

**THE EFFECT OF MEDIA INFLUENCE ON BODY IMAGE:
THE ROLE OF LOCUS OF CONTROL
AND DIETARY RESTRAINT**

THESIS

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ABSTRACT

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Locus of control, media influence, and dietary restraint have all been associated with changes in body image satisfaction. Undergraduate women (n=167) completed the restraint subscale of the Three-Factor Eating Questionnaire, the Dieting Beliefs Scale, and the Contour Drawing Rating Scale after viewing media images. Half of the participants viewed product advertisements which featured an extremely thin model, and the other half of participants viewed advertisements which featured the product only. The manipulation of the media images did not produce any significant differences in body image. Locus of control and dietary restraint were positively correlated, but did not correlate with body image. These findings were contrary to the hypotheses, and reasons for these findings as well as limitations are discussed.

CHAPTER I.

INTRODUCTION

Body Image

America has an obsession with food and dieting, which is evident when considering the multi-billion dollar diet industry (Berg, 1993). Many Americans are caught in a vicious cycle of overeating and dieting (Foreyt, et al., 1995). It is not just very overweight or obese people, however, that resort to unhealthy eating practices. Average weight, slightly overweight, and even underweight people can develop maladaptive eating behaviors which, in extreme cases, can lead to extremely serious eating disorders.

Maladaptive eating can be defined as abnormal eating patterns that affect normal psychological functioning and cause distress (Nelson & Hughes, 1999). This can include binge eating, purging, or restricting food intake. Abundant research has been conducted to determine the psychological and social variables that are associated with maladaptive eating, and body image dissatisfaction has been shown to be very powerful in prompting individuals to engage in maladaptive eating behavior (Furnham & Greaves, 1994).

Body image dissatisfaction, a subjective unhappiness with some aspect of one's appearance, is a variable that is consistently found to be related to maladaptive eating. The degree of body image dissatisfaction is based upon the degree of difference between

the perceived body shape and the ideal body shape (Silberstein, Streigel-Moore, Timko, & Rodin, 1988). When an individual's perceived body shape falls short of her 'ideal', it is likely to induce self-criticism and lower self-esteem (Furnham & Greaves, 1994). Berscheid, Walster, and Bohnstedt (1973) found that body image was positively correlated with personal happiness. In addition, body image dissatisfaction has been linked to decreased self-esteem in women (Weinberg, 1960) and also to depression (Noles, Cash, & Winstead, 1985).

Body image disturbances have become increasingly prevalent among the female population (Furnham & Hume-Wright, 1992). Dieting among young women is extremely more frequent than not dieting, with 95% of the female population having been on a diet at some point (Polivy & Herman, 1987). Wooley and Wooley (1984) surveyed 33,000 women of varying weights, and found that 45% considered themselves "too fat."

Body image dissatisfaction has been found to be one of the best predictors of worsening patterns of maladaptive eating in college age women (Cooley & Toray, 2001). A high level of body image dissatisfaction is a central feature of clinical eating disorders, and in the initial development of maladaptive eating, objective weight does not carry as much weight as the self-perception of body image (Patton, Johnson-Sabine, Wood, Mann, & Wakeling, 1990).

Current data suggest that body image holds the most promise as a focus in preventing the development of maladaptive eating (Cooley & Toray, 2001). Teaching women to accept their bodies is an important focus for body image support groups. In these groups, women can also learn that the "ideal" figure presented by the media is

unobtainable by most women, and that striving to reach this ideal is generally unrealistic (Cooley & Toray, 2001).

Media Effects on Body Image

The effect of the media on young women's body images has been well documented. In the American media, the portrayal of the female body has become thinner and thinner, while American women have been getting heavier (Garner & Garfinkel, 1980). Abundant research has indicated that this depiction of increasingly thinner women as American women have become heavier has promoted body dissatisfaction, dieting, and abnormal eating among young women (Field, Cheung, Wolf, Herzog, Gormaker, & Colditz, 1999; Irving & Berel, 2001). It has been found that an acute exposure to media images of extremely thin bodies produced greater body image dissatisfaction in adults, while exposure to pictures of overweight individuals lowered that dissatisfaction (Ogden & Munday, 1996). The media is a factor in older generations of women. Green and Pritchard (2003) found that for women with a mean age of 42 years, media influence was a predictor of their body image dissatisfaction.

Based on this evidence, Champion and Furnham (1999) hypothesized that exposure to media images depicting thin, stereotypically attractive bodies increased the body image dissatisfaction in adolescent girls, while exposure to pictures of overweight individuals lessened dissatisfaction. However, they did not find a significant difference between those viewing 'thin' pictures and those viewing 'neutral' pictures. Several methodological issues could have caused these contradictory results. Champion and Furnham (1999) controlled additional variables between the 'thin' and 'neutral' pictures that were not controlled by Ogden and Munday (1996), such as the facial attractiveness,

amount of flesh revealed, and the approximate age of the model. The statistically significant result found by Ogden and Munday may have been due, in part, to uncontrolled variables. In addition, this was a between subjects design, while Ogden and Munday's was a repeated measures, within subjects design. The repeated measures design shows more of the effect on individual's satisfaction, and can reveal any differences in baseline body image scores.

Locus of Control

Another very important variable which has correlated with body image dissatisfaction is locus of control, which was conceptualized by Rotter (1966). Rotter (1966) defined locus of control as follows:

‘When a reinforcement is perceived by the subject as...not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in *external control*. If the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in *internal control*.’

People who have an internal locus of control generally take responsibility for their actions more than those with an external locus of control (Strickland, 1978). In terms of weight and body shape, a woman with an internal locus of control believes that her actions and behavior will determine her weight; a woman with an external locus of control believes that something other than her own behavior, such as luck or genes, determines her weight.

The orientation of a person's beliefs of personal control is very important when considering body image because it can determine what kinds of behaviors might be

undertaken, and the related self-perceptions of worth and success (Furnham & Greaves, 1994). Furnham and Greaves (1994) used a new locus of control scale to assess individual beliefs about perceived control in achieving an “ideal” body shape. A significant difference was found between internal and external locus of control, with high external scores being negatively correlated with body satisfaction and self-esteem. As externality increased, body satisfaction and self-esteem decreased.

Women with an internal locus of control possess the belief that they are capable of performing behaviors that will lead to weight loss, and would be less likely to become more dissatisfied with their bodies when faced with media ideals. However, when those with an external locus of control are faced with media ideals, they may be more likely to be influenced because of their belief that something or someone other than themselves determines their body shape and weight (Furnham & Greaves, 1994).

However, Tiggemann and Rothblum (1997) found that an internal locus of control is only healthy for women whose perception of their body measures up to their ideal (i.e., those who are satisfied with their body image). Participants were measured on current weight and dieting habits, weight locus of control, self-esteem, and body satisfaction. By its very nature, engaging in a diet suggests a lack of satisfaction with body shape or weight. For women who constantly diet, an internal locus of control is correlated with lower self-esteem and body satisfaction (Tiggemann & Rothblum, 1997).

Dietary Restraint

A person who diets by consistently and consciously restricting their food intake, and who is frequently preoccupied with their weight, shape, and food intake is classified as a restrained eater (Riciardelli, Tate, & Williams, 1997). Dietary restraint has been

identified as an important factor underlying the eating behavior of many patients with eating disorders (Brody, Walsh, & Delvin, 1994; Gleaves, Williamson, & Barker, 1993). The decision to engage in restrained eating is often influenced by the belief that this style of eating will produce weight loss and thinness, and ultimately, increase body image satisfaction (McCarthy, 1990; Stice, 1994). Similarly, it has been argued that widespread and chronic dieting is caused by the fears about weight and body shape that comprise body image dissatisfaction (Cash & Henry, 1995).

As previously mentioned, it was found that an internal locus of control is only healthy for those women who are satisfied with their body; in those who are unsatisfied, an internal locus of control increased body image dissatisfaction. Repeatedly dieting, or practicing restrained eating, indicates there is a lack of satisfaction regarding body shape and size. Thus, those individuals who have an internal locus of control and who are also restrained eaters would be more likely than restrained eaters with an external locus of control to have greater body image dissatisfaction in response to media images of very thin models. This may hold true, regardless of objective weight, because it is the self-perception of weight that holds more importance. The role of locus of control and dietary restraint in media influence on body image has not previously been investigated.

Rationale

This study could provide valuable information as to how to counteract the effects of the media. It is more feasible to work on improving body image interventions than expecting such a huge industry to change dramatically in the near future. Determining what psychological and behavioral factors potentially interact with media influence is crucial. If an internal locus of control does prove to be harmful in the face of media

images, this could provide a framework upon which to structure interventions for those with body image dissatisfaction. These interventions would be able to foster control beliefs that are oriented in the direction that proves to be more beneficial. Additionally, because dieting is extremely prevalent, the exploration of it may provide valuable insight into the development and maintenance of body image disturbances.

Hypotheses

It is expected that (1) among individuals who are not restrained eaters, an external locus of control will be associated with greater body image dissatisfaction after viewing media images that depict very thin models; (2) among individuals who are restrained eaters, an internal locus of control will be associated with greater body image dissatisfaction after viewing media images that depict very thin models. Previous studies have found that an internal locus of control is only healthy for those women who are satisfied with their bodies, and is harmful for those who are unsatisfied. These studies did not include any media effects, and it is hoped that the potential influence of the media will produce similar results. Because restrained eating can be regarded as an indicator of body dissatisfaction, it is expected that those women who are internally-oriented and engage in dietary restraint will be more likely to have greater levels of body image dissatisfaction.

CHAPTER II.

METHODOLOGY

Participants

The participants in this study were 167 females recruited from undergraduate psychology classes at Texas State University-San Marcos who received extra credit for their participation. The vast majority of participants identified themselves as middle-class (91.2%), with 70% Anglo (n=127), 14% Latino (n=25), 7% Black-American (n=13), and 9% other (n=16). Participants' ages ranged from 18 to 41 years ($M = 20.5$, $SD = 2.87$), body mass indexes ranged from 16.9 to 53.2 ($M = 23.28$, $SD = 4.99$), heights ranged from 59 to 73 inches ($M = 65$, $SD = 2.66$), and weights ranged from 90 to 330 lbs. ($M = 140$, $SD = 32.29$).

Materials

Demographic information was collected through a questionnaire that included items about ethnicity, age, socioeconomic status, weight, ideal weight, and height. Height and weight were used to calculate body mass index to compare their objective weight with their subjective perceptions of their weight. Body mass index is computed with the following formula: $\{\text{weight in lbs}/(\text{height in inches} \times \text{height in inches})\} \times 703$.

The Dieting Beliefs Scale

The Dieting Beliefs Scale (Stotland & Zuroff, 1990) measures internal and external locus of control regarding weight and dieting behavior. It contains equal

numbers of internal and external items. There are three factors; factor 1 has eight items and represents internal beliefs of weight control, while factors 2 and 3 each have four items and are concerned with external beliefs of weight control. Factor 2 includes aspects of the person beyond his or her control, such as luck or genes, while factor 3 includes environmental factors, such as encouragement from others or the presence of fattening food. Respondents rate each statement on 6-point scale on how well it describes their own beliefs. These ratings range from not at all descriptive of my beliefs to very descriptive of my beliefs (6). Factors 2 and 3 are actually a reversed scale so that 6=1, 5=2, etc. Higher scores represent a more internal locus of control, with possible scores ranging from 16 to 96. This scale has demonstrated moderate internal consistency, (Cronbach's alpha = .68), and high test-retest reliability, ($r = .81$). It has also correlated highly with the Weight Locus of Control Scale (Saltzer, 1982). Table 1 provides a sample item from this scale.

Table 1. Sample Item from Dieting Beliefs Scale

When people gain weight, it is because of something they have done or not done.

1	2	3	4	5	6
<i>Not at all descriptive of my beliefs</i>				<i>Very descriptive of my beliefs</i>	

Contour Drawing Rating Scale

The Contour Drawing Rating Scale consists of nine line drawings of the female figure which range from extremely thin on the left to obese on the right. The increments between each drawing are consistent, and represent realistic increases in waist-to-hip ratios (Thompson & Gray, 1995). Participants answer three questions regarding these

figures: which figure they consider to be the most like them; which they consider to be the most common figure; and which figure they would like to look like (Champion & Furnham, 1999). The discrepancy between the ideal figure and the current perceived figure provides the measure of body image dissatisfaction. Validity of the drawings has been assessed by examining the degree of correspondence between an individual's self rating and BMI; this showed a strong correlation ($r = .76, p = .0001$) for female subjects (Thompson, 1993).

Three-Factor Eating Questionnaire: The Restraint Subscale

The restraint subscale of the Three-Factor Eating Questionnaire was used as the measure of dieting. It has been used to discriminate between dieters and free eaters, and has high test-retest reliability, $r = .91$ (Stunkard & Messick, 1985). This measures frequency and intensity of dieting. Table 2 provides a sample items from this questionnaire.

Table 2. Sample Items from Three-Factor Eating Questionnaire

I consciously hold back at meals in order to not gain weight. True or False

How often are you dieting in a conscious effort to control your weight?

1 - rarely 2 - sometimes 3 - usually 4 - always

There are twelve true/false questions, and nine questions which ask participants to rate their behavior. For the true/false questions, one point is given for the answer that would be given by a restrained eater, and zero points for the other answer. One point is also given for the rating questions; the possible responses are split at the middle, and are scored depending on the direction of the question. For example, in the sample item, anyone responding with 3 or 4 would receive one point, and anyone responding with 1 or

2 would receive zero points. Scores range from zero to 21, with higher scores representing more restrained eating behavior.

Media Images

Two different sets of five media images taken from popular print and electronic sources were also used. One set contained advertisements for brand-name items, which depicted extremely thin models. Each model was scantily dressed with the majority of her body visible. The second set contained advertisements for the same brand-name items, but did not feature extremely thin models in revealing clothing. In the set of five pictures which focused on the product instead of a model, three of the pictures contained only the product. However, two of the pictures featured a close-up of the model's face but did not show any part of her body. The pictures were matched in the brand-names that were advertised in the pictures.

Both sets asked participants to rate the advertisements in terms of how appealing it was, and then provide reasons for this rating to ensure that they had sufficiently focused on the advertisement. These pictures were used to assess in differences in body image between those who viewed images with thin models and those who viewed images containing only a product. Figures 1 and 2 provide an example of the type of pictures that were used.

Figure 1. Sample Image from Experimental Set

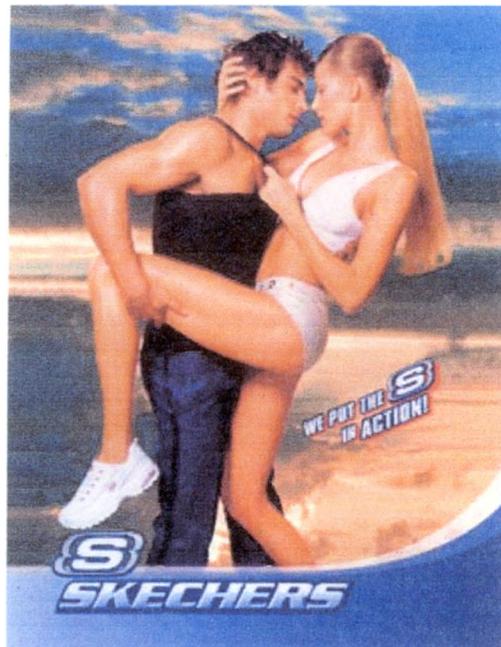
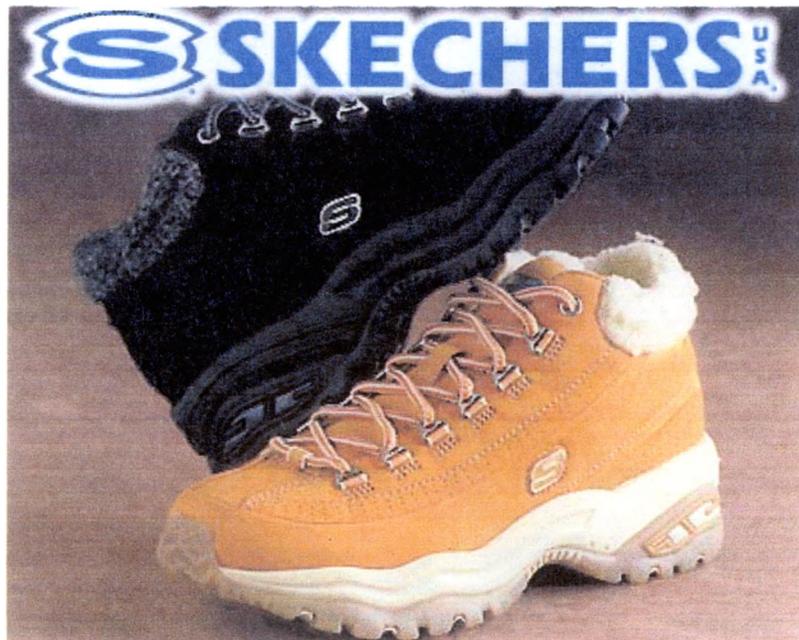


Figure 2. Sample Image from Control Set



Procedure

Participants were given a brief explanation of the aim of the study and asked to sign an informed consent form before beginning the study. The questionnaire booklet contained the demographic questions, the restraint subscale of the Three-Factor Eating Questionnaire, media pictures, the Dieting Beliefs Scale, and the Contour Drawing Rating Scale, in this order. These were distributed randomly, as the students completed an in-class test, with the type of picture alternating with each person. For example, the first female who finished was given a booklet containing images with thin models, the second was given a booklet without thin models, and so forth.

CHAPTER III.

RESULTS

To examine any possible effects of the type of picture viewed, locus of control, and dietary restraint, or interactions between these variables, locus of control and dietary restraint were each split into four groups, respectively. The standard deviation was used to divide the participants into four groups on each variable, starting from the median. The groups for locus of control were very external, external, internal, and very internal. Very external participants scored more than one standard deviation lower than the median, and very internal participants scored more than one standard deviation higher than the median. External and internal participants were within a standard deviation lower and higher than the median, respectively. For dietary restraint, the groups were created in the same manner, and participants were classified as very unrestrained, unrestrained, restrained, and very restrained. Thus, I used a 2x4x4 factorial design.

Though there was no baseline measure of body image, the control and experimental groups were very similar in mean BMI, mean weight, mean height, and mean ideal weight. Table 3 summarizes the mean, standard deviation, minimum, and maximum of body mass index, height, weight, and ideal weight for the experimental and control groups.

Table 3. Height and Weight Statistics

Experimental Group (n=82)				
	Mean	SD	Min	Max
BMI	23.45	5.55	16.97	53.26
Height (in.)	65.13	2.47	60.0	73.0
Weight	141.84	36.77	96.00	330.00
Ideal Wt.	127.98	18.97	95.00	230.00
Control Group (n=85)				
	Mean	SD	Min	Max
BMI	23.12	4.39	17.58	50.11
Height (in.)	64.97	2.85	59.00	71.00
Weight	138.56	27.29	90.00	274.00
Ideal Wt.	124.40	21.90	85.00	200.0

A three-way analysis of variance was conducted to identify any significant effects of the independent variables, media images, locus of control, and restraint, upon the dependent variable, body image dissatisfaction. There were no significant main effects of the type of pictures viewed, $F(1, 136) = .017, p > .05$, of locus of control, $F(3, 136) = .474, p > .05$, or of dietary restraint, $F(3, 136) = 1.26, p > .05$. Similarly, none of the four possible interactions between the independent variables proved to be significant; most importantly, the interaction between all three dependent variables was not significant, $F(8, 136) = .876, p > .01$.

The experimental and control groups had very similar mean scores of body image dissatisfaction, with the control group actually having a slightly higher level of body

image dissatisfaction. The mean body image dissatisfaction scores for participants in each group of locus of control and dietary restraint are summarized in Table 4.

Table 4. Mean of Body Image Dissatisfaction* (BID) Scores by Groups**

Experimental Group (n=82)		Overall BID score: -1.28					
Locus of Control	n	BID Score	Sig.	Dietary Restraint	n	BID score	Sig.
Very External	17	-1.41		Very Unrestrained	17	-1.41	
			.720				.628
External	29	-1.28		Unrestrained	30	-1.27	
			.853				.936
Internal	27	-1.33		Restrained	17	-1.41	
			.603				.878
Very Internal	9	-1.67		Very Restrained	18	-1.44	
Control Group (n=85)		Overall BID Score: -1.31					
Locus of Control	n	BI Score	Sig.	Dietary Restraint	n	BID score	Sig.
Very External	16	-1.25		Very Unrestrained	18	-1.61	
			.817				.116
External	24	-1.33		Unrestrained	27	-1.07	
			.617				.945
Internal	34	-1.18		Restrained	18	-1.05	
			.125				.082
Very Internal	11	-1.81		Very Restrained	22	-1.60	

*Body Image Dissatisfaction: discrepancy between ideal figure and perceived figure on Contour Drawing Rating Scale

**Tested with Independent Samples t-test

Though these were non-significant findings, in both the experimental and control groups, the very internal participants had the highest mean body image dissatisfaction as compared to internal, external, and very external participants. In terms of dietary restraint, those participants who were classified as very restrained tended to have slightly higher body image dissatisfaction than those classified as restrained, unrestrained, and very unrestrained. For both locus of control and dietary restraint, those participants who scored closer to the median tended to have lower levels of dissatisfaction.

In the control group, those participants who were most dissatisfied were very internal and very restrained, and those who were internal and unrestrained were the least dissatisfied. When these differences between the most and least dissatisfied were compared using an independent samples t-test, these differences were found to be significant, $t = -3.03, p = .009$, as summarized in Table 5. In the experimental group, participants who were very internal and unrestrained were most dissatisfied, and those who were least dissatisfied were internal and unrestrained. This again was a significant difference, $t = 3.12, p = .01$, also summarized in Table 5.

Because the manipulation of media images did not produce a significant difference in body image, analysis of variance was performed again, excluding the media variable, to determine if locus of control and dietary restraint alone were related to body image. There was not a significant interaction between locus of control and dietary restraint, $F(9, 158) = 1.16, p > .05$. However, the mean body image dissatisfaction between the group with the most dissatisfaction and the group with the least was again compared using an independent samples t-test. A significant difference was found between these two groups, with very internal and very restrained participants having the

most dissatisfaction, and internal and unrestrained participants having the least dissatisfaction. This is also summarized in Table 5.

Table 5. Comparison Using Independent Samples t-test of Mean Body Image Dissatisfaction of Groups with Most and Least Dissatisfaction

Control Group	BI Score	Std. Dev.	Std. Error Mean	<i>t</i>	Sig.
Very Internal & Very Restrained (n=3)	-2.67	.577	.333	-3.03	.009
Internal & Unrestrained (n=13)	-.833	.987	.273		
Experimental Group	BI Score	Std. Dev.	Std. Error Mean	<i>t</i>	Sig.
Very Internal & Unrestrained (n=4)	-2.25	.500	.250	3.122	.01
Internal & Unrestrained (n=9)	-.556	1.01	.338		
Excluding Experimental Manipulation	BI Score	Std. Dev.	Std. Error Mean	<i>t</i>	Sig.
Very Internal & Very Restrained (n=5)	-2.20	.837	.374	-3.088	.005
Internal & Unrestrained (n=22)	-.727	.985	.210		

To explore the predictive value of other variables included in this questionnaire, such as BMI, ideal weight, and discrepancy between actual and ideal weight, Pearson's correlations were performed (see Table 6 for significant correlations) to determine if multiple regression analyses would be warranted. For this test, locus of control and dietary restraint were entered as continuous variables, instead of being divided into groups. The majority of the significant correlations were between weight-related variables. Body mass index showed a very strong positive correlation with weight discrepancy, suggesting that body mass index tends to increase as the discrepancy between actual and ideal weight increases. Body mass index was also positively

correlated with body image dissatisfaction; as body mass index increases, body image dissatisfaction does the same. Locus of control and dietary restraint were positively correlated with each other, suggesting that as one's locus of control becomes more internal, one is more likely to engage in dietary restraint. However, these two predictor variables did not correlate with the outcome variable, body image dissatisfaction. Locus of control and dietary restraint did not account for any of the variance within body image dissatisfaction.

Table 6. Pearson correlations

	BMI	WTD	DBS	TFEQ-R	CDRS	WT
BMI						
WTD	.898**					
DBS	.085	.096				
TFEQ-R	.033	.003	.230**			
CDRS	.525**	.542**	.030	.021		
WT	.933**	.884**	.052	.020	.486**	
IWT	.729**	.532**	.008	.060	.221**	.866**

BMI – body mass index; WTD – discrepancy between actual and ideal weight; DBS – Dieting Beliefs Scale; TFEQ-R – Restraint subscale; CDRS – Contour Drawing Rating Scale; WT – actual weight; IWT – ideal weight

** $p < .01$

A qualitative analysis of answers to the open-ended questions regarding the advertisements was performed on a sample of 30 participants. The advertisements that contained thin models were consistently rated as more appealing than those that did not contain thin models. The reasons given for the higher ratings were most often related to

the model. Few respondents gave reasons which were related to the products featured in the advertisements. Several respondents did rate the advertisements containing the

Table 7. Reasons for Advertisement Ratings of 30 Participants

“The woman is very thin” (n=6)
“Model has a great body” (n=5)
“She has the perfect body” (n=3)
“She has the ideal American body” (n=1)
“Model has thin legs, arms, stomach” (n=2)
“Slim and sexy” (n=1)
“Skinny figure” (n=2)
“I wish I had a body like that” (n=2)
“Model is too skinny” (n=8)

models as unappealing because they believed the model was ‘too skinny.’ These answers are summarized in Table 7.

CHAPTER IV.

DISCUSSION

Conclusions

Contrary to the researcher's hypotheses, the viewing of provocative media images did not produce greater body image dissatisfaction. The participants who viewed images with very thin, partially clothed models did not have significantly higher levels of body image dissatisfaction than those who viewed images that did not depict very thin, partially clothed models. The experimental manipulation of the type of pictures viewed did not produce any significant effect; therefore, no causal relationships between the media and body image can be inferred from this study.

Though the experimental manipulation did not produce a significant difference in body image, the means of body image dissatisfaction for the control and experimental groups were examined. In the control group, there was a significant difference between those with the most dissatisfaction, very internal and very restrained, and those with the least dissatisfaction, internal and unrestrained. Within the experimental group, there was also a significant difference between those who had the most dissatisfaction, very internal and unrestrained, and those who had the least dissatisfaction, internal and unrestrained.

Because the manipulation of media images did not produce a significant difference in body image, analysis of variance was performed again, excluding the media variable, to determine if locus of control and dietary restraint alone were related to body

image, but did not yield any significant result. When the group with the highest mean body image dissatisfaction was compared against the group with the lowest mean body image dissatisfaction, it was found that those participants who were very internal and very restrained had significantly more body image dissatisfaction than those who were moderately internal and unrestrained. While the analysis of variance did not reveal any significant trends across all of the groups, comparison of the two extreme groups showed a pattern that as an individual becomes more internally oriented and increases dietary restraint, body image dissatisfaction may increase. These were exploratory statistical analyses, and results must be interpreted with caution. Due to the very small number of participants in these groups, the likelihood of possible error is greatly increased. If more subjects were employed and this pattern remained the same, the analysis of variance would likely approach a significant finding.

These findings were partially in agreement with the second hypothesis. While there were no differences due to media image, those participants with a very internal locus of control and a high level of dietary restraint had the most body image dissatisfaction. This pattern was found when testing participants without including media effects, and also in the control group when media effects were included. The fact that this pattern was not found in the experimental group when media effects were considered is likely due to the small number of participants who fit this criteria within the experimental condition. In regards to the hypothesis that among unrestrained eaters, externally oriented individuals would have the lowest body dissatisfaction, the mean of body image dissatisfaction among externally oriented participants was extremely close to that of internally oriented participants.

Overall, a very internal locus of control in regards to weight was associated with the most dissatisfaction, regardless of dietary restraint. In terms of dietary restraint, those who were very restrained and very internal also had the highest dissatisfaction. Again, these were insignificant results, but revealed a general pattern. As a woman's beliefs of control over weight become more internal and she engages in more dietary restraint, the dissatisfaction with her body image may increase.

This is a critical area of research, considering the serious problems that can be caused by disturbances in body image. Perhaps, an internal locus of control becomes harmful when it is extreme. A woman who possesses a moderately internal locus of control would take into account some amount of external factors that might affect her body shape, and if unsatisfied, there might not be as many negative repercussions upon her body image. However, one with an extremely internal belief would consider only her own actions when evaluating her body shape; thus, any dissatisfaction would reflect only upon herself, and lessen body image satisfaction.

Though the results were insignificant, this research also revealed that dietary restraint may also become harmful to body image when practiced in the extreme. Due to the vast majority of young women that engage in dieting behavior, it would be remiss to not investigate the influence this has on body image. The consistency with which body image has been found to relate to harmful, maladaptive eating behavior underscores the need to fully investigate psychological and social influences on body image. While this study did not find that media influenced body image, this is most likely due to methodological issues.

Limitations

Previous studies have found that viewing media images of very thin models will, in fact, increase body image dissatisfaction (Ogden & Munday, 1996). However, the present study used a between subjects design; the participants were only rated once on body image. Ogden and Munday (1996) used a within subjects design, in which participants were measured on body image before and after the experimental manipulation. A within-subjects design shows more of the effects of the experimental manipulation because a baseline measure is collected which is then compared against the post-manipulation measure. If the body image of these participants had been measured prior to the experimental manipulation, any changes made by the images could have been documented and analyzed. However, it was hoped that the two sets of media images would produce a distinguishable difference in body image between the experimental and control groups.

An additional point of concern regarding the media images is that two of the images viewed by the control group did contain a model. Both of these photos were shots of the model's face, taken at a very close range, and no other parts of the models' bodies were visible. However, these models did have attractive faces which potentially could have led some participants to infer that because the model had an attractive face, she would also have an "ideal" body. This could have activated thoughts of body image, and weakened any differences in the two sets of pictures by increasing body image dissatisfaction in the control group.

An additional difference between the present study and previous ones was the type of questions that participants answered in regards to the media images. In the

present and previous studies, open-ended questions were used to ensure that participants' attention was sufficiently focused on the images. However, in the present study, participants rated the appeal of the advertisement, and then provided reasons for their rating. In previous studies, participants rated the model appearing in the image on characteristics such as attractiveness, healthiness, and thinness. Those questions were designed to induce thought about weight and body shape and size, but were decided against in the present study in order to obtain a clearer picture of the influence of the media.

Asking questions about the advertisement in general made the results more similar to real-life situations. When a woman is looking at a fashion magazine or watching television, she is not being asked to rate images in terms of weight and body shape; by asking such questions, body image dissatisfaction could possibly be inflated. Although it is true that she is also not asked to rate the images and provide reasons for those ratings, asking about the advertisements in general is a more subtle way of prompting participants to look at the models. However, perhaps using a larger number of pictures could have increased any differences in body image between the experimental and control groups.

While the manipulation did not produce any significant effect, it was clear from the qualitative analysis that participants had focused on the thinness of the models. While some of these reasons do not explicitly say that the advertisement was appealing because the model was very thin, it can be inferred that these participants equate the perfect body with being extremely thin. This qualitative analysis illustrates that the

advertisement did, in fact, induce thought about weight without using questions that could possibly inflate body image dissatisfaction.

While it appears that thought about weight and body shape was induced by the media images that contained models, the body image assessment tool did not demonstrate any significant differences in body image between the experimental and control groups. Body image dissatisfaction was positively correlated with the discrepancy between actual and ideal weight. As the discrepancy between actual and ideal weight increased, body image dissatisfaction also increased. Interestingly, more than 70% of participants reported an ideal weight that was at least twenty pounds less than their current weight, but this weight dissatisfaction did not translate into the body image scores. The Contour Drawing Rating Scale does indeed measure a person's dissatisfaction with their weight, but it is possible it does not encompass the whole construct of body image. Perhaps being dissatisfied with weight is a necessary, but not sufficient, condition of body image dissatisfaction. For example, a woman could potentially be dissatisfied with her weight, but not have undue, negative views of her body shape and size in general. Previous studies have used measures such as the Body Cathexis Scale in addition to the Contour Drawing Rating Scale (Furnham & Greaves, 1994). This measure asks a person to rate dissatisfaction with different body parts, and also provides a picture of the nature and extent of dissatisfaction by asking the extent to which a person attempts to disguise and the extent to which a person attempts to change each body part. The inclusion of a scale such as this may have produced a more complete picture of body image.

The order in which the instruments were arranged in the survey may also have affected the results. The participants completed the demographic information, followed

by the Restraint subscale, the questions regarding the media images, the Dieting Beliefs Scale, and finally, the Contour Drawing Rating Scale. By having participants complete the Dieting Beliefs Scale in between viewing the media images and completing the Contour Drawing Rating Scale, the effects of the media images may have been diluted. Participants may have become distracted by the completion of the Dieting Beliefs Scale.

In addition, the Contour Drawing Rating Scale produces a narrow range of possible scores, which reduces variance. To further complicate matters, in the present study, there was a very restricted range of scores on the dependent variable of body image. Possible scores on the Contour Drawing Rating Scale range from -9 to 9, but the range of scores in this study was -4 to 1. This weakens the correlations by reducing the variability between the highest and lowest scores on the body image assessment. This could possibly be attributed to the population that was used. The mean of body-mass index of the participants was within the acceptable range, with less than 25% able to be classified as overweight according to BMI. A wider range of body image scores might have been found if the participants had been recruited in a different place, such as the university recreation center, at body image support groups, or diet centers.

Future Directions

Media should certainly not be discounted, although its impact may be declining as women become more aware and resistant to the message being conveyed. There are potentially valuable variables that were not included in this study. Future studies could benefit by including a measure of body image importance, the degree to which an individual's sense of self-worth is based on body image (Rieder & Ruderman, 2001).

This has previously been shown to interact with body image dissatisfaction in predicting the maladaptive eating behaviors of binge and purge eating (Rieder & Ruderman, 2001).

Perceptions of success in dieting and weight-loss efforts could also be significant in determining body image. A woman's body image satisfaction may increase as a function of how successful she perceives herself to be in achieving her ideal body size. An internal locus of control combined with repeated dieting may produce greater body dissatisfaction, as found by Tiggemann and Rothblum (1997), if a woman perceives herself to be unsuccessful in reaching her goal weight or shape. However, if a woman is repeatedly dieting and perceives her efforts to be successful, her satisfaction with her body image would likely improve.

The overall aim of this study was to determine if locus of control and dietary restraint interact with media influences to increase body image dissatisfaction in young women. These possible interactions had not previously been examined, and although this study did not produce any significant results, these factors may warrant further study.

APPENDIX A
CONSENT FORM

You are being invited to participate in a study that investigates the effects of the media, personal control beliefs, and dieting on the body image of young women. We are asking for your participation because it is young women who typically feel the most pressure from the media in terms of body shape. Please read this consent form carefully before agreeing to participate. Your participation is entirely voluntary. This study is being conducted by Jamison Maris, a second-year student in the Master's of Health Psychology program.

Background Information:

This study is designed to examine variables that are potentially harmful to the body image of young women, and the relationships between those variables. The variables are media influence, personal control beliefs, and dieting.

Procedure:

If you decide to participate, you will be asked to complete questionnaires involving your own personal body image, your personal beliefs about control over weight, and your dieting habits. You will also view pictures taken from magazines and answer questions regarding the advertisement.

Risks & Benefits of Participation:

The risks of participating are minimal. The consent form will contain your signature, but that will be kept separate from the forms with the last four digits of your phone number. The benefits of participation outweigh the risks. The study could provide valuable information as to how to improve the body image of young women. However, participating may increase your knowledge, attitudes, and/or awareness toward self, which may result in distressing emotional responses (e.g., depression, anxiety). If you experience any emotional distress, please contact the University Counseling Center at 245-2208 for free counseling services.

Confidentiality:

Your name will not be connected with the questionnaires, and your consent form will, at all times, be kept separately from the questionnaires.

Voluntary Nature of the Study:

Your participation is entirely voluntary. If you do agree to participate, you are free to discontinue that participation at any time.

Please feel free to ask any questions that you have now.

The researcher conducting this study is Jamison Maris. If you have any questions at a later time, you may contact Jamison at jm54808@txstate.edu. You may also contact Dr. Roque Mendez, graduate faculty supervisor, at 245-2526.

Statement of Consent:

I have read the above information. I have asked questions and received answers. I consent to participate in the study.

Signature _____

Date _____

Signature of Investigator

Or Person Obtaining

Consent _____ Date _____

APPENDIX B

EXPERIMENTAL GROUP SURVEY

_____ Please record this number on the scantron in the section marked IDENTIFICATION NUMBER.

Answer the following three questions in the space provided on this sheet.

What is your height? _____

What is your current weight? _____

What is your ideal weight? _____

Please fill in your birth date in the space provided on the scantron.

Please answer the following questions about yourself on the scantron provided.

1. Ethnicity

A - Black American

B - Asian-American

C - Latino

D - Anglo

E - Other

2. What is your family's socioeconomic status?

A - Upper class

B - Upper-middle class

C - Middle class

D - Lower-middle class

E - Working class

For the following questions, fill in A (TRUE) if this statement describes you, and B (FALSE) if this statement does not describe you.

3. When I have eaten my quota of calories, I am usually good about not eating any more.
4. I deliberately take small helpings as a means of controlling my weight.
5. Life is too short to worry about dieting.
6. I have a pretty good idea of the number of calories in common food.
7. While on a diet, if I eat food that is not allowed, I consciously eat less for a period of time to make up for it.
8. I enjoy eating too much to spoil it by counting calories or watching my weight.
9. I often stop eating when I am not really full as a conscious means of limiting the amount that I eat.
10. I consciously hold back at meals in order not to gain weight.

11. I eat anything I want, any time I want.
 12. I count calories as a conscious means of controlling my weight.
 13. I do not eat some foods because they make me fat.
 14. I pay a great deal of attention to changes in my figure.

Please answer the following questions on the scantron by filling in the response that is most appropriate to you.

15. How often are you dieting in a conscious effort to control your weight?

- | | | | |
|--------|-----------|---------|--------|
| 1 | 2 | 3 | 4 |
| Rarely | sometimes | usually | always |

16. Would a weight fluctuation of 5lbs affect the way you live your life?

- | | | | |
|------------|----------|------------|-----------|
| 1 | 2 | 3 | 4 |
| Not at all | slightly | moderately | very much |

17. Do your feelings of guilt about overeating help you to control your food intake?

- | | | | |
|-------|--------|-------|--------|
| 1 | 2 | 3 | 4 |
| Never | rarely | often | always |

18. How conscious are you of what you are eating?

- | | | | |
|------------|----------|------------|-----------|
| 1 | 2 | 3 | 4 |
| Not at all | slightly | moderately | extremely |

19. How frequently do you avoid 'stocking up' on tempting foods?

- | | | | |
|--------------|--------|---------|---------------|
| 1 | 2 | 3 | 4 |
| Almost never | seldom | usually | almost always |

20. How likely are you to shop for low-calorie food?

- | | | | |
|----------|-------------------|-------------------|-------------|
| 1 | 2 | 3 | 4 |
| Unlikely | slightly unlikely | moderately likely | very likely |

21. How likely are you to consciously eat slowly in order to cut down on how much you eat?

- | | | | |
|----------|-----------------|-------------------|-------------|
| 1 | 2 | 3 | 4 |
| Unlikely | slightly likely | moderately likely | very likely |

22. How likely are you to consciously eat less than you want?

- | | | | |
|----------|-----------------|-------------------|-------------|
| 1 | 2 | 3 | 4 |
| Unlikely | slightly likely | moderately likely | very likely |

23. On a scale of 0 to 5, where 0 means no restraint in eating (eating whatever you want, whenever you want it) and 5 means total restraint (constantly limiting food intake and never 'giving in'), what number would you give yourself

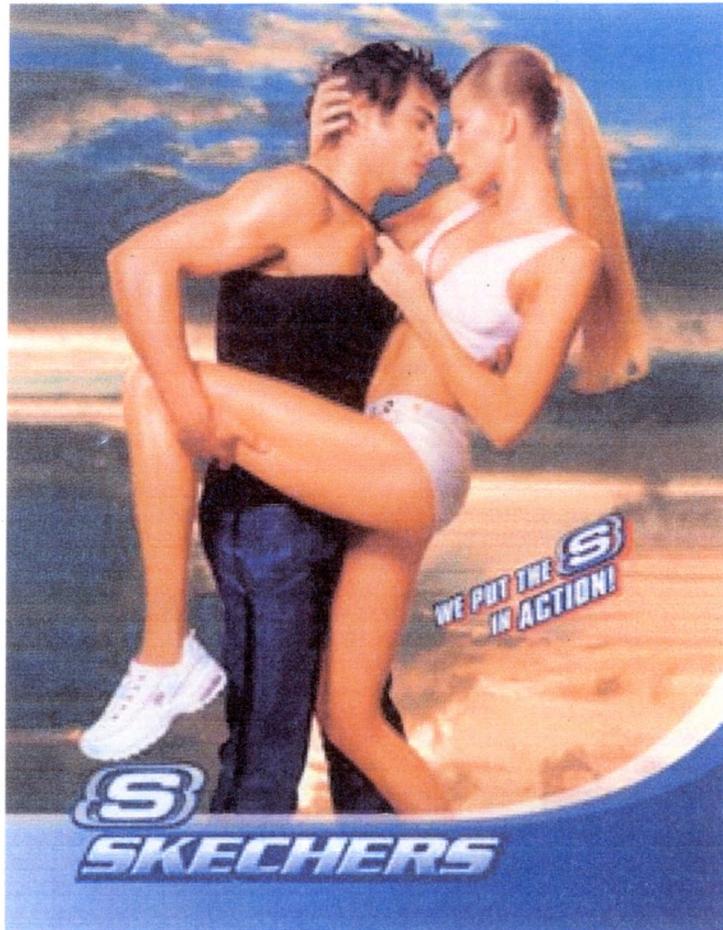
- 0 – eat whatever you want, whenever you want it
 1 – usually eat whatever you want, whenever you want it
 2 – often eat whatever you want, whenever you want it
 3 – often limit food intake, but often 'give in'
 4 – usually limit food intake, rarely 'give in'
 5 – constantly limiting food intake, never 'giving in'

Please answer the following open-ended questions in the space provided on this sheet.



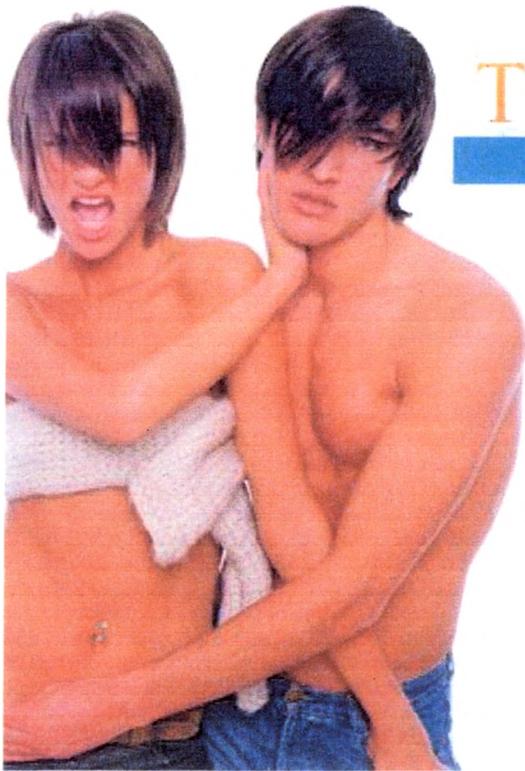
On a scale from 1 (least) to 10 (most) how appealing is this advertisement to you?

What aspects of this advertisement make it appealing or unappealing to you?



On a scale from 1 (least) to 10 (most) how appealing is this advertisement to you?

What aspects of this advertisement make it appealing or unappealing to you?

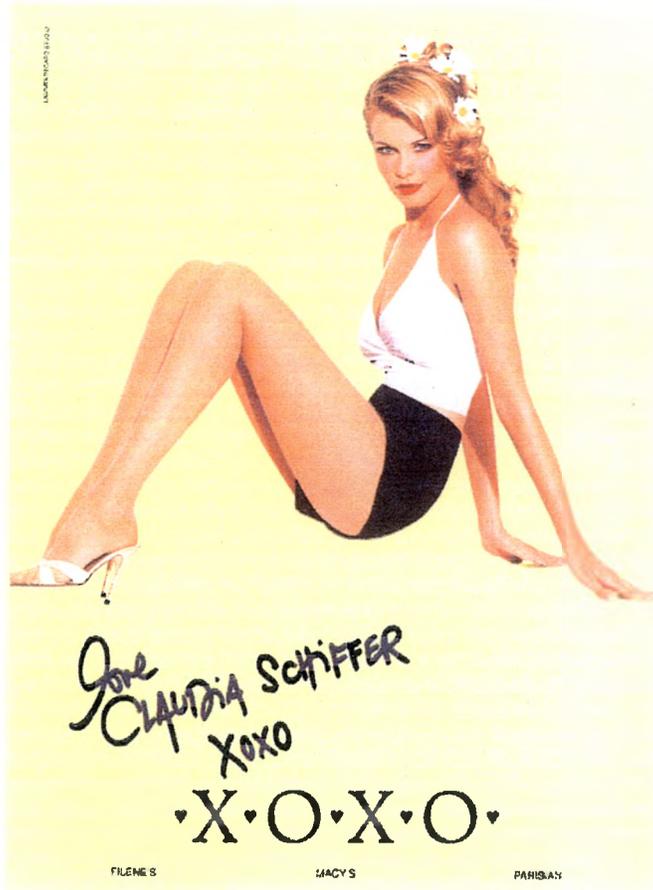


TIGI Products



On a scale from 1 (least) to 10 (most) how appealing is this advertisement to you?

What aspects of this advertisement make it appealing or unappealing to you?



On a scale from 1 (least) to 10 (most) how appealing is this advertisement to you?

What aspects of this advertisement make it appealing or unappealing to you?



On a scale from 1 (least) to 10 (most) how appealing is this advertisement to you?

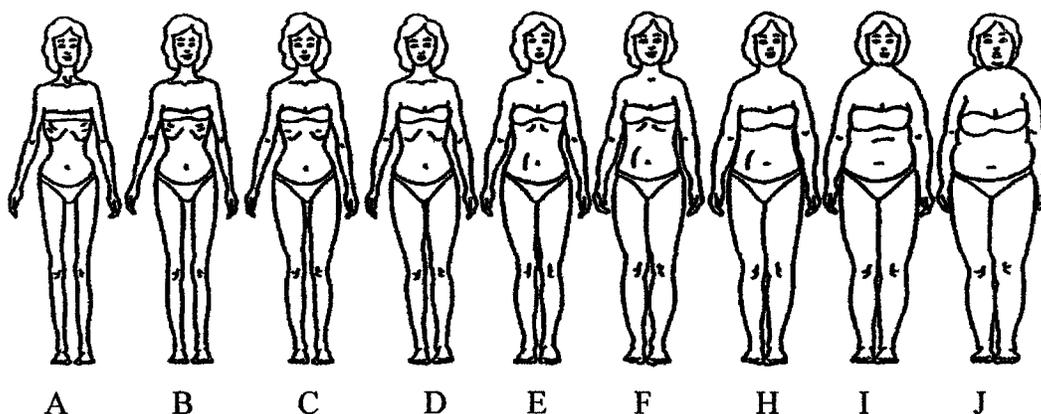
What aspects of this advertisement makes it appealing or unappealing to you?

Using the scantron again, please respond to the following statements by indicating how well each statement describes your beliefs. Fill in a number from 1 (*not at all descriptive of my beliefs*) to 6 (*very descriptive of my beliefs*) on the scantron provided.

<i>Not at descriptive of my beliefs</i>						<i>Very descriptive of my beliefs</i>
1	2	3	4	5	6	

24. By restricting what one eats, one can lose weight.
25. When people gain weight, it is because of something they have done or not done.
26. A thin body is largely a result of genetics.
27. No matter how much effort one puts into dieting, one's weight tends to stay about the same.
28. One's weight is, to a great extent, controlled by fate.
29. There is so much fattening food around that losing weight is impossible.
30. Most people can only diet successfully when other people push them to do it.
31. Having a slim and fit body has very little to do with luck.
32. People who are overweight lack the willpower necessary to control their weight.
33. Each of us directly is responsible for our weight.
34. Losing weight is simply a matter of wanting to do it and applying yourself.
35. People who are more than a couple of pounds overweight need professional help to lose weight.
36. By increasing the amount one exercises, one can lose weight.
37. Most people are at their present weight because that is the weight level that is natural for them.
38. Unsuccessful dieting is due to lack of effort.
39. In order to lose weight, people must get a lot of encouragement from others.

Please answer the following questions on the scantron regarding this set of drawings.



40. Which figure do you believe is the most similar to yourself? _____
41. Which figure do you believe is the most common among women? _____
42. Which figure would you most want to look like? _____

APPENDIX C

CONTROL GROUP SURVEY

_____ Please record this number on the scantron in the section marked IDENTIFICATION NUMBER.

Answer the following three questions in the space provided on this sheet.

What is your height? _____

What is your current weight? _____

What is your ideal weight? _____

Please fill in your birth date in the space provided on the scantron.

Please answer the following questions about yourself on the scantron provided.

1. Ethnicity

- A - Black American
- B - Asian-American
- C - Latino
- D - Anglo
- E - Other

2. What is your family's socioeconomic status?

- A - Upper class
- B - Upper-middle class
- C - Middle class
- D - Lower-middle class
- E - Working class

For the following questions, fill in A (TRUE) if this statement describes you, and B (FALSE) if this statement does not describe you.

3. When I have eaten my quota of calories, I am usually good about not eating any more.
4. I deliberately take small helpings as a means of controlling my weight.
5. Life is too short to worry about dieting.
6. I have a pretty good idea of the number of calories in common food.
7. While on a diet, if I eat food that is not allowed, I consciously eat less for a period of time to make up for it.
8. I enjoy eating too much to spoil it by counting calories or watching my weight.
9. I often stop eating when I am not really full as a conscious means of limiting the amount that I eat.
10. I consciously hold back at meals in order not to gain weight.

11. I eat anything I want, any time I want.
 12. I count calories as a conscious means of controlling my weight.
 13. I do not eat some foods because they make me fat.
 14. I pay a great deal of attention to changes in my figure.

Please answer the following questions on the scantron by filling in the response that is most appropriate to you.

15. How often are you dieting in a conscious effort to control your weight?

- | | | | |
|--------|-----------|---------|--------|
| 1 | 2 | 3 | 4 |
| Rarely | sometimes | usually | always |

16. Would a weight fluctuation of 5lbs affect the way you live your life?

- | | | | |
|------------|----------|------------|-----------|
| 1 | 2 | 3 | 4 |
| Not at all | slightly | moderately | very much |

17. Do your feelings of guilt about overeating help you to control your food intake?

- | | | | |
|-------|--------|-------|--------|
| 1 | 2 | 3 | 4 |
| Never | rarely | often | always |

18. How conscious are you of what you are eating?

- | | | | |
|------------|----------|------------|-----------|
| 1 | 2 | 3 | 4 |
| Not at all | slightly | moderately | extremely |

19. How frequently do you avoid 'stocking up' on tempting foods?

- | | | | |
|--------------|--------|---------|---------------|
| 1 | 2 | 3 | 4 |
| Almost never | seldom | usually | almost always |

20. How likely are you to shop for low-calorie food?

- | | | | |
|----------|-------------------|-------------------|-------------|
| 1 | 2 | 3 | 4 |
| Unlikely | slightly unlikely | moderately likely | very likely |

21. How likely are you to consciously eat slowly in order to cut down on how much you eat?

- | | | | |
|----------|-----------------|-------------------|-------------|
| 1 | 2 | 3 | 4 |
| Unlikely | slightly likely | moderately likely | very likely |

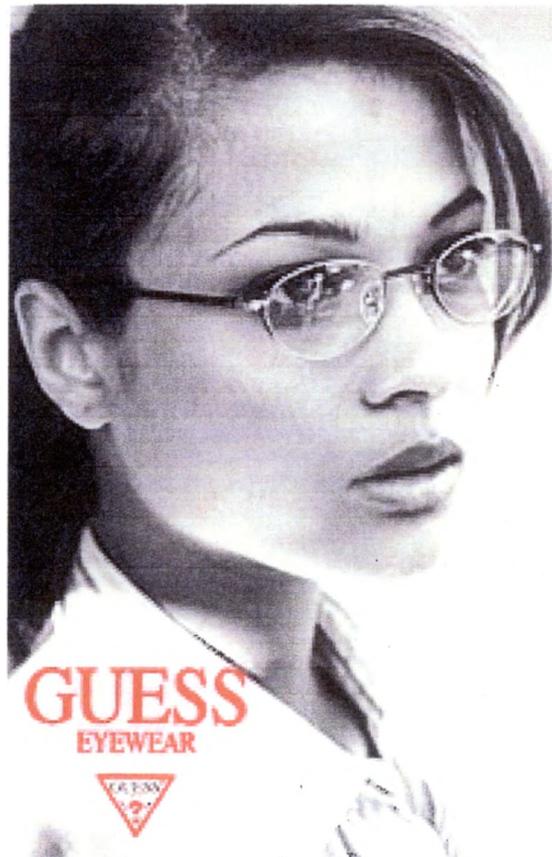
22. How likely are you to consciously eat less than you want?

- | | | | |
|----------|-----------------|-------------------|-------------|
| 1 | 2 | 3 | 4 |
| Unlikely | slightly likely | moderately likely | very likely |

23. On a scale of 0 to 5, where 0 means no restraint in eating (eating whatever you want, whenever you want it) and 5 means total restraint (constantly limiting food intake and never 'giving in'), what number would you give yourself

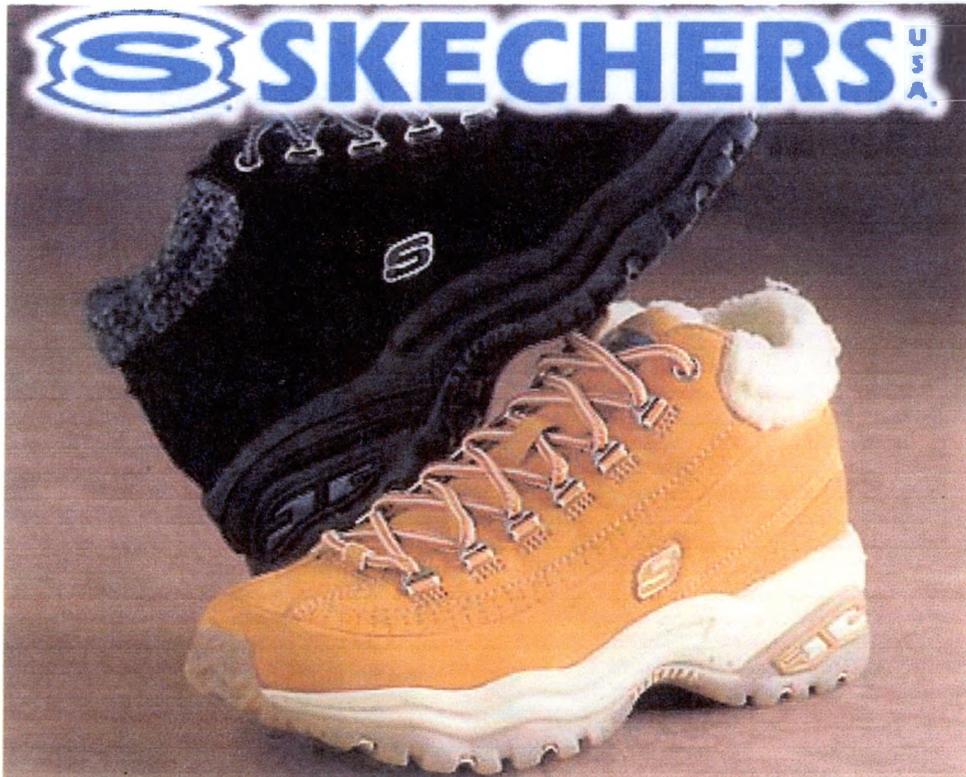
- 0 – eat whatever you want, whenever you want it
- 1 – usually eat whatever you want, whenever you want it
- 2 – often eat whatever you want, whenever you want it
- 3 – often limit food intake, but often 'give in'
- 4 – usually limit food intake, rarely 'give in'
- 5 – constantly limiting food intake, never 'giving in'

Please answer the following open-ended questions in the space provided on this sheet.



On a scale from 1 (least) to 10 (most) how appealing is this advertisement to you?

What aspects of this advertisement make it appealing or unappealing to you?



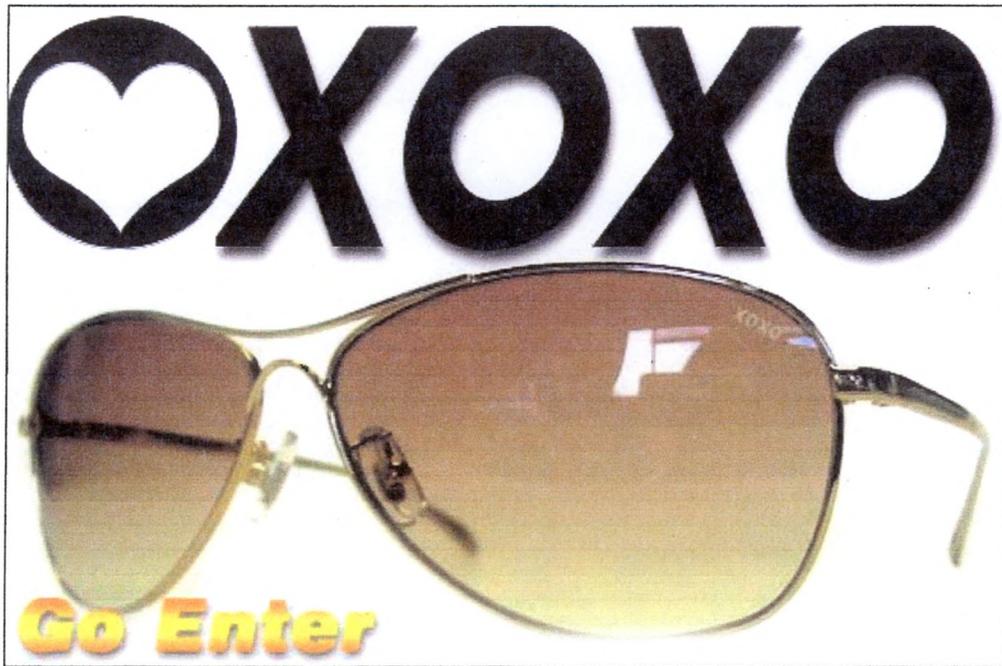
On a scale from 1 (least) to 10 (most) how appealing is this advertisement to you?

What aspects of this advertisement make it appealing or unappealing to you?



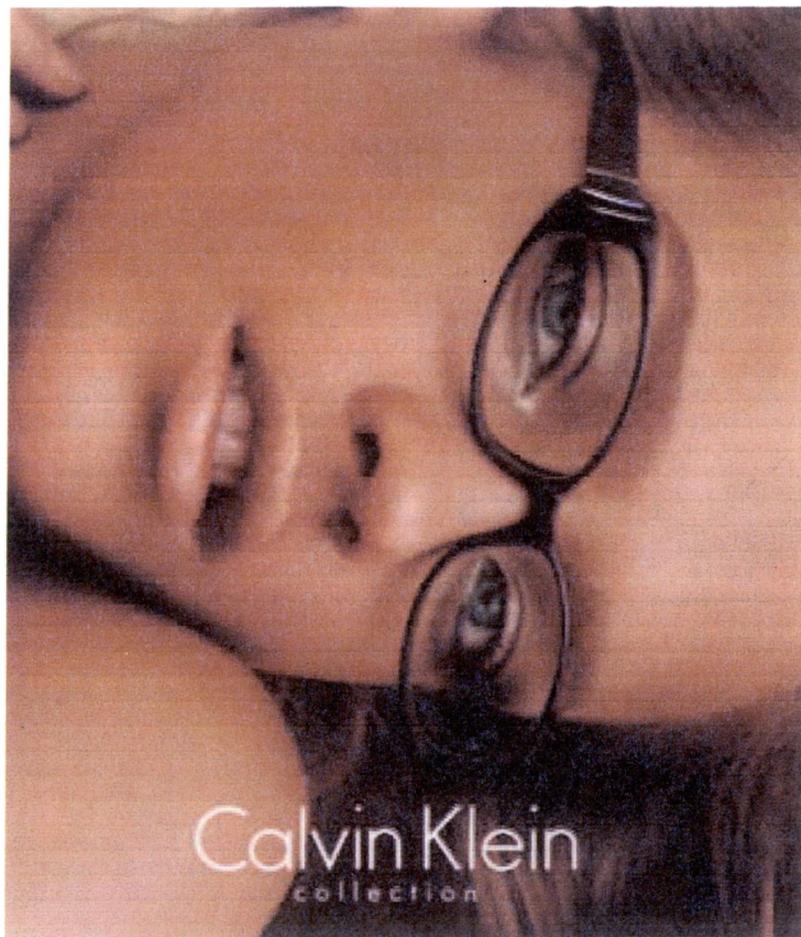
On a scale from 1 (least) to 10 (most) how appealing is this advertisement to you?

What aspects of this advertisement make it appealing or unappealing to you?



On a scale from 1 (least) to 10 (most) how appealing is this advertisement to you?

What aspects of this advertisement make it appealing or unappealing to you?



On a scale from 1 (least) to 10 (most) how appealing is this advertisement to you?

What aspects of this advertisement make it appealing or unappealing to you?

Using the scantron again, please respond to the following statements by indicating how well each statement describes your beliefs. Fill in a number from 1 (*not at all descriptive of my beliefs*) to 6 (*very descriptive of my beliefs*) on the scantron provided.

*Not at descriptive
of my beliefs*

1

2

3

4

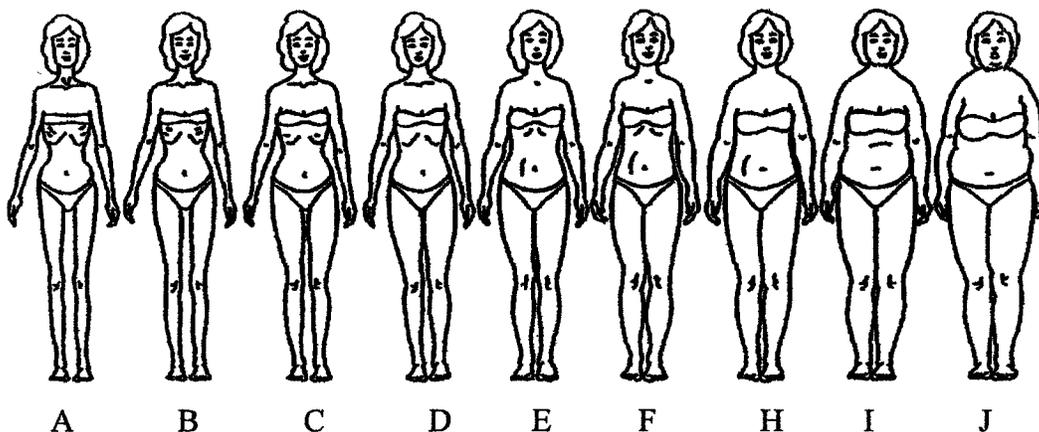
5

*Very descriptive
of my beliefs*

6

24. By restricting what one eats, one can lose weight.
25. When people gain weight, it is because of something they have done or not done.
26. A thin body is largely a result of genetics.
27. No matter how much effort one puts into dieting, one's weight tends to stay about the same.
28. One's weight is, to a great extent, controlled by fate.
29. There is so much fattening food around that losing weight is impossible.
30. Most people can only diet successfully when other people push them to do it.
31. Having a slim and fit body has very little to do with luck.
32. People who are overweight lack the willpower necessary to control their weight.
33. Each of us directly is responsible for our weight.
34. Losing weight is simply a matter of wanting to do it and applying yourself.
35. People who are more than a couple of pounds overweight need professional help to lose weight.
36. By increasing the amount one exercises, one can lose weight.
37. Most people are at their present weight because that is the weight level that is natural for them.
38. Unsuccessful dieting is due to lack of effort.
39. In order to lose weight, people must get a lot of encouragement from others.

Please answer the following questions on the scantron regarding this set of drawings.



40. Which figure do you believe is the most similar to yourself? _____
41. Which figure do you believe is the most common among women? _____
42. Which figure would you most want to look like? _____

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