of these six variables were significant at the .01 level; the *Interpersonal Communication Sources* variable ($p = .009$) was significant at the .05 level. The regression equation predicted 26 percent of the variance. A substantial amount of the variance was accounted for by this model. The addition of other variables such as body dissatisfaction, cultural attitudes and beliefs, education and social integration might be useful in explaining more of the variance.

Hypothesis three

The hypothesis was stated as follows: Those women who report more frequent goal-directed media use will also report stronger agreement with cultural attitudes and beliefs about weight.

This hypothesis was tested using the attitudes and beliefs indices, and was performed in two regressions, with the *Cultural Beliefs* index and *Weight Facts* index each being regressed on goal-directed media use. Results of hypothesis testing are shown in Table 9.

Cultural beliefs about weight Six out of eight variables (indices) in the *Cultural Beliefs* regression revealed a positive and significant relationship between goal-directed media use and cultural beliefs about weight. All but one of these six were significant at the .01 level; the *TV Use* variable ($p = .03$) was significant at the .05 level. The *Reputable Resources* variable was the only significant ($p = .01$) variable to predict an inverse relationship between

goal-directed media use and cultural beliefs about weight. This regression equation predicted 23 percent of the variance, a substantial amount, considering the fact that other variables might belong in a model that predicts cultural beliefs about weight. Variables such as self-concept, social integration, and personal experience might also be useful in such a model.

With respect to cultural beliefs about weight, then, hypothesis three was supported.

Factual information about weight No significant relationship was found between goal-directed media use and the *Weight Facts* index. The *Weight Facts* regression equation's prediction of three percent of the variance was not significant. Thus, in regard to factual information about weight, hypothesis three was not supported.

In light of the results of the two regression equations that were used to examine the relationship between goal-directed media use and attitudes and beliefs about weight, it can be concluded that hypothesis three was only partially supported.

In summary, hypothesis testing resulted in support of hypothesis one, support of hypothesis two, and partial support of hypothesis three. These results indicate that goal-directed media use was positively related to body dissatisfaction, drive for thinness and agreement with cultural attitudes and beliefs about weight. Further discussion, interpretation, and implications of these data and results will be offered in the upcoming chapter.

DISCUSSION

This chapter will present a discussion of the study results and their implications and will also address the study limitations and recommendations for further research.

Hypothesis Testing Results

Hypothesis one

Hypothesis one was stated as follows: Those women who report more frequent goal-directed media use will also report higher body dissatisfaction. More frequent goal-directed media use was found to be positively related to higher body dissatisfaction, and therefore, hypothesis one was supported.

The positive relationship between frequent goal-directed media use and body dissatisfaction may indicate that cultivation effects were present in this group of women. It is evident that purposeful, selective use of the media is significantly related to body dissatisfaction, but because the regression equation predicted just 16 percent of the variance, the influence of that goal-directed media use may be limited.

A uses and gratifications model of media use might reasonably be used to explain the relationship between goal-directed media use and body dissatisfaction. Perhaps respondents who were highly dissatisfied with their bodies were more motivated to seek out information about weight, dieting and appearance, and specifically selected the media from a variety of information sources. This explanation is supported by the fact that the informative function of the media has consistently been found to be an important reason

for media use (Potter, 1986).

The relationship between less frequent goal-directed media use and lower body dissatisfaction might be explained by a uses and gratifications interpretation, which holds that if the media user believes she will get what she wants from the media, she is motivated to seek gratification from them; if she does not believe she will get what she wants, she will not seek gratification of her needs in the media (Palmgreen, 1984). It is reasonable to assume that respondents who were less dissatisfied with their bodies were not as motivated to seek out information sources regarding weight, dieting and appearance. It is also possible that respondents with lower body dissatisfaction did not consider the media to be useful, believable sources of information about weight, dieting and appearance.

Hypothesis two

Hypothesis two was stated as follows: Those women who report more frequent goal-directed media use will also report higher drive for thinness. More frequent goal-directed media use was found to be positively related to higher drive for thinness. Therefore, hypothesis two was supported.

The positive relationship found between goal-directed media use and drive for thinness may indicate that cultivation effects were present in this group of young women. It is possible that more frequent goal-directed users of the media had accepted stylized media images as the standard of attractiveness for women, and had adopted higher drive for thinness in the process, in order to comply with such a perceived cultural imperative. In contrast, perhaps those respondents who did not frequently use the media to

find out about appearance, weight, and dieting were not as often exposed to media images and potential misinformation, and thus, had not assimilated a media-defined ideal—that is thin—standard of attractiveness for women. In such a case, an associated lower drive for thinness might be expected, as was found in this study.

Cultivation effects have traditionally been thought to occur from simple high levels of content exposure, rather than from selective use of the media. However, researchers have recently begun to find that in the cultivation of beliefs, the amount of exposure to media content is less important than the attitudes and beliefs of those exposed (Potter, 1986). If respondents have well-established attitudes and beliefs about thinness, they might well be susceptible to the enculturating effects of frequent, purposeful exposure to media messages regarding weight and thinness.

Looking at the results from a uses and gratifications perspective, it could be speculated that those respondents who were highly driven to achieve thinness were motivated information seekers who frequently sought out the media as potentially gratifying sources of information about weight, dieting and appearance. Conversely, it is possible that those respondents who had lower drive for thinness were not motivated to gather information about thinness, whether from the media, or from other sources of information.

Hypothesis three

Hypothesis three was stated as follows: Those women who report more frequent goal-directed media use will also report stronger agreement with cultural attitudes and beliefs about weight. More frequent goal-directed media

use was found to be related to stronger agreement with cultural attitudes and beliefs regarding weight. However, goal-directed media use did not significantly predict a relationship between itself and factual information about weight. Therefore, hypothesis three was only partially supported.

The positive relationship between goal-directed media use and agreement with cultural attitudes and beliefs regarding weight may indicate that cultivation effects were present in this group of respondents. Consumers who use the media in a specific, goal-directed fashion to glean information about weight, dieting, and appearance may have their needs for that information met, but may also be subject to the unintended effects of the media (Katz et al., 1974), such as the belief that the attainable norm for the adult female body is thinness, and that attractiveness is associated with success, intelligence, happiness, and other desirable qualities.

It is also possible that those respondents who bought into the culturally prevalent perspectives regarding weight control and appearance sought out the media frequently because their ideas were affirmed and reinforced in the media. Those who strongly subscribed to cultural themes might also have looked to the media as a source of information about weight control and appearance that could add to their direct learning experiences.

Conversely, those respondents who did not agree to a great extent with prevalent cultural themes about weight might have considered the media to be unreflective of their view of reality, and not have sought them out as information sources, whether due to a lack of need for information, or the belief that the media contain little accurate content regarding weight. The latter possibility might be plausible, given the fact that no significant

relationship between goal-directed media use and factual information about weight was found. This lack of a relationship might also be attributable to a scarcity of factual information contained in the media these respondents used.

Limitations and Cautions

1. This study cannot be considered a complete test of cultivation theory, partially because cultivation theory is based on the premise that frequent and/or repeated exposure to media content, rather than goal-directed use of the media, influences the consumer's perception of social reality. In addition, this study of goal-directed media use incorporated sources of information other than mass media, such as interpersonal communication, as part of the constellation of societal messages. The inclusion of non-mass-media sources of information in this study was justified because consumers do not differentiate between the media and other sources of need satisfaction; the media are simply several choices of need satisfaction among many (Katz et al., 1974). In fact, the inclusion of information sources other than mass media sources might have strengthened the research design, because most studies of media cultivation and uses and gratifications of media use attempt to control for other forms of information and need satisfaction.

2. In terms of the survey design, some of the standard research techniques used to test cultivation and uses and gratifications theories were not used. Instead, a combination of techniques was designed, incorporating a few necessary features of both theories. For example, the questions pertaining to enculturation were based on the findings of previous content analyses.

In cultivation research, media exposure is usually examined in terms of

the amount of hours spent using the media. However, most of the media use questions in this study focused on quantified goal-directed media use rather than on the simple amount of hours spent using magazines and TV. The rationale for the study's primary focus on goal-directed media use was based on the suggestions of other cultivation theory researchers who have recommended that adaptations be made to the traditional study of cultivation effects so as to include goal-directed, selective use of specific media content (Rubin et al., 1987; Wimmer & Dominick, 1983).

In addition, simple frequency of media use was not examined in relation to other variables such as body dissatisfaction, drive for thinness and attitudes and beliefs about weight, as was goal-directed media use. This was partly due to the research design and breadth of data analysis involving goal-directed media use, and was also due to time limitations.

Most cultivation studies examine demographics of the subjects, but such personal characteristics as race, age and socioeconomic status were not examined in this study, with respect to media use habits. Also, cultivation theory testing usually utilizes questions that have two alternatives, one based on the "real world," and the other based on the "media world." This study approximated that technique in the examination of cultural attitudes and beliefs about weight, though the statements were not strictly derived from the real world versus the media world. This real world versus media world format was not used anywhere else in the survey.

Contrary to most studies of media uses and gratifications, respondents' expectations of the media were not investigated in this study; only the frequency of goal-directed media use was examined. Having information

about why the respondents used the media might have helped to illuminate the relationships between variables. In addition, it would have been helpful to have questioned subjects about the gratifications they sought in the media, so as to further understand their perceptions of the media as need-satisfying sources of information about weight and dieting.

Recommendations for Future Research

Replication of this study in other geographical regions of the country would be of value in piecing together a picture of young female college students and their attitudes, beliefs and behaviors with respect to weight concerns. It might also be beneficial to perform a content analysis of the particular magazines this population reads, particularly fashion magazines, and pair it with a study of drive for thinness, body dissatisfaction, and attitudes and beliefs about weight as they are related to the use of those magazines. Such a study could take a uses and gratifications approach, examining reasons for use of those magazines and ways in which subjects believe the magazines to satisfy their identified needs. Real world versus media world elements could also be reflected in questions.

Because this study was based on a survey format, a causative relationship between the variables could not be determined. It would be beneficial to use an experimental design to study media use, both in terms of frequency and goal-directed use, relating it to body dissatisfaction, drive for thinness, and subscription to cultural attitudes and beliefs about weight, so that these relationships could be more accurately understood.

Further examination of the relationship between goal-directed media use

and agreement with factual information about weight seems warranted, given the findings of this study. A content analysis of news media coverage of factual information about weight might be enlightening, particularly if contrasted with factual information covered in fashion and appearance-oriented magazines. Such a study might also incorporate respondent evaluation of the content, because as Grotta, Larkin & Carrell, (1976) found, when people are interested in a topic, they do not distinguish between advertising and news content (cited in Jeffres, 1986).

Summary and Implications

The young women who participated in this study were highly concerned with bodily appearance, and in large numbers, attempted to achieve weight control and/or weight loss. This study revealed that the respondents' dissatisfaction with midsection of the body and weight was positively related to drive for thinness, which is in agreement with Garner et al.'s (1983) and Littrell et al.'s (1990) findings regarding adolescent body satisfaction and eating behavior/drive for thinness. The positive correlation between body dissatisfaction and drive for thinness in this study seems reasonable, because one's attitudes and behaviors might be expected to be consistent with each other.

It is possible that the respondents who reported higher body dissatisfaction were more highly driven to achieve thinness, and thus were highly motivated to obtain information about weight and dieting. Those respondents might simply have sought out the media more frequently as sources of that information, considering that higher drive for thinness was

related to frequent goal-directed use of the media to glean information about appearance, weight and dieting. On the other hand, it is possible that the respondents in this study developed higher body dissatisfaction and higher drive for thinness in part, as a result of their more-frequent, goal-directed exposure to media content concerning weight, dieting and appearance.

Perhaps the respondents in this study were attending to socially prevalent, though not accurate, messages about slimness found in the media, that equate thinness in women with personal worth, happiness, attractiveness, success and intelligence (Bruch, 1978; Gagnard, 1987; Kilbourne, 1993; MacKenzie, 1987; Rodin et al., 1984; Silverstein et al., 1986b; Smith, 1985). The supposition that the respondents' pursuit of thinness might have been driven by media messages and societal expectations is further supported by the positive correlation between drive for thinness and agreement with cultural attitudes and beliefs about weight.

More frequent goal-directed use of the media to find out about appearance, weight and dieting was also related to the respondents' stronger agreement with cultural messages about weight. However, more frequent goal-directed media use was not significantly related to respondents' stronger agreement with factual information about weight. It is not surprising then, that an inverse correlation was found between agreement with cultural beliefs about weight and agreement with factual information about weight.

In terms of cultural beliefs about weight, respondents who agreed more strongly with prevalent cultural beliefs about weight might have been information seekers who actively sought out the media to affirm and reinforce their already-established behaviors and beliefs. Those respondents who

indicated weaker agreement with cultural beliefs about weight might have been individuals who were less influenced by the opinions of others, and therefore, might not have been motivated to seek out the media for the information it offers about weight, dieting and appearance.

Results of this study may indicate that cultivation effects of media use were present in this group of young women, as evidenced by the positive relationships found between goal-directed media use and (a) body dissatisfaction, (b) drive for thinness, and (c) cultural beliefs about weight.

The collective mass media is only one source of information about bodily appearance, but it is a source that unnecessarily contributes to unrealistic and unhealthy standards of attractiveness by creating distorted images and messages concerning women and weight (Silverstein et al., 1986b). Even if young women do seek out the media for information about bodily appearance, perhaps in adherence to cultural imperatives about weight and thinness, is distorted media content somehow more justified? Researchers have shown that the media do not accurately reflect the diversity of female body types in society, but rather, present their own "media reality" (Gagnard, 1986; Garner et al., 1980; Kilbourne, 1987, 1993; Michelman, in press; Silverstein et al., 1986b), which is an artificial world of images of women in which even the 5 percent of women who have the "right" body type are not good enough. Even *they* are sculpted—surgically, photographically and technologically, through computer digitization—to "flawlessness" (Kilbourne, 1993). And such a pervasive use of near-perfect images of women is simply not reflective of the full spectrum of female body types found in society.

The media do seem to accurately reflect the status quo, in terms of our

society's increased concern about weight and preoccupation with thinness. However, that prevalent concern is not always a healthy one. Since the media not only have an entertainment function but an information-disseminating function (Potter, 1986), modification of their content to present fewer stylized, altered female images, and ideally, more images of women that are representative of women in society at large might well contribute to the overall fostering of healthier attitudes, beliefs and behaviors in society and among consumers of the media.

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I would also like to acknowledge the contribution of the students who so kindly participated in this study, and extend my thanks to Chris Stout and Nadine Dobbe for their computer expertise and generous assistance.

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APPENDIX A: HUMAN SUBJECTS IN RESEARCH APPROVAL FORM

Checklist for Attachments and Time Schedule

The following are attached (please check):

12. Letter or written statement to subjects indicating clearly:
- a) purpose of the research
 - b) the use of any identifier codes (names, #'s), how they will be used, and when they will be removed (see Item 17)
 - c) an estimate of time needed for participation in the research and the place
 - d) if applicable, location of the research activity
 - e) how you will ensure confidentiality
 - f) in a longitudinal study, note when and how you will contact subjects later
 - g) participation is voluntary; nonparticipation will not affect evaluations of the subject
13. Consent form (if applicable)
14. Letter of approval for research from cooperating organizations or institutions (if applicable)
15. Data-gathering instruments

16. Anticipated dates for contact with subjects:

First Contact

Last Contact

February 11, 1991

March 8, 1991

Month / Day / Year

Month / Day / Year

17. If applicable: anticipated date that identifiers will be removed from completed survey instruments and/or audio or visual tapes will be erased:

March 15, 1991

Month / Day / Year

18. Signature of Departmental Executive Officer

Date

Department or Administrative Unit

10 Jun 91

Journalism and Mass Communication

19. Decision of the University Human Subjects Review Committee:

Project Approved

Project Not Approved

No Action Required

Patricia M. Keith

Name of Committee Chairperson

1-30-91

Date

Signature of Committee Chairperson

**APPENDIX B: FINAL SURVEY MATERIALS AND TO-SCALE
BOOKLET ILLUSTRATION**

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IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

College of Sciences and Humanities
Department of Journalism
and Mass Communication
114 Hamilton Hall
Ames, Iowa 50011-1180
515 294-4340

February 19, 1991

Dear Student:

Because many Americans are concerned about weight control, researchers have recommended that studies be undertaken to better understand weight issues.

You are part of a group of ISU freshman women who have been randomly selected to participate in a study of women and their attitudes about weight. I am carrying out this study as part of my master's degree thesis.

Would you please take a few minutes to fill out this survey? It should take about 15 minutes. Your answers will be kept confidential. The number on your survey is there so that I will know if your survey has been returned. As soon as I receive your completed survey, I will delete all information that connects you with your survey.

Your participation is voluntary, of course, but I think you will find the survey very interesting. It will be a great help to me. If you choose to take part in the study, please try to complete your survey by March 5, 1991.

If you have any questions, please call me (232-2574) or my research advisor, Dr. Kim Smith, at 294-0482.

Thank you very much for your assistance!

Sincerely,

Nan Daniels
Graduate Student

Women and Weight :

A Study of ISU Freshman Women

The purpose of this study is to better understand how women feel about weight.

Please answer all of the questions. If you would like to comment on any questions or explain your answers, please feel free to use the space around the questions. Your comments will be read and taken into account.

Thank you for your assistance.

114 Hamilton Hall
Iowa State University
Ames, Iowa 50011

First, I would like to ask you how you use magazines and television to find out about appearance.

How often do you use magazines to find out about the following things? (Please circle your answer on the five-point scale below, on which (1) means never, and (5) means almost always.)

	NEVER				ALMOST ALWAYS
1. DIETING.....	1	2	3	4	5
2. EXERCISE.....	1	2	3	4	5
3. FASHION.....	1	2	3	4	5
4. HAIR & MAKEUP.....	1	2	3	4	5
5. OTHER..... (Please specify)	1	2	3	4	5

How often do you use television to find out about the following things? (Please circle your answer on the five-point scale below, on which (1) means never, and (5) means almost always.)

	NEVER				ALMOST ALWAYS
6. DIETING.....	1	2	3	4	5
7. EXERCISE.....	1	2	3	4	5
8. FASHION.....	1	2	3	4	5
9. HAIR & MAKEUP.....	1	2	3	4	5
10. OTHER..... (Please specify)	1	2	3	4	5

Next, I would like to ask you how much you use the media.

11. How often do you read/look at these types of magazines? (Please circle your answer on the five-point scale below.)

	NEVER				ALMOST ALWAYS
	1	2	3	4	5
DIET.....	1	2	3	4	5
FASHION.....	1	2	3	4	5
FITNESS..... (<u>Shape</u> , etc.)	1	2	3	4	5
NEWS.....	1	2	3	4	5
SPORTS..... (<u>Tennis</u> , etc.)	1	2	3	4	5
OTHER..... (Please specify)	1	2	3	4	5

12. How often do you watch these general types of TV programs? (Please circle your answer on the five-point scale below.)

	NEVER				ALMOST ALWAYS
	1	2	3	4	5
COMEDIES.....	1	2	3	4	5
COMMERCIALS.....	1	2	3	4	5
DAYTIME TALK SHOWS.....	1	2	3	4	5
DRAMAS.....	1	2	3	4	5
NEWS.....	1	2	3	4	5
NIGHTTIME TALK SHOWS.....	1	2	3	4	5
SOAP OPERAS.....	1	2	3	4	5
OTHER..... (Please specify)	1	2	3	4	5

13. How many hours of TV did you watch yesterday?
(Please fill in blank below.)

14. How many hours of TV do you usually watch each weekday?
(Please fill in blank below.)

15. How many hours of TV do you usually watch each week?
(Please fill in blank below.)

16. How many magazines do you read/look at each week?
(Please fill in blank below.)

17. How many magazines do you read/look at each month?
(Please fill in blank below.)

18. Please list below the magazines you use most often.

1 _____

2 _____

3 _____

4 _____

19. Please list below the TV programs you watch most often.

1 _____

2 _____

3 _____

4 _____

Beginning with the next page, I would like to ask you about the sources you use to find out about weight and dieting.

20. Please indicate how often you use the following sources to find out about weight and dieting. (Please circle your answer on the five-point scale below.)

	NEVER				ALMOST ALWAYS
DIET MAGAZINES.....	1	2	3	4	5
FASHION MAGAZINES.....	1	2	3	4	5
FITNESS MAGAZINES..... (<u>Shape</u> , etc.)	1	2	3	4	5
NEWS MAGAZINES.....	1	2	3	4	5
SPORTS MAGAZINES..... (<u>Tennis</u> , etc.)	1	2	3	4	5
OTHER MAGAZINES.....	1	2	3	4	5
TV COMEDIES.....	1	2	3	4	5
TV COMMERCIALS.....	1	2	3	4	5
TV DRAMAS.....	1	2	3	4	5
TV NEWS PROGRAMS.....	1	2	3	4	5
TV SOAP OPERAS.....	1	2	3	4	5
TV TALK SHOWS.....	1	2	3	4	5
NEWSPAPERS.....	1	2	3	4	5
DIET BOOKS.....	1	2	3	4	5
OTHER BOOKS.....	1	2	3	4	5
DIET ORGANIZATIONS.....	1	2	3	4	5
SPORTS ORGANIZATIONS.....	1	2	3	4	5
SCHOOL-SPONSORED PROGRAMS.	1	2	3	4	5
HEALTH PROFESSIONALS.....	1	2	3	4	5
FRIENDS.....	1	2	3	4	5
FAMILY.....	1	2	3	4	5
OTHER..... (Please specify)	1	2	3	4	5

21. Please indicate how often you are likely to believe these sources of information about weight and dieting. (Please circle your answer on the five-point scale.)

	NEVER				ALMOST ALWAYS
DIET MAGAZINES.....	1	2	3	4	5
FASHION MAGAZINES.....	1	2	3	4	5
FITNESS MAGAZINES..... (<u>Shape</u> , etc.)	1	2	3	4	5
NEWS MAGAZINES.....	1	2	3	4	5
SPORTS MAGAZINES..... (<u>Tennis</u> , etc.)	1	2	3	4	5
OTHER MAGAZINES.....	1	2	3	4	5
TV COMEDIES.....	1	2	3	4	5
TV COMMERCIALS.....	1	2	3	4	5
TV DRAMAS.....	1	2	3	4	5
TV NEWS PROGRAMS.....	1	2	3	4	5
TV SOAP OPERAS.....	1	2	3	4	5
TV TALK SHOWS.....	1	2	3	4	5
NEWSPAPERS.....	1	2	3	4	5
DIET BOOKS.....	1	2	3	4	5
OTHER BOOKS.....	1	2	3	4	5
DIET ORGANIZATIONS.....	1	2	3	4	5
SPORTS ORGANIZATIONS.....	1	2	3	4	5
SCHOOL-SPONSORED PROGRAMS.	1	2	3	4	5
HEALTH PROFESSIONALS.....	1	2	3	4	5
FRIENDS.....	1	2	3	4	5
FAMILY.....	1	2	3	4	5
OTHER..... (Please specify)	1	2	3	4	5

Next, I would like you to respond to some general statements regarding weight.

Please use this seven-point scale. On this scale, (1) means that you strongly disagree with the statement and (7) means that you strongly agree with the statement. Circle the number that best describes what you think about the following statements.

	STRONGLY DISAGREE							STRONGLY AGREE
	1	2	3	4	5	6	7	
22. The models and people in magazines and TV look good.	1	2	3	4	5	6	7	
23. People should try to look like the models and people in magazines and TV.	1	2	3	4	5	6	7	
24. I try to look like the models and people in magazines and TV.	1	2	3	4	5	6	7	
25. People are responsible for what they weigh.	1	2	3	4	5	6	7	
26. Overweight people are unattractive.	1	2	3	4	5	6	7	
27. Slender people are happier than overweight people.	1	2	3	4	5	6	7	
28. Slender people are more successful than overweight people.	1	2	3	4	5	6	7	
29. Slender people are more intelligent than overweight people.	1	2	3	4	5	6	7	
30. Anyone who tries to be slim should be able to be slim.	1	2	3	4	5	6	7	
31. Some people can't accept what they weigh.	1	2	3	4	5	6	7	
32. Weight is determined by calories consumed and calories used.	1	2	3	4	5	6	7	

STRONGLY
DISAGREESTRONGLY
AGREE

- | | | | | | | | |
|--|---|---|---|---|---|---|---|
| 33. Weight can be genetically determined. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 34. Women are born with more fat than men are. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 35. A person has a natural weight range that his or her body tries to maintain, regardless of the calories consumed. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 36. It is possible to control what you weigh. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 37. Generally, women are fatter than men. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 38. Some races of people are naturally fatter than others. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 39. Whether I feel attractive or not is based on my weight and/or body shape. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 40. Whether I feel good about myself or not is based on my weight and/or body shape. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Next, I would like to ask you a few questions regarding what you do about weight and/or your body shape.

41. What things have you done to change your weight or the shape of your body? (You may choose more than one answer.) Please circle as many numbers as apply.

- 1 EMPHASIZE/CONCEAL PARTS WITH CLOTHING
- 2 DIET
- 3 EXERCISE
- 4 FOOD SUBSTITUTES (Slim-Fast, etc.)
- 5 DIET PILLS
- 6 LAXATIVES/PURGING
- 7 PLASTIC SURGERY (including liposuction)
- 8 NOTHING
- 9 OTHER (Please specify) _____

42. How many times do you exercise per week? (Please circle only one number.)

- 1 NONE
- 2 ONE TO TWO TIMES PER WEEK
- 3 THREE TO FOUR TIMES PER WEEK
- 4 FIVE TO SEVEN TIMES PER WEEK

IF YOU DO NOT EXERCISE, SKIP TO QUESTION 45 BELOW.

43. What are your reasons for exercising? (You may choose more than one answer.) Please circle as many numbers as apply.

- 1 ENJOYMENT
- 2 SOCIALIZATION
- 3 WEIGHT LOSS/WEIGHT CONTROL
- 4 MUSCLE TONING
- 5 CARDIOVASCULAR FITNESS
- 6 STRESS REDUCTION
- 7 OTHER (Please specify) _____

44. Out of the reasons listed above, which is your main reason for exercising? (Please put number of item in the box below.)

Now I would like to ask you some questions regarding the way you feel about weight and your body.

Please use this seven-point scale. On this scale, (1) means that you are very dissatisfied with the item, and (7) means that you are very satisfied with the item. Circle the number that best describes the way you feel about the following items.

	VERY DISSATISFIED						VERY SATISFIED
	1	2	3	4	5	6	7
45. THE WAY CLOTHES LOOK ON MY BODY.....	1	2	3	4	5	6	7
46. BODY BUILD AND PROPORTIONS.....	1	2	3	4	5	6	7
47. WEIGHT.....	1	2	3	4	5	6	7
48. WEIGHT DISTRIBUTION.....	1	2	3	4	5	6	7

	VERY DISSATISFIED							VERY SATISFIED
	1	2	3	4	5	6	7	
49. WAIST.....	1	2	3	4	5	6	7	
50. TUMMY.....	1	2	3	4	5	6	7	
51. HIPS.....	1	2	3	4	5	6	7	
52. BEHIND OR BOTTOM.....	1	2	3	4	5	6	7	
53. THIGHS.....	1	2	3	4	5	6	7	
54. LEG SHAPE.....	1	2	3	4	5	6	7	

Next, I would like to ask you some questions about the way you feel about weight and dieting.

This is a scale that measures attitudes, feelings and behaviors. There are no right or wrong answers, so try very hard to be completely honest in your answers. Please read each question and place an (X) under the column that applies best for you.

	NEVER	RARELY	SOMETIMES	OFTEN	USUALLY	ALWAYS
55. I think about dieting.	()	()	()	()	()	()
56. I am preoccupied with the desire to be thinner.	()	()	()	()	()	()
57. I eat sweets and carbohydrates (bread, potatoes, rice, etc.) without feeling nervous.	()	()	()	()	()	()
58. I exaggerate or magnify the importance of weight.	()	()	()	()	()	()
59. If I gain a pound, I worry that I will keep gaining.	()	()	()	()	()	()

- | | NEVER | RARELY | SOMETIMES | OFTEN | USUALLY | ALWAYS |
|--|-------|--------|-----------|-------|---------|--------|
| 60. I feel extremely guilty after overeating. | () | () | () | () | () | () |
| 61. I am terrified of gaining weight. | () | () | () | () | () | () |
| 62. I have the thought of trying to vomit in order to lose weight. | () | () | () | () | () | () |

Finally, I would like to ask these questions about you.

To answer the next three questions, please circle your choice on this five-point scale, on which (1) means never, and (5) means almost always.

- | | NEVER | | | | ALMOST
ALWAYS |
|--|-------|---|---|---|------------------|
| | | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 63. When you were growing up, how much did your family talk about weight? | 1 | 2 | 3 | 4 | 5 |
| 64. When you were growing up, how much did you and your friends talk about weight? | 1 | 2 | 3 | 4 | 5 |
| 65. How often do you talk to other people about weight? | 1 | 2 | 3 | 4 | 5 |

66. At what age did you first become aware of your weight and dieting? (Please fill in blank below.)

67. What age are you now? (Please circle your answer.)

1 17

2 18

3 19

4 20

5 OTHER (please write in age) _____

Is there anything else you would like to say about weight or weight control? If so, please use this space for that purpose.

Also, if you would like to share any thoughts that you think would help in the study of this issue, feel free to share them here or in a separate letter.

**If you live in an ISU residence hall,
please return this survey to your
residence hall post office.**

**Otherwise, please mail it in the
enclosed pre-addressed, stamped
envelope. Thank you.**

Thank you so much for your contribution to this study.

Women and Weight :

A Study of ISU Freshman Women

The purpose of this study is to better understand how women feel about weight.

Please answer all of the questions. If you would like to comment on any questions or explain your answers, please feel free to use the space around the questions. Your comments will be read and taken into account.

Thank you for your assistance.

114 Hamilton Hall
Iowa State University
Ames, Iowa 50011

APPENDIX C: FIRST FOLLOW-UP

February 26, 1991

Last week I mailed you a survey, seeking your opinion about women and weight concerns. Your name was drawn in a random sample of ISU freshman women.

If you have already completed and returned your survey, please accept my sincere thanks for your contribution. If you have not completed and returned your survey, please do so today. Because the survey has been sent to a small, but representative, sample of ISU freshman women, it is very important that your views be included so that the study will truly represent the opinions of ISU freshman women.

If by some chance you did not receive the survey, or it was misplaced, please call me right now, collect (515-232-2574) and I will get another survey in the mail to you today.

Sincerely,

Nan Daniels
Graduate Student

APPENDIX D: SECOND FOLLOW-UP



IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

College of Sciences and Humanities
Department of Journalism
and Mass Communication
114 Hamilton Hall
Ames, Iowa 50011-1180
515 294-4340

March 18, 1991

Dear Student:

About three weeks ago I wrote to you, seeking your opinion about women's weight concerns. As of today, I have not received your completed survey.

I have undertaken this study because many Americans, particularly women, have become concerned about weight issues. I am interested in understanding how freshman women feel about weight.

I am writing to you again because of the importance that each survey has to the accuracy of the study. Your name was drawn in a scientific sample in which every ISU freshman woman between 17 and 20 who is a U.S. citizen had an equal chance of being selected. One out of every three of these women is being asked to complete this survey.

In order for the results of the survey to accurately represent the opinions of these freshman women, it is essential that each person in the study return her survey. Let me assure you that all responses will be kept confidential.

Just in case your survey has been misplaced, I have enclosed a replacement. If you have any questions, please feel free to call me at 232-2574.

Thank you so much for your cooperation.

Cordially,

Nan Daniels
Graduate Student

P.S. Many participants have found that it only takes 10 minutes to complete the survey.