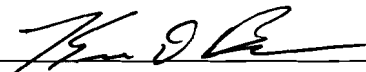


AN ABSTRACT OF THE THESIS OF

Linda Gates for the Master of Science  
in Psychology presented on June 15, 2000

Title: Influences on the Eye of the Beholder: Reaction of Women to Body Images  
Portrayed in Fashion Magazines

Abstract approved: 

The purpose of this within-subjects design was to determine if college women experienced different physiological and psychological responses to idealized body images from fashion magazines and to images from a home decorating magazine. Participants were 45 undergraduate women, ages 18 to 24, who were enrolled in a small midwestern university. Stress reaction was measured with hand temperature and the level of satisfaction with physical health, weight, and physical appearance/body image was measured by self-report. Paired sample t tests yielded no significant differences in hand temperature when viewing images in fashion magazines compared to home decorating images. There was also no significant difference in level of satisfaction with physical health or physical appearance/body image. There was a statistically significant difference regarding weight as participants reported greater dissatisfaction with weight after viewing idealized body images in fashion magazines. While the practical significance of this finding is difficult to determine, it supports previous research regarding negative reactions to idealized body images.

INFLUENCES ON THE EYE OF THE BEHOLDER:  
REACTION OF WOMEN  
TO BODY IMAGES PORTRAYED IN FASHION MAGAZINES

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A Thesis  
Presented to  
the Division of Psychology and Special Education  
EMPORIA STATE UNIVERSITY

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science

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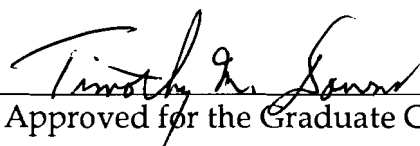
by  
Linda Gates  
August 2000

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Approved for the Division of  
Psychology and Special Education



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Approved for the Graduate Council

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## CHAPTER 1

### INTRODUCTION

The present study investigated cultural norms with emphasis on the impact idealized body images might have on women currently living in the United States. Cultural roles and expectations help individuals form self-image and can impact cognition, affect, and behavior. The way roles and expectations impact people can minimize or maximize the potential of each person within the framework of gender and other considerations. Self-fulfillment as well as improvements in society can be limited or advanced by cultural roles and expectations.

If self-image is affected negatively or if a woman experiences stress within the context of roles and expectations, the result may be damaging physically and/or psychologically. Extreme or enduring stress reactions leading to excessive stress levels present potential hazards to health. Stress has been researched extensively and excessive stress is considered a major factor in depleting the immune system. Many symptoms of disease and illness are triggered or exacerbated by too much stress (Lazarus, 1966). Society contributes to the stress level of women through the media (Stice & Shaw, 1994). Unrealistic, ideal roles and expectations bombard women with information that can be destructive to self-image and can lead to stress reactions. This study assessed the effects of idealized body images on women to determine if women experience significant stress reactions to those images as presented in fashion magazines. Changes in self-perception regarding physical health, weight, and physical appearance/body image were also investigated.



## Stress

According to Hans Selye (1974), “stress is the nonspecific response of the body to any demand made upon it” (p. 27). Selye also stated many conditions produce stress depending on individualized definitions and perceptions, but most human bodies respond with identical biochemical changes to cope with increased demand. He further explained that “stress is the common denominator of all adaptive reactions in the body” (Selye, 1976, p. 64).

Lazarus (1966) acknowledged the complexities and difficulties in defining stress, but indicated it is basically an interaction of the environment with the individual. Lazarus (1984) lists the experience of harm, the perception of threat, and the perception of challenge as stimuli producing adaptive responses resulting in a stress reaction or condition. Sources of stressors, or stimuli, may be external, internal, psychological, and physiological.

Individual perception or interpretation is a major criterion defining stress (Lazarus & Lazarus, 1994). As Lazarus indicated, the perception of threat or challenge rather than threat or challenge itself stimulates a stress reaction. It is the appraisal not the reality that influences stress reactions. Circumstances based in reality or imagination affect the body with the same physiological responses.

In any stress reaction, numerous biological responses mobilize the body to perform with greater energy, strength, endurance, and speed. Arousal reactions include increased heart rate, blood pressure, and breathing rate, increased production of sugar and production of adrenaline, noradrenaline, and corticosteroids. Some physiological activity is diminished to conserve energy. For example, blood is diverted from the digestive organs and the hands to large muscles for improved performance in what is commonly termed a “fight or

flight" response. Cessation or reduction of these and some other physiological functions enhances potential performance in other, more crucial functions (Manning, Curtis, & McMillen, 1999).

Measurement of stress. Brain waves, blood pressure, heart rate, muscle tension, finger/hand temperature, salivary output, pupillary size, and skin resistance are some of the physiological responses that can be measured to evaluate the occurrence of a stress reaction. These responses are generally not observable and must be amplified to be measured. In some cases, sophisticated equipment is required (Lazarus, 1984).

Reliability for between subjects comparison varies according to the type of measurement. Individuals are consistent in their patterns of autonomic responses from one occasion to another but not consistent with or completely similar to each other. Measurements are more reliable for a within subjects appraisal than a between subjects appraisal. The accuracy of measurement is increased if more than one measure is used and if the measurement is appropriate for the stimuli. Individual physiological differences prohibit a meaningful comparison and create unequal bases for comparison between subjects for numerous reasons (Lazarus, 1966). Size and quality of vascular systems vary and vasoconstriction potential varies.

Repeated measurements of hand temperature within subjects can be used as a comparison for assessment of changes in the response of a given individual. This measurement has been used to evaluate evidence indicating the effect of an intervention (Goldberger & Breznitz, 1982). Boudewyns (1976) found finger temperature increased significantly during relaxation and decreased significantly during stress. A stress reaction reduces blood circulation

in the hands through vasoconstriction resulting in a decrease of hand temperature. Conversely, a relaxation response increases blood circulation in the hands and therefore increases hand temperature. Fingers and toes are areas affected first by the vasoconstriction process because they have relatively small radii with relatively large blood flow (Ramsey, 1983). Hand temperature measurement has been used by many clinicians in biofeedback training and some researchers as a procedure to monitor stress or relaxation response (Goldberger & Breznitz, 1982).

For the present study, the measurement of many physiological responses was prohibited because of expense and inaccessibility to appropriate equipment. Access to digital thermometers provided the means to measure stress reactions by recording pre- and post-hand temperature of women who viewed magazine images. This laboratory experiment was designed to test for a stress reaction stimulated by an event (i.e., viewing idealized body images found in fashion magazines). While the viewing sessions were events lasting only a short time, the content of the images viewed related to societal expectations, attitudes, and gender role descriptors. Goldberger and Breznitz (1982) reported the possibility of eliciting state anxiety reactions similar to real life in a laboratory setting.

Comparison of acute and chronic stress. Wheaton (1997) compared sources of stress and differentiated between events and conditions as provocation for stress reactions. Wheaton identified major and minor events as discrete stimuli, and when perceived as stressful, result in acute stress. Wheaton distinguished acute stress from chronic stress which includes more ubiquitous stimuli such as expectations, attitudes, or circumstances in social environments or roles. Chronic

stress is contingent upon conditions while acute stress is event contingent. Physical appearance can be a factor in what Wheaton labels chronic stress because it involves expectations, attitudes, circumstances in social environments and roles. Aspects of physical appearance could also produce acute stress reactions when stimuli occur as a specific circumstance. It seems plausible that the pervasive conditions constituting chronic stress stimuli may be impacted by the intensity, duration, and frequency of events. Acute stressors could eventually lead to chronic stress. Gender roles encompass attitudes, expectations, and descriptors regarding physical appearance. The possibility of the thin ideal within cultural roles was investigated and related to acute stress reactions of women in the present study.

### Cultural Roles of Women

Expectations for behavior are put forth in subtle and obvious ways by society, cultures, subcultures, families, and individual people. Expectations are numerous and potentially powerful tools to perpetuate and organize lives within a given group. Expectations help people set goals, define roles, and establish boundaries for social interactions. Presented directly or as behaviors to model, expectations may eventually be incorporated into group status as norms of behavior. Utilized as behavioral guides, these norms often become internalized. Success or failure to conform to norms could impact a person's self-worth and status in society. Continued failure to conform to norms could contribute to chronic stress in some people.

Gender roles. According to Lepore (1997) "gender role expectations shape men's and women's behaviors and lives in powerful and sometimes stressful ways.... Institutions, laws, and norms of interacting that encourage people to act

in a role-consistent manner” (p. 138) represent values integrated into society and are imposed by society. Lepore believed these values are difficult to avoid.

In the United States, a woman’s role includes responsiveness to the needs and desires of loved ones and others. Women tend to value relationships and are more connected to others than men. Women demonstrate greater responsiveness to others than men demonstrate (Gilligan, 1982) and are expected to do so. Responsiveness to the desires of others may extend to adopting norms of physical appearance. People define themselves by how they look and in this country, thinness is a major factor (Epel, Spanakos, Kasl-Godley, & Brownell, 1996).

In a study conducted by Tiggemann and Pickering (1996) results were consistent with the sociocultural model of the ideal of thinness for women. They reported “the current epidemic of body dissatisfaction and emergence of eating disorders [was] a function of the sociocultural ideal of thinness” (p. 202).

Reciprocal effects. Norms of appearance demonstrate a reciprocal effect involving the impact of society on the individual and the resulting impact of the individual(s) on society. Societal appraisal/treatment of individuals, a person’s physical attributes, and internalization of societal standards by an individual, are some of the factors that interact dynamically to form norms of appearance. Cash (1990) described the psychology of physical appearance as occurring within two basic perspectives: (a) “the view of persons as social objects. This social-image perspective has traditionally examined the influences of physical attractiveness on social perceptions, interpersonal interactions, and human development”; and (b) “the individual’s subjective experience of his/her own physical aesthetics and attributes” (p. 51). Cash purported the way others view and treat an individual is affected by that person’s physical appearance

and bodily attributes. The individual then adapts the treatment cognitively, affectively, and behaviorally.

Lerner and Jovanovic (1990) concurred. They linked individual differences in bodily appearance to differences in social appraisals and social behaviors. They further explained, "People's physical characteristics may provide a source of their own body-image and psychosocial development by either matching or not matching the physicalistic stereotypes of their social context " (p. 120). Cash (1990) claimed that hundreds of studies conducted by behavioral scientists verify that "physical appearance variables such as physical attractiveness, weight, height, facial characteristics, and grooming factors—are reliably perceived (not wholly idiosyncratic to the eye of the beholder) and systematically affect social attitudes, attributions, and actions" (p. 52). Physical appearance, as dictated by social attitudes, attributions, and actions can become part of gender role expectations.

Socio-cultural emphasis on thinness. Numerous researchers such as French, Story, Neumark-Sztainer, Downes, Resnick, and Blum (1997) have recognized the pervasive sociocultural emphasis on thinness and physical appearance in the United States. Boskind-Lodahl and Sirlin (1977) acknowledged sociocultural pressures on females to seek and keep a thin, ideal body weight. According to Dimalanta (1996), this ideal of slimness even expands to other countries influenced by Western cultural standards. Results in a study by French et al. (1997) suggested ethnic subgroups were affected in similar ways by the immense sociocultural emphasis on thinness and physical appearance. The researchers found dieting and binge eating to share similar variables across ethnic groups within the United States.

Our societal obsession with weight is pervasive and some body dissatisfaction seems to be the norm among women (Rodin, Silberstein, & Striegel-Moore, 1985). Polivy and Herman (1987) agreed that dieting and body dissatisfaction have become all but normative and that thinness is a part of ideal attractiveness. Myers and Biocca (1992) reported the thin ideal has progressively become more thin in the recent past.

Heilbrun and Putter (1986) found that 86% of the women in their study preferred to have a lower weight than their actual weight. The discrepancy ranged from one to 50 pounds with a mean of ten pounds. Women with lower ideal weights also reported more stress.

In a 1992 study conducted by Epel et al. (1996), body shape was a major component defining attractiveness. A random sample of 500 personal ads indicated 62% requested body shape descriptors from potential contacts. Men requested body shape descriptors more often than women. In this same study, women verbally conformed to the thin ideal.

Brouwers (1990) calls the prejudice in the United States against being fat "fatism." This includes "cultural indoctrinations that women must be thin to be happy, and that overweight people are lazy, lack will power, or are less intelligent" (p. 147). Cash (1990) stated the perception or reality of being overweight impacts women more than men. Martz, Handley, and Eisler (1995) referred to imperatives of the feminine gender role "as the focus on one's physical attractiveness and a need for approval by others" (p. 494).

Whatever the cultural conditions, "exposure to social stressors is multiply determined by broad, sociocultural factors as well as by characteristics of people, such as their gender identity, role occupancy, and stigmatizing traits" (Lepore,

1997, p. 140). Haimovitz, Lansky, and O'Reilly (1993) found body satisfaction can be influenced by situational factors including who is present in the situation, the presence or absence of a mirror and cognitive, emotional, and behavioral variables of the individual. "The effects of culture—though substantial—are not monolithic.... Values and meanings do not necessarily become adopted as firmly in all persons" (Lazarus & Lazarus, 1994, p. 194) nor do all persons have the same definitions, reactions, or degree of reactions regarding stressors.

### Individual Differences

"We must not forget that individuals within a culture differ greatly from each other in all sorts of ways" (Lazarus & Lazarus, 1994, p. 194) including emotional reactions and stress reactions. These differences extend to how we perceive ourselves and our physical attributes. Our psychological development and unique self-experiences also reflect how we think and feel (Cash, 1990). There are some features of identities more likely to be vulnerable to stress impacts according to Wheaton (1997). These features include assumptions about roles, needs to occupy mandated or valued roles or social statuses, and contributions a person has to offer.

Gender differences. Harris, Blum, and Resnick (1991) found stress reactions took different forms of expression according to gender. For distress, the negative, hurtful, unpleasant stress, boys tend to act out more and girls turn it inward. It was found that girls have greater distorted body image and higher risk for eating disorders or chronic dieting than do boys. Girls' expressions of stress reaction were related to distress in general and not specifically to the thin ideal although they appear to be related to the thin ideal. Cash (1994) found "women report significantly more frequent body-image distress than men do" (p. 183).



Perceptual differences. Beck (1990) described stress as occurring if a person perceives he or she is not able to control or meet an environmental challenge. Challenge as well as ability to meet a challenge are defined by the individual. Because “it is the way a person appraises what is happening, rather than the realities themselves that determines the stressful impact” (Lazarus & Lazarus, 1994, p. 237), a woman may or may not perceive the cultural norm of thinness as a stressor. Cash (1990) pointed out that even if a woman is culturally defined as beautiful and demonstrating the norms, she does not necessarily experience a favorable image of her own body. He further explained that homeliness, as defined in our culture, does not necessarily result in a negative body image either. Martz et al. (1995) indicated the challenge of obtaining an ideal slender physique is not internalized in all women. They also found that rigid acceptance and striving for the thin ideal was a source of distress for some women. Women experiencing this distress are vulnerable to failure since the ideal “portrayed by contemporary models and actresses is an unrealistic feminine challenge for most women” (p. 506). There appear to be scores of subjective factors involved in the perception of stress, the thin ideal, and other normative descriptors.

Eating disorders and body dysmorphic disorder. Only a small percentage of women demonstrate eating disorders. Women with effective coping skills demonstrate more adaptive ways to deal with acute stressors and any chronic stress that may result from gender roles or the thin ideal. Perhaps women with perfectionistic propensities are more inclined to feel dissatisfied with their bodies in comparison to the thin ideal (Stice & Shaw, 1994).

Dimalanta (1996) reported the adoption of Western cultural values by other societies was associated with the emergence of eating disorder syndromes in

their cultures. But in Dimalanta's study, Asian-American women with disordered eating were reportedly responding to acculturation stress and not specifically to the thin ideal. Dimalanta described acculturation stress as characterized by adapting to lack of identity, and by depression and anxiety. Acknowledging "the already slim body types of Asian-Americans," Dimalanta stated "the implications of the slimness ideals can be manifested in other disordered type of behavior and could be detrimental to the mental health of these women" (p. 95). So while disordered eating was not directly related to the thin ideal of Western cultural standards, in this study disordered eating was related to the acculturation process involving identity issues. Therefore, disordered eating would not have to be related directly to the thin ideal, but could be indirectly related to the female gender role of Western cultural standards.

Martz et al. (1995) indicated research has yielded mixed results in evaluating the relationship of femininity and disordered eating. Empirical research has not conclusively revealed "whether individuals with eating disorders are different from other women in gender role orientation" (p. 494). Data also have been mixed regarding an association between stress and disordered eating. Ball, Lee, and Brown (1999) reported there is an association between psychological disturbance and disordered eating, but did not find this evidence in their recent study with Australian women. Martz et al. suggested the missing link between vulnerability for eating disorders and the cultural values of femininity may be feminine gender role stress.

The severity of binge eating was positively related to stress in a study by Wolf and Crowther (1983). They also concluded binging was not specifically

related to any particular weight group. Muuss (1990) reported binge eating was not the result of a strong appetite but rather a response to an intense emotional experience, such as stress, loneliness, depression, or rage. He described the first binge as frequently occurring in reaction to real or imagined rejection by a man. Women who purge after binge eating are described as having bulimia. Muuss stated women with bulimia frequently show a great deal of egocentric concern with what others think. He further described them as having negative feelings about their body and incorrectly evaluating themselves as unattractive and fat.

DeMarco, Li, Phillips, and McElroy (1998) stated the onset of body dysmorphic disorder (BDD) may partly occur due to high levels of perceived stress which in turn may lead to symptom exacerbation. Women with BDD also report their symptoms significantly increase their levels of stress demonstrating a reciprocal reaction.

Other variables. In addition to the subjective factors of perception, there are many other variables that moderate effects of the thin ideal standard. Additional personality (e.g., degree of introversion/extroversion, perfectionism, agreeableness), biological (e.g., metabolic rate, genetic predisposition to diabetes or other disease), and social (e.g., interactions with healthy role models, romantic liaisons, reinforcement history) factors impact each individual dynamically. Myers and Biocca (1992) found "the personal ideal body image may fluctuate with mood swings and the influence of peers" (p. 116). Plante, Chizmar, and Owen (1999) found perceived or actual fitness might lower responsivity to stress. Lepore (1997) purported "stigmatized people may experience heightened chronic stress because of social strains, isolation, hypervigilance, and attributional ambiguity in interpersonal interactions" (p. 139). Genetic

predisposition toward obesity or thinness could be another key factor. According to Allgood-Merten, Lewinsohn, and Hops (1990), age is a consideration, too. They found body image to be an important correlate for self-esteem and depression in female adolescents.

Reality or intensity of a stress reaction may also be impacted by coping style and/or skills. Using emotion-oriented or task-oriented coping methods can produce different results in stress management and is relative to the type of stimuli, too. Task oriented coping seems to be effective in reducing stress related to eating disturbances (Koff & Sangani, 1997). Some other moderating effects on distress and disorder include self-efficacy and self-esteem (Avison & Gotlib, 1994).

Differences lead to differing impacts. Many factors demonstrate a potential association of a stress reaction with the thin ideal and gender role of Western cultural standards. Individual differences and the dynamic interactions of the many variables weave elusive elements into a complex maze, manifesting differing reactions and consequences.

#### The Thin Ideal as an Unrealistic Goal

As previously indicated in this literature review, a social expectation or norm of thinness is unrealistic for women in the United States. Another point of agreement is that the thin ideal is internalized by some women and not others. Therefore, the impact of the thin ideal is directly related to individual differences. Whether or not someone accepts the thin ideal as a standard of appearance, whether or not someone attempts to attain or maintain it, affects the likelihood and degree of its impact. Individual physiological and psychological capabilities also impact the effects this unrealistic cultural norm might stimulate.

For some women, adherence to the thin ideal creates negative repercussions. For those who try to conform but fail, and for those who want to meet the cultural expectations of thinness, stress reactions may ensue. Martz et al. (1995) stated “perhaps a rigid commitment to fulfilling imperatives of the feminine gender role, such as the focus on one’s physical attractiveness and a need for approval by others, creates significant stress” (p. 494). They further explained these pressures might make women more likely to develop eating disorders than men.

A woman trying to attain or maintain the thin ideal might experience chronic stress. According to Wheaton’s definition (1997), chronic stress results as a reaction to pervasive conditions relating to expectations, attitudes, or circumstances in social environments or roles. Such reactions are enduring, lasting longer than a specific event and can result in numerous negative outcomes. According to Selye (1976), chronic stress can have severe and damaging physiological and psychological effects. Avison and Gotlib’s (1994) “proposition that social and psychological sources of stress influence health outcomes” (p. 4) is supported by hundreds of empirical reports utilizing various measurements.

In addition to negative health outcomes, the individual’s physical resources can be depleted. “Changes in the brain and in the hormones that circulate in the blood have profound effects on the tissues throughout the body, thereby affecting the physical resources available to us for confronting emergencies (Lazarus & Lazarus, 1994, p. 196). Eventually, with repeated challenges the body perceives as stressful (i.e., after the alarm and resistance stages of Selye’s (1976) General Adaptation Syndrome), the stressed person experiences exhaustion.

Cash (1994) found “women with greater body-image dysphoria engage in more behavioral avoidance, are more appearance schematic, hold physical ideals from which they perceive themselves to be more discrepant, have stronger public self-focus of attention and are heavier in body mass” (p. 184). For those women who develop body dysmorphic disorder, an imagined or slight defect in appearance can result in significant social, occupational, and academic impairment which are associated with high rates of psychiatric hospitalization and suicide attempts (DeMarco et al., 1998). Cash (1990) stated “physical unattractiveness represents a risk factor (i.e., a diathesis) in the development of psychopathology in general” (p. 59). If “fatism” is deemed unattractive, perhaps it is a risk factor for greater problems.

Avison and Gotlib (1994) reported stressful experience in one social role contributes to stress in other relationships and roles. If a love relationship is terminated or threatened, that event and/or condition becomes a source of stress (Jones, Morgan, & Tonelson, 1992) and can increase exponentially. Cash (1990) indicated possession of physical attractiveness was predictive of greater intimacy and satisfaction for heterosexual relationships. It is possible then, that heterosexual women who are deemed unattractive would experience less intimacy and satisfaction in romantic relationships. Dissatisfaction with a relationship might also produce stress.

Setting and achieving goals. Locke and Latham (1990) stated greater effort and persistence results from striving toward hard goals than toward easy goals. They further explained that satisfaction from achieving hard goals depends on a higher level of performance than achieving easy goals. Also, when people fail to meet a goal, they often try to compensate by radically increasing their future

performance. For the person trying to reach the thin ideal, great effort and persistence may be demonstrated. If a woman perceives failure, she may try to compensate by even greater effort to become thin. This goal difficulty effect and goal setting behavior could be deleterious to a woman's physical and psychological health. As Selye (1976) indicated, most human bodies respond with identical biochemical changes to cope with increased demand and stress is the base of these adaptive reactions. According to Locke and Latham if goals do become too unrealistic, then people cease commitment and give up. Failure can be stressful and result in hopelessness.

#### Sources of Exposure to the Thin Ideal

Verbal, visual, and audio communications help to create a cultural context. Lepore (1997) credited broad, socio-cultural factors along with individual differences as determining social stressors. The thin ideal appears to be an unrealistic standard within Western culture contributing to stress reactions for some women. Crandall (1988) stated the thin ideal is communicated by numerous sources including peers and family. Mass media is another source of communication perpetuating the thin ideal (Stice & Shaw, 1994) and will be addressed after a brief discussion of peers and family. This final section concludes with a discussion on idealized body images in fashion magazines as it relates to the present study.

Peer and family influences. Levine, Smolak, Moodey, Shuman, and Hessen (1994) found peer dieting techniques and a mother's attitudes about thinness to be significant correlates of nonpathological dieting among young girls. Although this could mean that the girls used modeling cues for weight management or some girls were just more aware of weight related issues, there was, nonetheless,

increased sensitivity to thinness. Stimuli relating to the thin ideal can come from peers and family. Crandall (1988) noted peer influence among women living together in college dormitories or sorority house environments. He reported strong impacts on social and personal factors from these contacts may make some women more vulnerable to the development of eating disorders.

Media influences. In addition to influence from peers and family, Stice and Shaw (1994) cite the mass media as possibly one of the strongest transmitters of the pressure to conform to the thin ideal. Mass media can include television, radio, movies, music videos, and printed material such as books, newspapers, and magazines. Heinberg and Thompson (1995) caution those “most at-risk for a negative reaction to media messages appear to be those with high pre-existing levels of body image disturbance or individuals who ‘buy into’ societally-presented images” (p. 336).

The media generally promote a standard of thinness for women which is impossible to achieve by healthy means (Nemeroff, Stein, Diehl, & Smilack, 1994). Citing evidence of an association between media exposure and negative consequences, Nemeroff et al. described the media as presenting a constant barrage of idealized images of extremely thin women. Exposure to miscellaneous media sources promoting an extreme ideal body image resulted in body dissatisfaction leading to increased eating disorder symptomatology for some women. Heinberg and Thompson (1995) concurred and found that “media-presented images of thinness and attractiveness may negatively affect mood and body satisfaction” (p. 334) for certain individuals.

According to Myers and Biocca (1992), television presents advertising and programming emphasizing the pursuit of the ideal body. This standard is



the thin ideal which has progressively become thinner and thinner in the recent past. Describing a cumulative effect of individual media messages, Myers and Biocca credit exposure to these stimuli with the formation and reinforcement of the thin ideal. They referred to distortion of self-perception reported in the medical literature and concluded that some women may have internalized and pursued this ideal body. Myers and Biocca described the ideal body standard as unrealistically thin for most women and significantly below acceptable weight standards.

Tiggemann and Pickering (1996) found the type of television program to be crucial in prediction of body satisfaction for young women. Soaps or serials and movies depicting women in stereotyped roles were positively correlated with body dissatisfaction. They also found young women who viewed music videos were more likely to demonstrate a drive for thinness.

Fashion magazines. Past research regarding exposure to idealized body images in fashion magazines appears to be limited. Waller et al. (1994) reported the female bodies presented in fashion magazines impact some women depending on type of stimulus and identity of the reader. After viewing fashion magazines, body image was distorted among those women already sensitive to body size, (e.g., those demonstrating characteristics of anorexia and bulimia). Waller et al. indicated exposure to ideal images in fashion magazines possibly help to maintain eating disorders but were not necessarily antecedents to eating disorders. They identified women with anorexia and bulimia as being more vulnerable to negative repercussions from viewing idealized body images. They recommended women with characteristics of anorexia and bulimia not view fashion magazines.

In a previous study, Hamilton and Waller (1993) found “the photographic representation of women in mass circulation fashion magazines has an unintended influence, enhancing a feature that is of marked importance in the eating disorders” (p. 839). In this study, women with anorexia and bulimia overestimated their body size after viewing the fashion images. With just six to seven minutes exposure, they overestimated an additional 25% more than their usual level of overestimation.

Stice and Shaw (1994) conducted a study with 157 female undergraduates and randomly exposed them to pictures from magazines. They found “thin ideal images produced depression, stress, body dissatisfaction, and decreased levels of confidence” (p. 302). Pictures from magazines of average models or no models did not produce these reactions. Stice and Shaw declared experimental evidence that the ideal body images portrayed in popular women’s magazines have destructive effects on the affect and body satisfaction of the female reader. They found, however, that even though most women are exposed to these images in the media, only a small proportion of women develop eating disorders. According to these researchers, individual differences such as perfectionistic tendencies and coping skills could impact the development of eating disorders.

### Hypotheses

Reactions to idealized body images in fashion magazines were investigated in the present study through measurement of stress as indicated by hand temperature and through self-report using a Likert scale. Similar research regarding reaction to idealized body images has been limited, focusing on women with and without eating disorders as between-groups studies. Such research has primarily utilized self-report instruments.

The present study investigated the following hypotheses:

Hypothesis 1: Participants produce a greater acute stress reaction to viewing idealized body images in fashion magazines as compared to their reaction to viewing home decorating images.

Hypothesis 2: Participants report less satisfaction with physical health after viewing the fashion images as compared to the home decorating images.

Hypothesis 3: Participants report less satisfaction with weight after viewing the fashion images as compared to the home decorating images.

Hypothesis 4: Participants report less satisfaction with physical appearance/body image after viewing the fashion images as compared to the home decorating images.

## CHAPTER 2

### METHOD

#### Participants

Female psychology students ( $N = 45$ ) from a small mid-western university volunteered to participate in this study in order to fulfill research requirements in introductory and developmental psychology courses. The age range of participants was 18 to 25 years with both a mean age and a median age of 19 and standard deviation of 1.73. Most participants were classified as freshmen. Participants could be from any socioeconomic status, race, or ethnic background. One woman was Afro-American, another was Hispanic, and the remaining participants were Caucasian. Of 60 participants who committed to participate, only 53 attended. To prevent contamination of the study, eight of those attending were disqualified because of vascular abnormalities, prior bio-feedback training, and/or previous association with the researcher. A participant who was pregnant was also excluded from the sample.

#### Design

The present study was a within-subjects design of volunteers. Each participant was compared to her own reactions within two treatment conditions: (1) viewing idealized body images from fashion magazines and (2) viewing images from a home decorating magazine. Reaction to each condition of treatment was measured by hand temperature for a stress/relaxation response and a self-report evaluation of satisfaction with physical health, weight, and physical appearance/body image. Both conditions of treatment were considered discrete stimuli, events that could be used to measure the presence or absence of an acute stress reaction. This acute stress could indicate a propensity toward

chronic stress defined by Wheaton (1997) as a condition in social environments and roles and lasting longer than any particular event. Chronic stress in this study was investigated as relating to gender roles and norms for physical appearance.

### Materials

Apparatus. To assess stress level, a digital read out, battery powered temperature monitor was used to measure hand temperature. The brand name of the device was Digi-temp Electronic Thermostat. It was 2 1/2" W x 2 1/8" H and approximately 1/2" in depth. The range of measurement was -58 degrees to +158 degrees Fahrenheit with accuracy  $\pm 1.0^\circ$ .

Questionnaire. Participants completed a demographic questionnaire (see Appendix A) after the post-temperature was recorded for each treatment condition. The questionnaire contained items such as age, college classification, and race. Also included were questions relating to hypotheses in the study. These questions measured self-report of satisfaction with physical health, weight, and physical appearance/body image on a Likert scale ranging from one to five (one being very dissatisfied and five being very satisfied). Participants were asked these additional questions to determine eligibility for the study: (a) Have you ever been medically diagnosed with a vascular abnormality? If so what? and (b) Have you ever had bio-feedback training? If so, what type of training/apparatus? How many times did you participate in such training?

### Procedures

The participants volunteered using the Division of Psychology and Special Education undergraduate research participation procedures. The project title and participation requirements were generally described on the

sign up sheet to prevent disclosure of information which might affect the participants and the outcome of the study. The night before the first testing session, the volunteers were reminded by telephone of their commitment to participate in the research study. Participants attended two 45-minute sessions one week apart. Five individuals were scheduled to be tested in each time slot.

The time of day was consistent for each participant (morning, afternoon, or evening). Half of the groups first viewed images from the home decorating magazine House Beautiful and the other half viewed images from fashion magazines Glamour and Marie Claire (see Appendix B). The conditions were reversed for the second testing session. Demographic questionnaires were filled out by each participant after viewing both the fashion magazine images and the home decorating images.

When participants arrived, each participant was assigned a testing number for coding purposes. Participants faced the walls of the room, with their backs to each other. Participants read and signed an Informed Consent Document (see Appendix C).

Participants were asked if anyone was allergic to rubbing alcohol or scotch tape. Consent forms were checked for validation of allergy status. Then the examiner sterilized a digital thermometer with cotton soaked in rubbing alcohol and attached the thermometer to a participant's finger with scotch tape. This process was repeated for each participant in the group.

Participants were instructed to remain seated and to refrain from talking for a period of ten minutes. They were instructed to relax and told they could rest their heads on the table.

After ten minutes, a baseline temperature for each participant was recorded using the participant's code number. Participants then viewed photographs from magazines. All participants in each group viewed a loose leaf notebook of the same images, either pictures of models from fashion magazines, Glamour and Marie Claire, or pictures of home furnishings from a home decorating magazine, House Beautiful. Participants were instructed to look at the pictures and to refrain from talking. After fifteen minutes elapsed, post-treatment temperature was recorded utilizing participant code numbers. The digital thermometer was removed from the finger of each participant and each person completed a demographic questionnaire (see Appendix A).

During the second testing session, the examiner briefly reminded the participants of the procedure, requirements, and confidentiality as outlined in the consent form. Participants were again asked if anyone was allergic to rubbing alcohol or scotch tape. The process for testing was repeated as in the first week except the treatment conditions were reversed. Procedures of measurement with the digital thermometer, as well as the administration of the treatment conditions and the questionnaires was repeated.

After the second and last session of testing, participants were given the opportunity to make comments and to ask the researcher questions regarding the study.

## CHAPTER 3

### RESULTS

The data were entered into the Statistical Analysis Package for the Social Scientist (SPSS) and analyzed with paired sample  $t$  tests at .05 alpha level of significance. The independent variable was the type of printed images viewed under two conditions (1) idealized body images from fashion magazines and (2) images of furnishings from a home decorating magazine. The dependent variable for the first hypothesis was hand temperature, an indicator of stress level. Each participant was measured before and after exposure to each condition of the independent variable. Post-temperature was subtracted from pre-temperature to derive a single score for each participant in each condition. The dependent variable for the remaining three hypotheses was self-reported degree of satisfaction with physical health, weight, and physical appearance/body image on a five point Likert scale. Means and standard deviations by treatment conditions are given in Table 1.

The comparison of hand temperature to the idealized body images and the home furnishing images approached significance,  $t(44) = 1.75$ ,  $p = .09$ . These results do not support the prediction made in Hypothesis 1 that idealized body images produce a greater stress reaction than home furnishing images.

No significant differences were obtained between the treatment conditions for satisfaction with health,  $t(44) = 1.42$ ,  $p = .16$ . Contrary to Hypothesis 2, these findings indicated the participants reacted similarly when evaluating their health status after exposure to idealized body images and to home furnishing images.

A significant difference was found in satisfaction with weight between the treatment conditions,  $t(44) = 3.08$ ,  $p < .01$ . Because participants reported greater



dissatisfaction with weight after viewing idealized body images than they did after viewing home furnishing images, Hypothesis 3 was supported.

No significant differences between the treatment conditions for satisfaction with physical appearance/body image,  $t(44) = 1.48, p = .15$ . These findings suggest, contrary to Hypothesis 4, that viewing idealized body images did not negatively impact participants' self-evaluations when compared to those made after viewing home furnishing images.

Table 1

Summary of Means and Standard Deviations of Scores by Treatment Condition

	Fashion Magazines			Home Decorating Magazine	
	<u>n</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Hand Temperature	45	-.95°	2.60°	-.22°	1.71°
Physical Health	45	3.49	.89	3.64	.93
Weight	45	2.78	1.04	3.04	1.00
Physical Appearance/ Body Image	45	3.02	.97	3.20	.94

## Note:

Hand Temperature means indicated stress reaction as measured by a decrease in temperature.

Physical Health, Weight, and Physical Appearance/Body Image were measured on a 5 point Likert scale where 1 indicated greatest dissatisfaction and 5 indicated greatest satisfaction.

## CHAPTER 4

## DISCUSSION

Hypothesis 1 predicted college women would experience a greater stress reaction to viewing idealized body images when compared to viewing home furnishing images. Most studies investigating the impact of idealized body images on stress reactions and self image have exclusively used self-report instruments and have made no attempt to measure physiological responses, crucial indicators of stress reactions. Lazarus (1984) addressed the difficulties of measuring stress as did Lester, Nebel, and Baum (1994). Lester et al. defined stress as a process and not just an event or a response to the demand of the event. They indicated it is difficult to measure this process because it requires assessment through many considerations including “the stressor—the environmental event viewed as taxing or requiring adjustment ... and the cognitive affective, behavioral, physiological and biochemical changes that occur when stress is experienced” (p. 292). The use of different methodological tools for measuring stress may have yielded quite different results in this study.

The decrease in hand temperature indicating a stress reaction to idealized body images in college women approached significance. Extraneous variables (as indicated by a sizeable discrepancy between the standard deviations of the stress reactions to body images and home furnishing images) may have masked true stress reactions. Nuisance variables could be reduced or eliminated in future studies by utilizing additional physiological measures, larger, more homogenous samples, and more comprehensive self-report instruments.

Hypothesis 2 predicted participants would report less satisfaction with physical health after viewing idealized body images. Although the prediction

was not supported, potential health impacts result from striving for the thin ideal (Cash, 1990; Tiggemann & Pickering, 1996). Participants may not have been aware of the possibility of health consequences. They may not have acknowledged any consequences even if they realized such consequences existed. People may not relate body size to health because healthy bodies can come in many sizes.

The prediction posed in Hypothesis 3, that participants would report greater dissatisfaction with weight after viewing idealized body images, was supported. This finding supports Epel et al. (1996), a person's degree of thinness is a major factor in defining self. This finding also suggests thinness is a crucial component in the idealized body image (Brouwers, 1990; Polivy & Herman, 1987)) and a negative effect results in college womens' self-perception from exposure to these images. While the difference between means was not very large, it is nonetheless noteworthy. Alteration of self-perception resulting from minimal exposure to idealized body images indicated the potentially powerful impact of these images. The evidence in this study of diminished satisfaction with self from a single, modest exposure to idealized body images was an indication that frequent exposure to these images could cause a greater, cumulative, and negative effect for college women.

Hypothesis 4 anticipated participants would report greater dissatisfaction with physical appearance/body image after viewing idealized body images. Contrary to Hypothesis 3, in which it was predicted participants would report greater dissatisfaction with weight, the prediction of greater dissatisfaction with physical appearance was not supported. The terms physical appearance/body image may have presented participants with numerous factors for evaluation (Cash, 1990). Weight may fit more easily into discrete categories while definitions

of physical appearance and body image remain more diffuse or ambiguous. This wider margin of interpretation may have provided participants with a less threatening experience and a more generous framework for self-evaluation. It is also possible the most crucial component of an ideal body image may be thinness and not other characteristics (Brouwers, 1990).

### Limitations and Implications

There were several unforeseen problems with the visual images used for the treatment conditions in this study. It was assumed the home furnishing images would be neutral as compared to idealized body images. The choice of home furnishing images was based on a study of size estimation by Hamilton and Waller (1993). They found women with eating disorders reacted with significant overestimation of body size to idealized body images when compared to the home furnishing images. Women without eating disorders were not affected by the type of image stimulus. Women with eating disorders may perceive home furnishing images as more neutral or at least as less threatening than idealized body images. The present study did not control for differences regarding eating disorders.

According to some participants in this study, the home furnishing images were boring and participants did not want to look at them. Others reported the images made them feel homesick. Other participants reported feeling a sense of inadequacy because their homes were more modest than homes represented in the images. Any or all of these cognitions could have elicited a stress reaction and by comparison, diminished the appearance of the reaction to idealized body image. If images from a different type of home furnishing magazine representing

a different socioeconomic status had been used, participants may have reacted differently.

The idealized body images also elicited some unforeseen reactions. Some participants could have been responding with a type of Walter Mitty experience by identifying with an ideal body (Myers & Biocca, 1992). Perhaps the human form alone provided a degree of interest or relaxation response for some participants. During debriefing, several participants commented they liked looking at the clothes in the fashion images. One participant indicated a same sex attraction to the fashion models. It is also possible college women are desensitized to the ideal body images through excessive media exposure. Any of these cognitions could have contributed to decreased stress reaction and increased relaxation response.

Comparison of means of ideal body images and home furnishing images, demonstrated a greater decrease in hand temperature for the idealized body image condition. But when evaluating individual reactions, images from both treatment conditions elicited stress reactions and also elicited relaxation responses as indicated by a decrease or an increase in hand temperature. It is possible there is no neutral image for a group of college women. Participants stated images of animals, buildings, or scenery would not have been neutral images because the definition of neutral varies according to the individual.

Duration may have been another problematic factor in the measurement of stress reactions. Some participants in the present study voiced difficulty sitting still for testing. In some cases, the experimental manipulation may have lasted too long. On the other hand, the manipulation may not have lasted long enough. Thirty images were used in a 15 minute time period for both home furnishing

images and idealized body images. This segment was intended to simulate a block of time a college women would spend viewing a fashion magazine. Hamilton and Waller (1993) used only 20 images in their study, but they measured reactions after exposure to each individual image.

Perhaps the experimental manipulation was not powerful enough or specific enough to significantly impact participants regarding all hypotheses. Maybe correlational studies would be better than experimental studies to investigate the impact of idealized body images portrayed in fashion magazines on college women.

### Conclusions and Future Directions

In conclusion, the present study supports previous findings some women experience a negative effect in reaction to idealized body images. Results indicated statistical significance regarding dissatisfaction in weight for college women after they viewed idealized body images. Because most similar research has focused on women with eating disorders, the results in this study could be viewed as a preliminary indicator there is a negative effect for women in other populations. While the practical significance of this finding is indeterminate, this effect suggests a need for research with various groups of women in addition to those diagnosed with eating disorders. Although numerous researchers have recognized the pervasive sociocultural emphasis on thinness (Boskind-Lodahl & Sirlin, 1977) and physical appearance (Cash, 1990; French et al., 1997), more information is needed to investigate the effects of these standards. Information regarding additional groups of women, such as the general college population in this study, will contribute to a greater understanding of reactions to cultural roles and expectations relating to idealized body images.

While other hypotheses in this study were not supported, additional research into these predictions is needed. Perhaps college women do not experience greater stress or dissatisfaction with body image and health in reaction to idealized body images. Perhaps methodological weaknesses in this study account for rejection of these hypotheses. Perhaps there really was no effect of the treatment on these participants. Further research in these areas is necessary because attaining or maintaining the idealized body is an unrealistic and potentially damaging societal standard for most women (Nemeroff et al., 1994). Cultural awareness of counterproductive standards could help to improve the emotional and physical health of women and therefore benefit all people. The college environment provides an ideal opportunity for longitudinal research to comprehensively investigate stress reactions and state/trait characteristics relating to idealized body images. Research is a tool to help define societal standards, investigate individual differences, and to increase the possibility of positive change. Results from future research may affect the fashion industry or society in general and impede further perpetuation of idealized body image standards.



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## APPENDIX A

## Demographics

Participant Number \_\_\_\_\_

Age \_\_\_\_\_

College Classification (circle one): Fresh. Soph. Jr. Sr.

Race (check one):

Asian \_\_\_\_\_ African-American \_\_\_\_\_ Hispanic \_\_\_\_\_ Caucasian \_\_\_\_\_

Other \_\_\_\_\_

How satisfied are you with your physical health?

Circle one:

Very Dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
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How satisfied are you with your weight?

Circle one:

Very Dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
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How satisfied are you with your physical appearance/ body image?

Circle one:

Very Dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
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## APPENDIX B

Magazine Images Listed by Page Number  
(according to the order of presentation)

## Idealized Body Images:

G: Fuller, B. (Ed.). (2000, April).

Glamour. NY: Conde Nast.

M: Bailey, G. (Ed.). (2000, May).

Marie Claire. NY: Rizzuto.

1. M p. 190
2. M p. 189
3. M p. 199
4. M p. 191
5. M p. 180
6. M p. 178
7. M p. 196
8. M p. 147
9. M p. 28
10. M p. 27
11. M p. 188
12. G p. 181
13. M p. 184
14. M p. 35
15. M p. 194
16. M p. 42
17. G p. 258
18. G p. 256
19. G p. 259
20. G p. 260
21. G p. 242
22. G p. 240
23. M p. 186
24. M p. 185
25. M p. 46
26. M p. 231
27. G p. 157
28. G p. 88
29. M p. 48
30. M, Composite of five images from  
pp. 201, 201, 208, 209, 210

## Home Furnishing Images:

Gropp, L. O. (Ed.). (2000, May).

House Beautiful. NY: Arnold.

1. p. 131
2. p. 147
3. p. 115
4. p. 118
5. p. 25
6. p. 149
7. p. 151
8. p. 67
9. p. 49
10. p. 19
11. p. 141
12. p. 57
13. p. 13
14. Inside front cover
15. p. 1
16. p. 4
17. p. 5
18. p. 6
19. p. 11
20. p. 127
21. p. 29
22. p. 122
23. p. 123
24. p. 124
25. p. 144
26. p. 143
27. p. 140
28. p. 139
29. p. 137
30. Composite of five images from p. 138



## APPENDIX C

## Informed Consent Document

The Division of Psychology and Special Education at Emporia State University supports the practice of protection for human subjects participating in research and related activities. The following information is provided so that you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time, and that if you do withdraw from the study, you will not be subjected to reprimand or any other form of reproach.

This study will include two sessions. The second session will be exactly one week after the first session. Each session, the same basic procedure will occur. Each participant will have a digital thermometer connected to her finger with scotch tape. After ten minutes, a baseline temperature will be read and recorded for each participant. Then each participant will view photographs from a magazine for 15 minutes after which time another temperature will be read and recorded from the digital thermometer. There will also be a paper/pencil demographic questionnaire for you to fill out.

There are no known risks anticipated for you as a participant in this study.

By participating in this study, you will be making a contribution to the discipline of psychology. Your contribution may help researchers acquire a better understanding of gender issues.

At this time and in regard to this study, there are no known alternative procedures that would be advantageous for you as a participant.

**Please check and initial one of the following two boxes:**

- I am not allergic to rubbing alcohol or scotch tape.
- I am allergic to rubbing alcohol and/or scotch tape and therefore will not participate in this research study.

*"I have read the above statement and have been fully advised of the procedures to be used in this project. I have been given sufficient opportunity to ask any questions I had concerning the procedures and possible risks involved. I understand the potential risks involved and I assume them voluntarily. I likewise understand that I can withdraw from the study at any time without being subjected to reproach."*

---

 Participant Signature

---

 Date

---

 Participant Number

---

 Researcher Signature

---

 Date

## Permission to Copy Page

I, Linda Gates, hereby submit this thesis to Emporia State University as partial fulfillment of the requirements for an advanced degree. I agree that the Library of the University may make it available for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, or other reproduction of this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential financial gain will be allowed without written permission of the author.



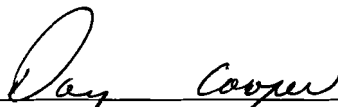
\_\_\_\_\_  
Signature of Author

7/5/00

\_\_\_\_\_  
Date

Influences on the Eye of the Beholder:  
Reaction of Women to Body Images Portrayed  
in Fashion Magazines

\_\_\_\_\_  
Title of Thesis



\_\_\_\_\_  
Signature of Graduate Office Staff Member