

**EFFECTS OF MEDIA CONSUMPTION, THROUGH GUIDE
ELABORATION AND PROPORTIONAL VALUATION OF SELF,
ON EATING PATHOLOGY IN YOUNG WOMEN**

by

Carolyn Jean Nesbitt

B.A., University of Western Ontario, 1980

B.A., Waterloo University, 1990

M.A., Simon Fraser University, 1994

Dissertation Submitted in Partial Fulfillment of the Requirements for the

Degree of

Doctor of Philosophy

in the Department

of

Psychology

© Carolyn Nesbitt, 2000

SIMON FRASER UNIVERSITY

September, 2000

All rights reserved.

This work may not be reproduced in whole or part, by
photocopy or other means, without permission of the author.



**National Library
of Canada**

**Acquisitions and
Bibliographic Services**

**395 Wellington Street
Ottawa ON K1A 0N4
Canada**

**Bibliothèque nationale
du Canada**

**Acquisitions et
services bibliographiques**

**395, rue Wellington
Ottawa ON K1A 0N4
Canada**

Your file Votre référence

Our file Notre référence

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-61669-X

Canada

ABSTRACT

This study examined factors as possible mediating and moderating influences on the relationship between media consumption and eating pathology. It was hypothesized that greater media consumption increases eating pathology through a mediated pathway. The proposed mediational variables were guide elaboration and proportional valuation of self. It was also proposed that the mediated pathway is moderated by a daughter's perception of her mother's body image discrepancy. Structural equation modeling was used to test these hypotheses in a sample of 165 female undergraduates. All of the fit indices suggested that the mediational model fit the data. The effect of media consumption on eating pathology is primarily indirect and is mediated through guide elaboration and proportional valuation of self. Data was inconsistent with the moderated mediational model. While the entire pathway was not moderated, relationships do exist between aspects of self-evaluation and aspects of perception of mother's self-evaluation. Future research could examine the influence of mother's guide elaboration on own and media guide elaboration, proportional valuation of self and disordered eating behaviour. Clinical implications for therapeutic interventions are discussed. Most important, the influence of guide elaboration versus self-discrepancy in the area of eating disorders is deliberated.

DEDICATION

For my mother.

ACKNOWLEDGEMENTS

How do I begin to thank all those who supported me throughout the six years that went into this particular piece of work?

To the SFU psychology faculty in general: Thank you for bending the rules so that I could raise my child in a way that was congruent with my values and still be a successful student.

To my committee: Thank you, Marlene, for your insight, clarity and dedication. You make an effort with your students' research that is unparalleled. I knew, with you as my supervisor, that what I produced would be of scientific worth. Michael, thank you for expecting excellence. In my final year, I have a grasp on the numbers, and it is exciting! David, you were there throughout most of my graduate career, with encouragement, compassion and humanity. You saw me in a way that few do, and your kindness came just at the right moments.

To my friends: Thanks, Angela, for slogging through all those initial proposals. Inna, Mary, Amy and Jocelyne, thanks for keeping me sane when I wasn't working. And Deb, your love and care for Birch made it much easier to leave for the lab in those early days. It was still tough, but it was easier!

To my mother and father: Thanks for teaching me to aim high, and that I could be anything I wanted to be if I worked at it.

And to Giovanni: Thank you for seeing my work as important. Thank you for getting up at 5:30 a.m. and biking to work in the dark (and the rain) so that I could take the car. Thank you for being home with Birch so that I could continue working guilt-free. Thank you for your unending support and your deep belief in me.

TABLE OF CONTENTS

Approval	ii
Abstract	iii
Dedication.....	iv
Acknowledgements	v
Table of Contents	vi
List of Tables	ix
LIST OF FIGURES.....	X
INTRODUCTION	1
Eating Pathology	2
Messages of the Media	3
Pathway from Media Exposure to Eating Pathology	4
Evidence of Influence	4
Correlational Evidence.....	4
Experimental Evidence	5
Mechanisms of Influence	6
Guide Elaboration	6
Ideal Standards of Beauty	6
Self-Regulation.....	7
Disproportional Valuation of Body Shape and Weight	12
Valuation of Self	12
Influence of Maternal Standards.....	13
Proposed Models.....	15
METHOD	18
Participants.....	18

Procedure	19
Measures.....	20
Physical Selves.....	20
Guide Elaboration	20
Media Guide	21
Self-regulatory Own Guide	21
Perception of Mother's Discrepancy	22
Media Consumption Questionnaire	22
Eating Attitudes Test.....	23
Shape- and Weight-Based Self-Esteem Inventory	25
Demographics Questionnaire	25
Statistical Analyses.....	26
Disattenuated Correlational Model	26
Specification: Measurement Model and Structural Equation Model	26
Identification	27
Estimation and Hypothesis Testing.....	27
Mediational Model.....	27
Specification: Measurement Model	27
Specification: Structural Equation Model	27
Identification	29
Estimation and Hypothesis Testing.....	29
Moderated Mediational Model	29
Specification and Identification	30
Estimation and Hypothesis Testing.....	30
Assessment of Model Fit	30
RESULTS.....	32
Descriptive Statistics	32
Media Consumption.....	32
Guide Elaboration	32
Proportional Valuation of Self	32
Mother's Perceived Physical Discrepancy	33
Eating Pathology.....	33
Original Scoring System for the EAT-26.	33
Full Scoring System of EAT-26 Data	33

Zero-order Correlations of All Variables	34
Estimating the Disattenuated Correlation	35
Mediation Model	36
Identification.....	36
Modification.....	36
Assessment of Fit	37
Estimation	37
Moderated Mediation Model	42
Assessment of Fit	42
DISCUSSION	44
REFERENCES	58
Appendix 1: Physical Selves	64
Appendix 2: Media Consumption Questionnaire	76
Appendix 3: Eating Attitudes Test	83
Appendix 4: Shape- and Weight-Based Self-Esteem Inventory	85
Appendix 5: Demographic Questionnaire	86
Appendix 6: Histogram of Standardized Residuals for Low Perceived Mother's Body Image Discrepancy	88

LIST OF TABLES

Table 1: Correlation Matrix for All Variables	34
Table 2: Goodness-of-fit Statistics.....	35
Table 3: Correlation Matrix of Mediational Model	37
Table 4: Estimates for the Structural Model	38
Table 5: Covariance Matrix of Latent Variables.....	38
Table 6: Estimates for the Measurement Model.....	39
Table 7: Theta-Epsilon: Variance/Covariance ^a of the Errors in Measurement of the Endogenous Indicators	40
Table 8: Theta-Delta: Variance ^a of the Errors in Measurement of the Exogenous Indicators	40
Table 9: Effects of Media Consumption on Eating Pathology ^a	40
Table 10: Estimates ^a for the Moderated Mediator Model	42

LIST OF FIGURES

Figure 1:	Proposed Mediation Model	16
Figure 2:	Structural Model for Disattenuated Correlation	26
Figure 3:	Mediation Structural Equation Model	28
Figure 4:	Disattenuated Correlational Model.....	36
Figure 5:	Standardised Solution for Mediation Model	41

INTRODUCTION

Eating disorders, and disordered eating, are believed to result from multiple sources. This research explores the impact of media consumption on eating pathology in young women. It also explores pathways, both direct and indirect, from media consumption to eating pathology.

Research investigating the factors that lead to disordered eating has focused on biochemical, psychological and sociocultural components. The sociocultural messages learned by women today in North America are passed on in three important ways: through the process of socialization within the family, particularly through mothers to daughters (Chodorow, 1978), through peers, and through mass media (Henderson-King & Henderson-King, 1997; Stice, 1994; Stice, Schupak-Neuberg, Shaw, & Stein, 1994; Waller and Shaw, 1994).

How does an increase in consumption of media images depicting stereotypical standards influence eating attitudes and behaviours? The purpose of this study was to examine how elaboration of self-guides and proportional valuation of the self act as mediators in the relationship between media exposure and eating pathology. In so doing, more light was shed on the impact of sociocultural messages about women that are present in mass media.

Specifically, it was proposed that the impact of media consumption on disordered eating is mediated through increased relevance of body ideals to self-guides and a subsequent increase in the proportion of self-esteem derived from body shape and weight.

While greater media exposure (Stice *et al.*, 1994) and internalized maternal

standards (Pike & Rodin, 1991) have both been independently linked to increased eating pathology, the interaction of these two influences has not been thoroughly examined. It was also proposed that perception of mother's body image discrepancy moderates the mediated pathway.

In this study, terms were defined as follows: Media Consumption as the hours of television, films and videos watched in the previous week and the number of magazines read in the previous month; Guide Elaboration as the extent of media guides and self-regulatory own guides focused on body image; Proportional Valuation of Self as the proportion of self-esteem derived from body shape and weight; Eating Pathology as dysfunctional eating attitudes and behaviours; Perception of Mother's Body Image Discrepancy as the perception of whether one's mother lives up to her own standards regarding body image.

Eating Pathology

Eating disorders affect many people in Canada. In British Columbia alone, it is estimated that of females between the ages of 14 and 25, approximately 9000 have *anorexia nervosa* (anorexia) while approximately 22,000 have *bulimia nervosa* (bulimia) (National Eating Disorder Information Centre, 2000). Anorexia has remained at a steady 0.5 to 2 percent of the North American female population for years, while the prevalence of reported bulimia has climbed over the past several decades to 3 to 5 percent of the female population. It is estimated that another 10 to 20 percent of women engage in many of the pathological behaviours associated with both disorders, although at a sub-clinical level. These behaviours and their associated pathological cognitions will be

referred to in the current study as disordered eating. While this study focuses on women, it is important to note that approximately 10 percent of eating disordered individuals coming to the attention of health professionals are men.

Multiple health risks are associated with anorexia, such as gastrointestinal, cardiovascular, hematological, and endocrine problems (see Costin, 1999 for a review). Health risks associated with bulimia appear to differ depending on the individual's preferred method of purging. Vomiting is associated with dental and periodontal problems, damage to the oesophagus, and electrolyte disorders which, if severe enough, can result in serious cardiac arrhythmia, seizures and muscle spasms. Laxative abuse can damage colonic neurons, possibly necessitating surgery. Use of diuretic pills can result in fluid and electrolyte imbalance, while use of amphetamines as appetite suppressants can result in hypertension, seizures and anxiety attacks.

Messages of the Media

Images of "beautiful" women are in use everywhere, to sell anything from cars to cookware. Over the past several decades, the average weight of the models used for these images has decreased while dieting and exercise articles and advertisements have increased: the ideal shape is thin and increasingly thinner (Silverstein, Perdue, Peterson, and Kelly, 1986; Steiner-Adair, 1986; Wiseman, Gray, Mosimann, & Ahrens, 1992). Content studies of magazines reveal that women's magazines have 10.5 times more advertisements and articles promoting weight loss than men's magazines (Guillen and Barr, 1994). Content studies of 4,294 television commercials analyzed for what is and is not considered attractive suggest that 1 out of 3.8 commercials has attractiveness

content and that adolescents on average see over 5,260 "attractiveness messages" per year (Downs and Harrison, 1985; Myers and Biocca, 1992). At the same time, the prevalence of eating disorders has also increased as shown in a review by Stice (1994). Although these events seem more than coincidental, the self-evaluative link between thin ideal body images in the media and eating disorder symptoms remains unclear (Barel and Irving, 1998; Harrison and Cantor, 1997). Social learning theory predicts that media images will affect us (Bandura, 1977). If we are all bombarded by highly potent media messages about the ideal female body type, why do some but not all women develop disordered eating patterns (Brown and Jasper, 1993)?

Pathway from Media Exposure to Eating Pathology

Evidence of Influence

Correlational Evidence

In a recent survey, 47% of preadolescent and adolescent girls reported that magazine pictures increased their desire to lose weight (Field, Cheung, Wolf, Herzog, Gortmaker and Colditz, 1999). Results from a survey of young adults showed that patients with eating disorders are more likely than controls to report being influenced by the body ideals presented in the media (Murray *et al.*, 1996). Media consumption has been linked to both dietary restraint and bulimic behaviours (Abramson and Valene, 1991).

Structural equation modeling has been used to successfully test a model that includes a direct path from media exposure to eating pathology as well as mediating

mechanisms of gender-role endorsement, ideal body stereotype internalization and body dissatisfaction (Stice, 1994; Stice et al., 1994). High exposure to mass media, such as greater viewing of television and greater reading of popular magazines, was directly related to increased eating disorder symptoms.

Experimental Evidence

Causal inference can be drawn from a number of experimental studies. Exposure to photographs of thin fashion models decreases women's self-esteem (Irving, 1990). As well, exposure to images of ultra-thin models increases depression, stress, guilt, shame, insecurity, body dissatisfaction and body-size estimation (Stice and Shaw, 1994; Waller, Hamilton and Shaw, 1992). Media images have also been found to affect women's self-esteem differently, depending on individual differences and situational differences (Henderson-King and Henderson-King, 1997). Subjects who were high self-monitors felt worse about themselves than low self-monitors when viewing images of thin women following "accidentally overhearing" a confederate's conversation about judging a friend's weight. Heavier women also felt worse about themselves when viewing images of thin women as opposed to neutral images.

Individual differences were also found in a group of studies which showed that adolescents, pregnant women, and anorectic and bulimic women overestimated their body size more after viewing fashion images (cited in Waller and Shaw, 1994). In other words, those women who already have reasons to be sensitive to their body sizes are more likely to misjudge their body size after viewing images depicting ideal standards of beauty.

Mechanisms of Influence

Guide Elaboration

Ideal Standards of Beauty

Recent semi-structured interviews with 230 eating disorder patients and controls (men and women) confirmed the standards of beauty of our western industrialized culture (Murray, Touyz and Beumont, 1996). When asked for a description of the ideal figure, "slim" accounted for the majority of responses from all groups. Bulimic women were more likely than all other female subjects to describe the ideal figure as muscular or fit, which goes against the assumption that fitness as a standard is linked to healthy attitudes and behaviours. Men were more likely than all women to describe the ideal as shapely.

This ideal standard of beauty is impossible to attain for most women. According to Smolak (1996), the average American woman is 5'4" tall and weighs 140 pounds, while the average American model is 5'10" and weighs 117 pounds. Most fashion models are thinner than 98% of American women. Canadian statistics are unavailable, but are expected to be similar.

Not even super-models themselves live up to images of themselves. These images are elongated by computers to give the effect of longer legs, longer bodies and thinner bodies than the models actually have. Airbrushing softens the pictures so that blemishes and wrinkles disappear. Breasts and lips are enlarged through implants, make-up and lighting. Sixty-year-old characters are portrayed by forty-year-old models, forty-year-old characters are portrayed by twenty-five year-old models, and twenty-five year-old characters are portrayed by fifteen year-olds. An impossibly youthful, wrinkle-

free, acne-free, tall, thin, long-legged, big-breasted image results as the ideal standard to attain (Kilbourne, 1989; Wolf, 1991).

While most individuals may recognize, at least intellectually, that it is impossible to live up to standards set by media images, awareness of the media standards still has its effects. Research on exposure to print media revealed that 69% of preadolescent and adolescent girls believe magazine pictures influence their idea of the perfect body shape (Field *et al.*, 1999). This suggests a relationship between standards depicted in the media and standards held by the girls themselves. After viewing a video of thin, attractive women, female subjects who accepted the societal standard of beauty as their own standard were more likely than others to be angry and depressed (Heinberg and Thompson, 1995). Watching even 30 minutes of television programming can alter a woman's perception of the shape of her body (Myers and Biocca, 1992), which suggests a pathway from media consumption through distorted thought patterns.

Self-Regulation

Theory

A closer look at self-discrepancy theory may give insight into the specifics of the relationships among internalized standards and self-representations. Self-discrepancy theory postulates that the standards that one holds for oneself are experienced as self-guides that guide or regulate affect and behaviour (Higgins, 1987; Moretti & Higgins, 1990). The standards that significant others hold for a person provide important guides of self-regulation as well. When one believes one's features do not match a guide, a self-discrepancy exists which leads to affective tension. In order to relieve the tension,

attempts are made to reduce the discrepancy through changes in behaviour or cognition. The greater the discrepancy between two self-representations, the greater the intensity of psychological discomfort and thus the more the individual will be motivated to reduce the discrepancy (Higgins, 1987). If the guide is impossible to attain, then psychological discomfort will always exist, alongside the omnipresent discrepancy.

For example, if a woman's physical features (actual self) do not match a particular desired set of physical features (guide), then a physical self-discrepancy exists. An increase in depression or anxiety would be expected. In order to relieve this affective distress, the woman may resort to disordered eating behaviours in an attempt to change her features to more closely match the guide (self-regulation). As the media guide is impossible to match for most women, to embrace this guide as one's own may lead to chronic dysfunctional self-regulation.

Self-discrepancy theory assumes that self-representations are organized in memory as cognitive structures or schemata that represent the relationship between actual-self and desired-self attributes (Higgins, 1987; Strauman, 1989; Strauman & Higgins, 1987; Van Hook & Higgins, 1988). Self-discrepancies are relatively stable, internal representations that guide information processing. Like other cognitive structures, self-discrepancies must be available, accessible, and applicable to influence the processing of self-relevant information. They can influence information processing automatically, without intention or awareness. Once activated, discrepancies automatically focus conscious attention and direct encoding, identification, interpretation, and memory for self-related information (Bargh, Bond, Lombardi, & Tota, 1986; Higgins, 1987). For example, if a media guide is activated by a person viewing an image on television or in a magazine, the person may then unconsciously focus attention on her

body shape and weight. This may influence other information processing, such as looking for confirmation of a cognitive belief that she does not match the guide.

If sociocultural standards laid out by the media act as a schematic guide, and are discrepant from one's belief about the self, then each media exposure will activate relevant schemas and discrepancies. Greater media exposure will activate self-discrepancies more often than less media exposure, due to effects of recency and frequency. The highest media exposure should result in chronically activated self-schemas and self-discrepancies.

If guides are continually activated, they can become chronically accessible. In the larger social context, continual exposure to mass media leads to chronically accessible guides for a culturally "ideal" body. Once guides are chronically accessible, these activated guides work to direct attention and behaviour toward this information in the environment (i.e. buying magazines, watching particular shows). The system becomes self-perpetuating.

Research on Self-Discrepancy and Eating Disorders

Self-discrepancy theory has been used to explore eating pathology in various college populations. Both self-image (personality traits) and body-image discrepancies from own and other standpoints have been investigated. In some studies, bulimic symptoms were associated with actual(own): guide(ideal/own) discrepancies while anorectic symptoms were associated with actual(own): guide(ought/other) discrepancies (Higgins, Vookles, & Tykocinski, 1992; Strauman, Vookles, Berenstein, Chaiken, & Higgins, 1991). However, Forston and Stanton (1992) found that actual(own): guide(ideal/own) discrepancies predicted bulimic symptoms but only for appearance-related attributes. Szymanski and Cash (1995) used a predetermined set of attributes

and found that bulimic symptoms were predicted by own-guide and romantic-other-guide body-attribute discrepancies. Strauman and Glenberg (1994) found that ideal own-guide psychological and physical discrepancies are related to disordered eating cognitions, such as overestimation of body size.

The disparity among these findings may be due to the failure of past researchers to consider specific aspects of self-representation and self-evaluative guides. For example, Snyder (1997) used a version of the Selves Questionnaire (Higgins, 1987) that asks specifically for physical attributes rather than psychological ones. She found that physical discrepancies from a "society" guide were more closely related to symptoms reflecting failure to achieve this guide, such as body dissatisfaction symptoms, than symptoms reflecting efforts to attain it, such as drive for thinness.

As body dissatisfaction is related to actual:guide discrepancies, then perhaps body satisfaction is related to actual:guide matches. Meeting standards may be related to efforts to attain the ideal body.

In most studies of self-regulation, discrepancy is measured and is often seen as problematic, as it is associated with stressful affective states. In the realm of eating disorder literature, having a discrepant guide could be problematic (failure to attain desired body shape and weight); however, meeting a guide could also be problematic. One may be using dysfunctional behaviours in order to meet guide standards. High matches could mean that one is self-regulating towards the ideal out of fear of fat or drive for thinness. Regulation could be through pathological means, such as restricting or purging. When guides include a greater number of body image attributes derived from unrealistic mass media images, self-regulation towards such ideals will be dysfunctional in the long run.

It appears that, in the area of eating disorder research, it may not be important whether there are discrepancies. Rather, it seems likely that the degree to which guides are influenced by unattainable standards, such as those derived from media images, is more important. It may be more problematic if a guide contains many attributes specifically related to body image, such as those concerned with lower weight, silhouette (i.e. skinnier), and differently-sized body parts (i.e. smaller thighs), than if a guide contains other attributes unrelated to body image, such as those concerned with fitness, movement (i.e. coordinated, fast, graceful), skin/complexion, hair, face parts, health, or overall looks (i.e. pretty, attractive in general). Accordingly, one's body image guide elaboration, not discrepancy, should be examined.

Self-representations are thought to be linked in memory. The media guide is linked to all of the information stored in memory as a result of media exposure. As media consumption increases, the information increases. To examine media guide elaboration, all attributes pertaining to body image should be included, whether or not they are found in the actual self-representation.

The proximal level is found at the level of own guide. In order to ensure personal relevance, only own guide attributes also found in the actual self are appropriate for inclusion. Therefore, to examine own guide elaboration, self-regulatory attributes (matches and mismatches) pertaining to body image should be included.

It is expected that, as one increases consumption of media images, one's media guide will increase its focus on body shape and weight attributes. One's self-regulatory own guide will more closely match the maladaptive media guide. Therefore, it is proposed that increased media consumption leads to increased elaboration of media guides and self-regulatory own guides.

Disproportional Valuation of Body Shape and Weight

Valuation of Self

Media messages screaming “thin is in” may not directly cause eating disorders, but they help to create the context within which people learn to place a value on the size and shape of their body. To the extent that media messages like advertising and celebrity spotlights help our culture define what is beautiful and what is “good”, the media’s power over our development of self-esteem and body image can be incredibly strong (Eating Disorders Awareness and Prevention, Inc., 2000).

Research on Valuation of Self

Many studies have examined the impact of exposure to media images on the *quality* of self-esteem and its relationship to disordered eating attitudes and behaviours (Cusumano and Thompson, 1997; Henderson-King and Henderson-King, 1997; Irving, 1990). For example, exposure to images of thin models was found to be related to negative self-evaluation regardless of severity of bulimic symptoms (Irving, 1990).

Other studies have concentrated on the *quantity* of self-esteem derived from body shape and weight. Geller, Johnston and Madsen (1997) developed an innovative measure of the influence of shape and weight on feelings of self-worth. This inventory requires one to rank factors contributing to self-esteem and then to indicate the proportion of self-esteem derived from each factor. In a study of undergraduates, the proportion derived from body shape and weight was significantly correlated with two measures of eating disorder symptoms, even after controlling for the effects of body mass index, depression and global self-esteem (Geller *et al.*, 1997). In a separate study, women with eating disorders were found to have higher proportions of self-esteem derived from body shape and weight than undergraduate and psychiatric controls (Geller, Johnston, Madsen, Goldner, Remick, and Birmingham, 1998).

Those who have greater elaboration of body image attributes in their self-regulatory guides are likely to base more of their self-esteem on body image. Those who derive much of their self-esteem from body shape and weight are more likely to self-regulate towards a culturally ideal body when these body standards are activated. Again, culturally ideal body standards as depicted in the media are almost impossible to achieve and maintain by the majority of women, so self-regulation towards these ideals will turn maladaptive. Thus, it is hypothesized that the last two steps in the mediational model are from body image guide elaboration to shape- and weight-based self-esteem, to dysfunctional self-regulation in the form of disordered eating attitudes and behaviours.

Influence of Maternal Standards

In addition to the mediating factors previously discussed, other influences may moderate the impact of media influence on disordered eating behaviour. Stice and colleagues were surprised that their "data did not support the predicted direct effect from media exposure to ideal-body stereotype internalization" (p. 839, 1994). Rather, the relationship between media exposure and ideal-body stereotype internalization was mediated by gender role endorsement. They concluded that it might have been due to an imprecise measure of media exposure or to the role that family and peers play in promoting the thin ideal. It may be that family and peers are responsible, in large part, for shaping one's attitudes towards women and men, which is how gender role endorsement was measured. After all, according to Chodorow (1978), mothers play the largest role in shaping their daughters attitudes towards women.

In *The Reproduction of Mothering* (1978), Chodorow focuses on gender

identification and gender role learning. "A girl identifies with and is expected to identify with her mother in order to attain her adult feminine identification and learn her adult gender role. At the same time she must be sufficiently differentiated to grow up and experience herself as a separate individual (p. 177)." Therefore, while a young woman may turn to others to enable her to differentiate and separate from her mother, the mother-daughter relationship is still the primary source of information on what it is to be a woman. A woman's evaluation of herself is influenced by her mother's standards regardless of whether the daughter holds those standards for herself (Moretti & Higgins, 1999). When it comes to standards regarding the ideal woman, a mother's standards for herself may well influence the daughter's relationship to standards set forth by others, including those of the media.

It seems that a mother's guide for herself may serve as a template for her daughter's guides. Thus, a mother influences her daughter's development of a self-regulatory system. Many studies have examined aspects of mother-daughter relationships and disordered eating, and these studies suggest that these effects may occur through maternal influences on self-standards, body image and self-regulation.

Daughters who restrict their eating tend to have mothers who do the same (Hill, Weaver, & Blundell, 1990; Pike & Rodin, 1991), suggesting that daughters who are dissatisfied with their weight and shape have mothers who are similarly dissatisfied, much like a relationship between a daughter's body image discrepancy (actual(own): guide(own) daughter viewpoint) and mother's body image discrepancy (actual(own): guide(own) mother viewpoint). Pike and Rodin (1991) found that when a daughter does not meet her mother's desired physical appearance for the daughter, much like an actual(mother): guide(mother) discrepancy, she is more likely to have higher scores on

subscales for Bulimia, Body Dissatisfaction, and Drive for Thinness. Forston and Stanton (1992) found that bulimic symptoms were predicted by discrepancy with the mother's evaluation of the daughter, as perceived by the daughter (actual(own): actual(mother) discrepancy).

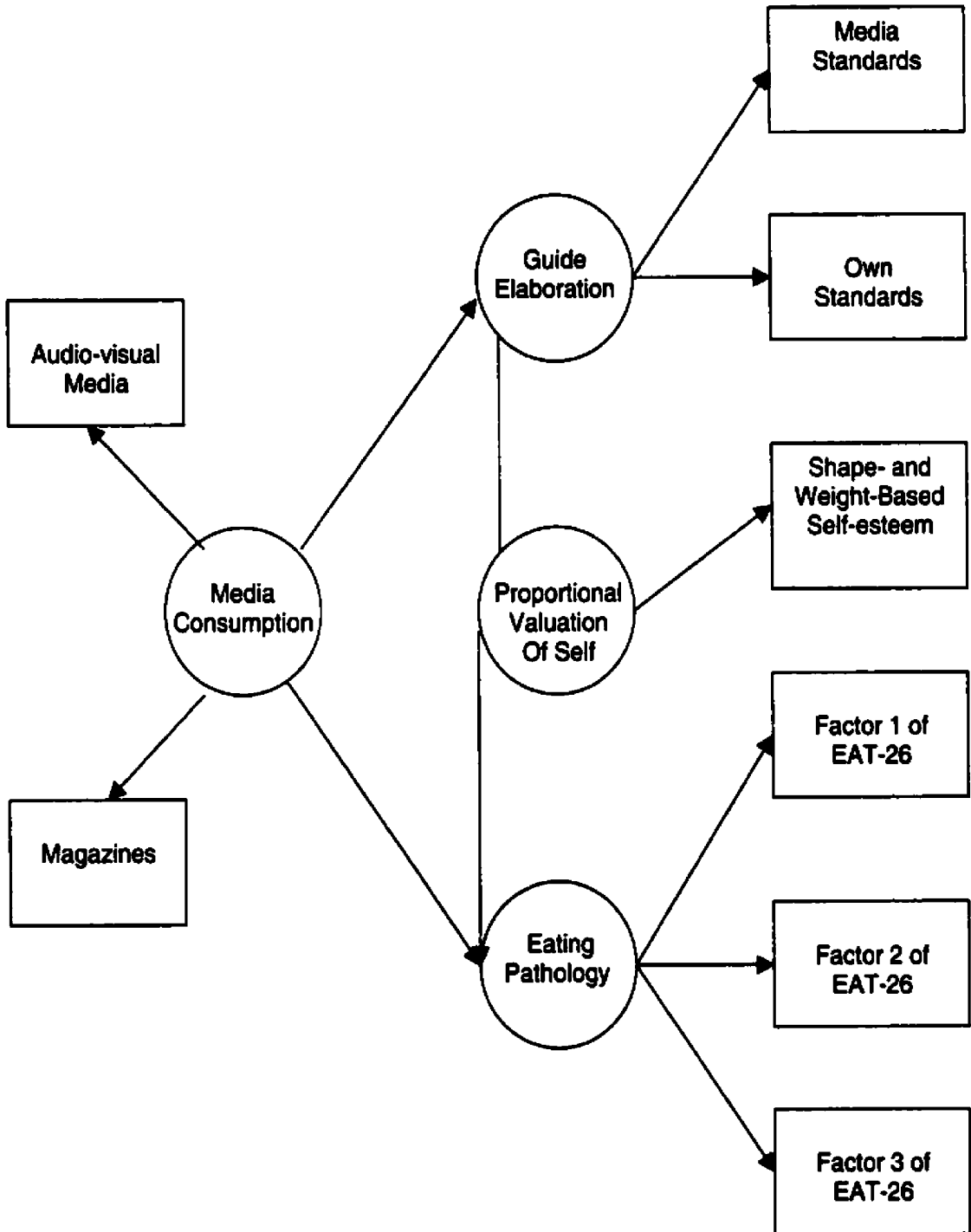
Father guides were not similarly related to bulimic symptoms (Forston & Stanton, 1992). Rather, fathers have been found to influence their daughters' eating pathology through mothers (Smye, Cockell, Srikameswaran and Geller, 1999). So it would seem that a mother's self-discrepancy could influence a relationship that exists between desired physical guides as depicted by mass media and her daughter's self-regulation towards these guides. Therefore, it is hypothesized that a daughter's perception of her mother's physical self-discrepancy, particularly body image discrepancy, will moderate the relationship between media consumption and disordered eating attitudes and behaviours.

Proposed Models

The present study examined mediating and moderating factors in the relationship between media consumption and eating pathology. The model to be tested is depicted in Figure 1.

Figure 1:

Proposed Mediation Model



This mediational model posits that greater media consumption increases the elaboration of body image attributes represented in self-guides (media guide; self-regulatory own guide), which is associated with the extent to which self-esteem is related to body shape and weight, which in turn is associated with increased eating pathology. This pathway is standard for all; however, personal relevance is determined by a daughter's perception of her mother's body image discrepancy, which is the proposed moderating factor. Thus, it is expected that the path through the mediating factors will differ for those daughter's who perceive their mothers as having high physical self-discrepancy from the path for those who perceive their mothers as having low physical self-discrepancy.

Hypothesis 1: The mediated effect through guide elaboration and proportional valuation of self is more important than the direct effect of media consumption on eating pathology.

Hypothesis 2: Perception of mother's body image discrepancy moderates the mediated relationship between media consumption and eating pathology.

METHOD

Participants

One hundred and ninety-two first-year undergraduate women at Simon Fraser University were offered course credit in return for participation. Four subjects did not fill in the questionnaires properly and were dropped from the study. Because this research examines self-regulation towards an assumed ideal of thinness, data from 23 subjects who indicated a desire to gain weight were dropped from the study, leaving 165 participants. Of this sample, 116 (70%) were born in Canada. Of the remaining 49 (30%) participants, 12 (7%) have been in Canada less than five years, 21 (13%) have been in Canada from five to ten years and 16 (10%) have been in Canada eleven to twenty years. Fifty-one percent of participants identify themselves as Caucasian, 30% as Asian, 10% as South Asian, 2% as Caucasian/Asian, and 7% identify with other ethnic backgrounds. Sixty-nine percent of participants speak English as their first language while for 28%, it is a second language. Three percent did not answer the language question. Ten percent of participants identified their family's income bracket as low, 74% as medium, and 15% as high. Their ages ranged from 17 years to 45 years ($M=19.86$ years; $SD = 3.34$ years).

The women's height ranged from 53 inches to 72 inches ($M = 64.84$ inches; $SD=2.8$ inches). Their weight ranged from 90 pounds to 200 pounds ($M = 130.59$ pounds; $SD = 22.82$ pounds). The weight that these women desired to weigh ranged from 85 pounds to 165 pounds ($M = 118.52$ pounds; $SD = 15.33$ pounds). The amount of

weight loss that these women desired ranged from 0 pounds to 50 pounds ($M = 12.33$ pounds; $SD = 11.03$ pounds). The majority of women (86%) desired to lose weight; only 14% wished to remain at the same weight.

As the Body Mass Index takes into account both height and weight in its calculation ($BMI = (\text{weight in kilograms}) / (\text{height in metres})^2$), it is often used to establish bodyweight ranges. Body Mass Index ratings ranged from 16.48 to 32.25 ($M = 21.83$; $SD = 3.32$). The DSM-IV uses a BMI of 17 as a cut-off, under which one's BMI is counted as one criterion for a diagnosis of anorexia nervosa. Three women (1.2%) had a BMI under 17. Women with a BMI under 20 are considered underweight. Fifty-two women (31.5%) had a BMI under 20. Women for whom $20 = BMI < 25$ are considered normal weight. Ninety-one women (55.2%) had a BMI in this normal weight range. Women with a BMI of 25 or over are considered overweight and 22 women (13.3%) had a BMI in this range.

Procedure

A notice was posted at the university asking first-year psychology students to participate in a study in which they would complete a set of questionnaires. The study was presented as a survey on behaviours and opinions of women in today's world. All subjects participated on a voluntary basis for course credit and informed consent procedures were followed. Participants were run in groups of ten. They completed questionnaires in the following order: Physical Selves, Shape-and-Weight-Based Self-Esteem (SAWBS), Media Consumption, Eating Attitudes Test-26 question version (EAT-26) and a demographics questionnaire. The researcher then debriefed participants.

Measures

Physical Selves

This instrument is a variation of The Selves Questionnaire (Higgins, Bond, Klein, & Strauman, 1986) and is designed to measure body image discrepancy (see Appendix 1.). The Physical Selves asks subjects to spontaneously list physical attributes associated with several of their physical self-representations.

Guide Elaboration

Subjects were asked to list up to ten physical traits for each of the following actual and desired self-representations:

1. **Actual Own physical self:** the physical attributes that one believes one actually possesses.
2. **Desired Own physical self (guide=own):** the physical attributes that one desires; the type of body one wishes for, or thinks one should possess.
3. **Desired Other physical self (guide=media):** the physical attributes that one believes are most desirable for young women as portrayed by the media through what is shown in advertisements, magazines, films, and television.

Participants also rated the extent to which they believe they actually possess or desire to possess each attribute on a scale from 1 (slightly) to 4 (extremely).

Adjectives were categorized in the following way: weight (less weight, overweight), silhouette (skinnier, curvy), body parts (smaller thighs, flat stomach), fitness (strong, fast), movement (coordinated, graceful), skin/complexion (fair, smooth, acne-free), hair (long, smooth, shiny), face parts (full lips, double chin, big nose, big ears),

health (diabetes, use of both arms), overall looks (pretty, sexy, younger, feminine), other (singing voice, big feet, long nails).

The first three categories (weight, silhouette, and body parts) were used because of their direct relevance to body image and the hypotheses under examination.

Media Guide

The extent to which body-related attributes dominated the media guide was assessed by counting the total number of adjectives (related to weight, silhouette and body parts) listed for Desired Other physical self (guide=media), regardless of self-regulation.

Self-regulatory Own Guide

Self-regulatory own guide attributes were determined by comparing the body-related attributes in the own guide to the body-related attributes on the actual self.

Attributes were classified into four categories:

1. **match:** identical or synonymous attributes differ in their extent ratings by not more than one point.
2. **synonymous mismatch:** identical or synonymous attributes differ in their extent ratings by two or more points.
3. **antonymous mismatch:** the attributes listed are antonyms
4. **non-match:** the attribute listed in the desired self-representation was not listed in the actual-self

Synonyms and antonyms were operationalized using Roget's Thesaurus. Interrater reliability of 95% was achieved.

The extent to which body-related attributes dominated the own self-regulatory

guide was assessed by adding together only those body adjectives that are important for self-regulation, including matches, synonymous mismatches, and antonymous mismatches.

Perception of Mother's Discrepancy

Subjects were also asked to describe beliefs that they think their mother holds about her own physical self. They listed the physical attributes that they believe their mother sees herself as actually having. Then they listed the physical attributes that they believe their mother most desires for herself: the type of body she wishes for herself or thinks she should possess. Subjects also rated the extent to which they think that their mother believes she actually possesses or desires to possess each attribute on a scale from 1 (slightly) to 4 (extremely). Maternal attributes were determined by comparing the body-related attributes in the perceived maternal own guide to the body-related attributes in the perceived maternal actual self. Interrater reliability of 95% was achieved.

The discrepancy score is the participant's perception of "the difference between who my mother believes she is physically and who my mother desires to be physically". Discrepancy scores were calculated using the standard equation as described by Higgins and colleagues (1986):

$$2(\text{Antonymous Mismatches}) + (\text{Synonymous Mismatches}) - (\text{Matches}).$$

Media Consumption Questionnaire

The measure used in this study is based on that developed by Stice and colleagues (1994); however, additional items were included based on recommendations discussed in their study (see Appendix 2.). First, to increase the accuracy of recall,

subjects listed their favorite television shows, as well as videos and films most recently viewed. To assess audio-visual consumption, participants were asked to list the number of hours spent watching television, videos, and movies for each day of the previous week. As well, a number of popular magazines were listed, and participants were asked to check off which of these magazines they had looked at in the past month.

Two scores were computed: the total number of hours of audio-visual media watched in the previous week (sum of hours spent watching television, videos and media from Sunday to Saturday of the previous week) and the total number of magazines read in the previous month.

Eating Attitudes Test

This self-report questionnaire is commonly used in university populations to address issues related to both bulimic and anorectic tendencies (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982; see Appendix 3.). There are 26 items regarding eating attitudes and behaviours. Answers are presented in a forced-choice six-point Lichert scale. Historically, scores of 0,0,0,1,2, and 3 are given for answers of "Never", "Rarely", "Sometimes", "Often", "Very Often", and "Always" respectively. Garner and colleagues (1982) designed the EAT-26 to use "as a screening instrument in non-clinical settings" (p. 877). Scores of 0 are given for answers "Never", "Rarely", and "Sometimes". Scores of 1, 2, and 3 are given for answers "Often", "Very Often", and "Always" respectively. Scores of 20 and above are indicative of potential eating disturbances.

The curve that the EAT-26 data creates is not a normal curve. Rather, it is both leptokurtic and positively skewed, as might be expected with a measurement whose

scores are 0, 0, 0, 1, 2, and 3. In order to further explore the EAT-26 data, data was re-scored using scores of 1, 2, 3, 4, 5, and 6 for "Never", "Rarely", "Sometimes", "Often", "Very Often", and "Always" respectively to give a full range of disordered eating scores.

Garner and colleagues (1982) found that three factors form sub-scales, which appear to be meaningfully related to bulimia, weight, body-image variables, and psychological symptoms.¹ Items loading on Factor 1 (Dieting) appear to represent an avoidance of fattening foods, while items loading on Factor 2 (Bulimia and Food Preoccupation) appear to represent thoughts about food and bingeing behaviour. Items such as self-control of eating, and perceived pressure from others to gain weight, load on Factor 3 (Oral Control). While no differences were found between bulimic and restricting anorexia nervosa patients on total scores, these groups did indicate significant differences on these three factors.

¹ Factor structure of the EAT-26. While it is common practice when researching eating disorder symptoms to use a single total-score analysis and/or the three-factor analysis found by Garner and his colleagues (1982), other factor structures of the EAT-26 have been determined. When Koslowsky and colleagues (1992) investigated the EAT-26 psychometrically using data from a non-clinical group of 809 female Israeli soldiers in their late teens, they found a four-factor structure based on 20 items. Lee (1993) analyzed the original 40 items of the Eating Attitudes Test (Garner & Garfinkel, 1979) using data from a group of men and women in Hong Kong and found 5 factors based on 33 items. Nasser (1994) tested a group of 351 Egyptian secondary school girls and found a high level of consistency among items representing the dieting factor and a much lower level for those items representing the bulimia factor. Leichner, Steiger, Puentes-Neuman, Perreault, and Gottheil (1994) translated the EAT-26 into French for use in Quebec and found 3 factors with a similar structure to that of Garner and his colleagues (1982).

Because of these discrepancies with different ethnic groups, and because only 51% of our subject pool was Caucasian, a confirmatory factor analysis was performed using Garner and colleagues' original three factors (1982) to determine how well our data fit this model. Confirmatory factor analyses showed poor goodness-of-fit.

An exploratory factor analysis was then performed using all of the data and revealed a six-factor solution for this particular set of data. Most items from the original Factors 1 and 2 (Garner et al., 1982) hung together and were found on the first factor, changing Factor 3 into the second factor. Four other poorly defined factors also emerged. A decision was made to utilize the original Factors 1, 2 and 3 as described by Garner and colleagues (1982) because of the poor clarity of the six-factor solution. Because most items from the original Factors 1 and 2 loaded onto one factor in our exploratory factor analysis, they could be expected to correlate highly in the analyses of the main hypotheses. As well, their error variances could be expected to correlate.

The decision was made, therefore, to run the analysis for the current research with the original three factors.

Shape- and Weight-Based Self-Esteem Inventory

This self-report instrument measures the importance of shape and weight to feelings of self-worth (SAWBS; Geller *et al.*, 1997; see Appendix 4.). Specifically, it assesses how much self-esteem is based on shape and weight in the context of other contributing factors to self-esteem. From a list, individuals select aspects of their lives that have contributed to their self-esteem in the previous four weeks. The list includes intimate or romantic relationships, body shape and weight, competence at school/work, personality, friendships, face, personal development, competence at activities other than school/work such as hobbies or sports, and “other” (which subjects self-define). Subjects rank their selection in order of importance of contribution to over-all self-esteem as a prelude. Subjects are then asked to divide a circle into portions representing each aspect selected, with the size of the portion representative of the size of the contribution to self-esteem. The SAWBS score is the angle in degrees of the shape-and-weight piece of the circle. Stability, convergent, concurrent, and discriminant validity have been demonstrated (Geller *et al.*, 1997; Geller *et al.*, 1998).

Demographics Questionnaire

This questionnaire includes items regarding age, ethnicity, income, height, weight and desired weight (see Appendix 5.).

Statistical Analyses

Disattenuated correlational, mediational and moderated mediational models were each tested using LISREL 8. Statistical analyses of these three models consisted of four steps as suggested by Kenny and colleagues (Kenny, 2000; Kenny, Kashy & Bolger, 1998): specification, identification, estimation, and examination of model fit.

Disattenuated Correlational Model

To establish mediation, it is first important to establish a main effects relationship (Baron and Kenny, 1986; Holmbeck, 1997). Therefore, an estimation of the disattenuated correlation between Media Consumption and Eating Pathology was examined. This is the true score correlation between the latent variables.

Specification: Measurement Model and Structural Equation Model

The two indicators for the latent variable Media Consumption were Audio-visual Media and Magazines. The three indicators for the latent variable Eating Pathology were Factors 1, 2 and 3 of the EAT-26. The structural equation model is shown in Figure 2.

Figure 2:

Structural Model for Disattenuated Correlation



Identification

The lambdas for Audio-visual Media and F1 were fixed to unity for identification purposes.

Estimation and Hypothesis Testing

The model's parameters were estimated by maximum likelihood. Loadings of the measures on the theoretical constructs were estimated, as were error variances and covariances. Modification indices were examined for suggestions regarding model improvement.

Mediational Model

To test the first hypothesis, that the pathway from media consumption to eating pathology is mediated by the latent construct guide elaboration, followed by proportional valuation of self, a path analysis was executed (c.f. Bollen, 1989; Hayduk, 1987; Klem, 1994; Long, 1983a; Long1983b). The indirect and direct effects of media consumption on eating pathology were compared.

Specification: Measurement Model

The two indicators for the latent variable Media Consumption were Audio-visual Media and Magazines. The two indicators for the latent variable Guide Elaboration were Media Standards and Own Standards. The indicator for the latent variable Proportional Valuation of Self was SAWBS. The three indicators for the latent variable Eating Pathology were Factors 1, 2 and 3 of the EAT-26.

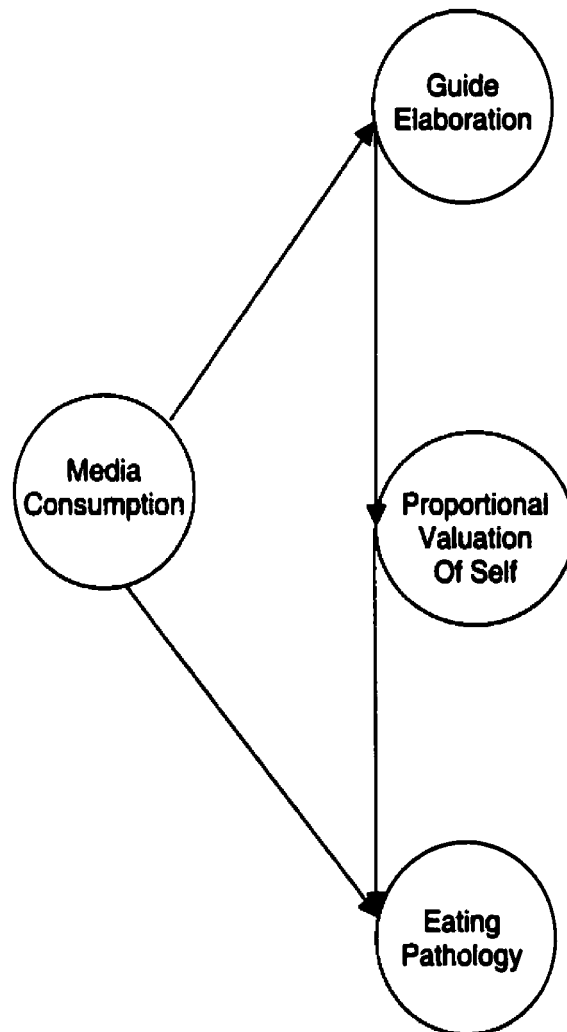
Specification: Structural Equation Model

The structural equation model specifies substantively motivated constraints,

based on theory, that determine the relationships between variables (c.f. Bollen, 1989; Hayduk, 1987). Unidirectional arrows from Media Consumption to Eating Pathology indicate the implicit causal effect conceptualised to be both direct and indirect (see Figure 3).

Figure 3:

Mediational Structural Equation Model



Identification

Each latent variable had lambda set to unity for one of the observed variables. Thus, the lambdas for Audio-visual Media, Media Standards, SAWBS, and F1 were fixed to unity for identification purposes. For the case of Proportional Valuation of Self, for which there was only one indicator, the measurement error was set to .25, which is typical for a measure in the social sciences (i.e. reliability of .75) (c.f. Bollen, 1989; Hayduk, 1987).

Estimation and Hypothesis Testing

The model's parameters were estimated by maximum likelihood. Loadings of the measures on the theoretical constructs were estimated, as were error variances and covariances. Modification indices were examined for suggestions regarding model improvement.

Moderated Mediation Model

The second hypothesis was that the perception of mother's body image discrepancy is a moderating variable on the mediated pathway between media consumption and eating pathology. In order to test for the moderating effect of the perception of mother's body image discrepancy, multi-sample models were tested. Subjects were divided into three groups depending on whether subjects scored above, at or below the median on mother's perceived self-discrepancy. The associations among media consumption, guide elaboration, proportional valuation of self, and eating pathology were then compared for groups high (n=82) and low (n=50) on mother's perceived self-discrepancy while the middle group (n=33) was discarded.

Specification and Identification

For both the invariant and variant models, specification of the models and identification was identical to the mediational model.

Estimation and Hypothesis Testing

To test for significant differences, the models were estimated for women high and low on mother's self-discrepancy with all of the parameters constrained to be equal (invariant). Then, after allowing the paths to differ between groups, the models were re-estimated (variant).

Assessment of Model Fit

Estimated model parameters were used to predict correlations and covariances between measured variables. Predicted correlations or covariances were compared to observed correlations or covariances (Kenny, 2000). Assessment of model fit was accomplished using the following: the parameter estimates, chi-square, standardised residuals and Root Mean Square Error of Approximation (RMSEA).

1. First, the estimated parameter values were examined. For example, the presence of negative error variances or correlations greater than 1 was considered unacceptable.

2. If the estimated parameter values were in-bounds, the chi-square output was examined. The chi-square statistic measures whether the differences between the model-implied covariance matrix, Σ_{M_i} , and the sample covariance matrix S are small enough to be considered sampling fluctuations. A small observed probability is taken as an indication of poor fit (Hayduk, 1987). As the chi-square is very sensitive to sample size, it is often looked at relative to the degrees of freedom (Carmines & McIver, 1981;

cited in Hayduk, 1987).

3. The pattern of standardised residuals was examined as it perfectly describes the fit between the data and the model (Hayduk, 1987). A standardised residual is an observed minus a fitted covariance divided by its estimated standard error. It is an estimate of the number of standard deviations away from a zero residual that would be provided if the model was to fit the data perfectly. A limit of two standard deviations is considered acceptable (Hayduk, 1987). For this research, if a large portion of the standardised residuals fell outside of the range of -2.00 to $+2.00$, the model was considered unacceptable.

4. RMSEA is based on the non-centrality parameter:

$$\text{RMSEA} = \text{sqr}[(\chi^2/\text{df} - 1)/N]$$

It allows for some error in a model, because as N increases to infinity, one would reject every model. A value of 0.05 or less indicates a good fit.

RESULTS

Descriptive Statistics

Media Consumption

The amount of retrospectively self-reported audio-visual material watched in the previous week ranged from 0 to 41 hours ($M = 12.58$, $SD = 8.72$). The number of magazines read in the previous month ranged from 0 to 29 magazines per month ($M = 6.82$; $SD = 5.50$).

Guide Elaboration

For media standards, the total number of body adjectives found in the media guide ranged from 0 to 9 ($M = 3.42$, $SD = 1.75$). For own standards, the number of self-regulatory body adjectives found in the own guide ranged from 0 to 5 ($M = 1.28$, $SD = 1.10$).

Proportional Valuation of Self

Scores on the SAWBS (Geller et al., 1997) ranged from 0° to 212° ($M = 64.45^\circ$, $SD = 47.93^\circ$). When this is translated into a percentage, the mean of 64.45° (maximum = 360°) means that on average, participants reported that $1/6^{\text{th}}$ or 18% of their self-esteem was based on their shape and weight. The proportion ranged from none to 59%. These scores are comparable to a mean score of 59.5° with a standard deviation of 42.6° obtained by an undergraduate control group tested by Geller and her colleagues

(1998).

Mother's Perceived Physical Discrepancy

Scores for actual(mother): guide(mother) discrepancy ranged from -3 to 10 ($M = 1.74$; $SD = 2.01$).

Eating Pathology

Original Scoring System for the EAT-26.

About 19% (32 women) of the sample had scores of 20 and above, which are indicative of potential eating disturbances. Scores ranged from 0 to 66 ($M = 11.20$; $SD = 12.31$). To compare these statistics with previous research, studies using non-clinical samples were desired. Koslowsky, Scheinberg, Bleich, Mark, Apter, Danon, and Solomon (1992) investigated the EAT-26 psychometrically using data from a non-clinical group of 809 female Israeli soldiers in their late teens and found similar descriptive results: 20% of their subjects had scores of 20 and above.

Full Scoring System of EAT-26 Data

Using the full-scoring system (1, 2, 3, 4, 5, and 6), total scores ranged from 35 to 144 ($M = 66.42$; $SD = 20.77$). Scores on Factor 1 (Dieting) ranged from 16 to 74 ($M = 37.88$; $SD = 13.01$). Scores on Factor 2 (Bulimia and Food Preoccupation) ranged from 6 to 34 ($M = 12.39$; $SD = 5.88$). Scores on Factor 3 (Oral Control) ranged from 7 to 38 ($M = 16.15$; $SD = 5.51$).

Zero-order Correlations of All Variables

The matrix of zero-order correlations is given in Table 1. Overall, the pattern of associations suggests adequate convergent and discriminant validity for the various measures.

Table 1:

Correlation Matrix for All Variables

Variable	1	2	3	4	5	6	7	8	9
1. Audio-visual media consumption	1.00	.12	.10	.10	.03	-.07	.08	.02	.10
2. Magazine consumption		1.00	.17*	.18*	.12	.05	.18*	.18*	.06
3. Shape- and weight-based self-esteem			1.00	.21**	.24**	.28**	.56**	.49**	.07
4. Media guide elaboration				1.00	.29**	.20*	.16*	.21**	.07
5. Self-regulatory own guide elaboration					1.00	.26**	.21**	.22**	.04
6. Actual(mother): guide(mother) body image discrepancy						1.00	.12	.08	.03
7. Factor 1 of EAT-26: Dieting							1.00	.74**	.40**
8. Factor 2 of EAT-26: Bulimia and food preoccupation								1.00	.37**
9. Factor 3 of EAT-26: Oral control									1.00

*. Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Listwise N=159

Estimating the Disattenuated Correlation

Parameter values were admissible, as there were no negative error variances and no correlations greater than 1.00. Goodness-of-fit statistics indicate a good fit (see line 1 of Table 2). In particular, the RMSEA was entirely acceptable.

Table 2:

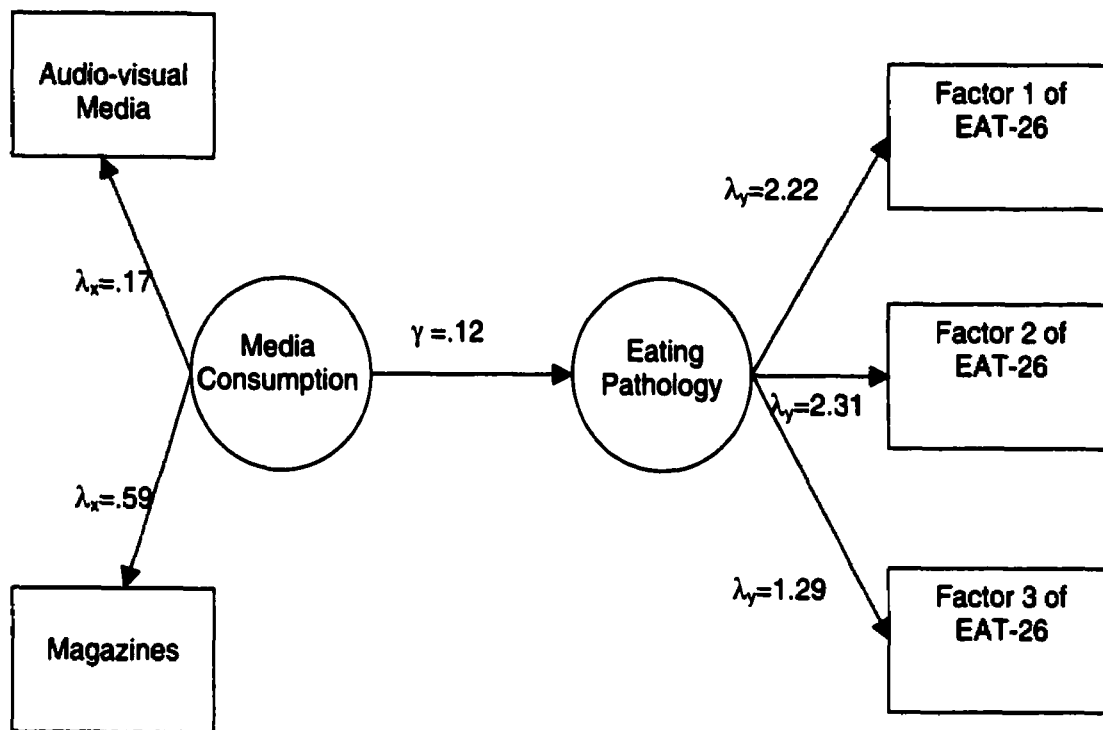
Goodness-of-fit Statistics

	χ^2	<i>df</i>	<i>p</i>	Range of Standardised Residuals	RMSEA
Disattenuated Correlational Model	2.26	4	0.69	-1.17 to 1.02 median = 0.00	0.00
Mediational Model	7.91	15	0.93	-0.95 to 1.13 median = 0.03	0.00
Moderated Mediational Model Invariant	26.75	36	0.87	-0.79 to 3.62 median = 0.07	0.00
Moderated Mediational Model Variant	25.64	32	0.78	-0.81 to 43.83 median = 0.00	0.00

The disattenuated correlation between the latent constructs Media Consumption and Eating Pathology was 0.33 ($.12/\sqrt{.13}$; see Figure 4).

Figure 4:

Disattenuated Correlational Model



Mediational Model

Identification

Parameter values were admissible, as there were no negative error variances and no correlations greater than 1.00. The correlation matrix for the mediational model is contained in Table 3.

Modification

An examination of modification indices suggested that a small modification would result in model improvement without substantively compromising the model. In

particular, the measurement error between SAWBS and F3 and between F2 and F3 was allowed to correlate.

Assessment of Fit

All of the fit indices suggest that this model fits the data (see line 2 of Table 2).

Of note, RMSEA was entirely acceptable.

Estimation

Estimates for the structural model are contained in Tables 4 and 5. Estimates for the measurement model are contained in Table 6.

Table 3:

Correlation Matrix of Mediational Model

	Media Guide	Own Guide	SAWBS	F1	F2	F3	AV Media	Magazine
Media Guide	1.00							
Own Guide	0.31	1.00						
SAWBS	0.23	0.25	1.00					
F1	0.17	0.21	0.55	1.00				
F2	0.20	0.22	0.44	0.69	1.00			
F3	0.06	0.04	0.05	0.38	0.40	1.00		
AV Media	0.11	0.03	0.09	0.07	0.01	0.09	1.00	
Magazine	0.16	0.11	0.16	0.15	0.17	0.06	0.10	1.00

Table 4:**Estimates for the Structural Model**

Parameter (Pathway)	Estimate	SE
β_{21} (Guide Elaboration to Proportional Valuation of Self)	0.81	0.27
β_{32} (Proportional Valuation of Self to Eating Pathology)	0.70	0.11
γ_{11} (Media Consumption to Guide Elaboration)	0.35	0.18
γ_{31} (Media Consumption to Eating Pathology)	0.10	0.13
ϕ_1 (Media Consumption)	1.00	-
Ψ_1 (Guide Elaboration)	0.18	0.14
Ψ_2 (Proportional Valuation of Self)	0.54	0.11
Ψ_3 (Eating Pathology)	0.44	0.11

Table 5:**Covariance Matrix of Latent Variables**

	1	2	3	4
1. Guide Elaboration	0.31			
2. Proportional Valuation of Self	0.25	0.75		
3. Eating Pathology	0.21	0.55	0.86	
4. Media Consumption	0.35	0.29	0.30	1.00

Table 6:**Estimates for the Measurement Model**

Variable	<i>Lambda</i>	<i>SE</i>
Y: Media standards	1.00	na
Y: Own standards	0.95	0.30
Y: SAWBS	1.00	na
Y: F1	1.00	na
Y: F2	0.80	0.10
Y: F3	0.45	0.10
X: Audio-visual media	0.23	0.13
X: Magazines	0.45	0.21

The variance/covariance matrix for values of the errors in measurement of the endogenous concepts is displayed in Table 7, while Table 8 shows the variance of the errors in measurement of the exogenous concept.

The total effect of Media Consumption on Eating Pathology was 0.30 (SE=0.15) (see Table 9). Decomposition of the total into direct and indirect was as follows: direct was non-significant at 0.10 (SE=0.13); indirect was significant at 0.20 (SE=0.10). It appears that the effect of Media Consumption on Eating Pathology is mostly indirect. Thus, the effect of media consumption on eating pathology is mediated by guide elaboration and proportional valuation of self. The standardised solution is illustrated in Figure 5.

Table 7:**Theta-Epsilon: Variance/Covariance^a of the Errors in Measurement of the Endogenous Indicators**

	Media standards	Own standards	SAWBS	F1	F2	F3
Media standards	0.69 (0.13)					
Own standards		0.72 (0.12)				
SAWBS			0.25			
F1				0.14 (0.09)		
F2					0.44 (0.08)	
F3			-0.19 (0.06)		0.09 (0.07)	0.83 (0.10)

Table 8:**Theta-Delta: Variance^a of the Errors in Measurement of the Exogenous Indicators**

	Audio-visual Media Consumed	Magazines Consumed
Theta Delta	0.95 (0.12)	0.80 (0.19)

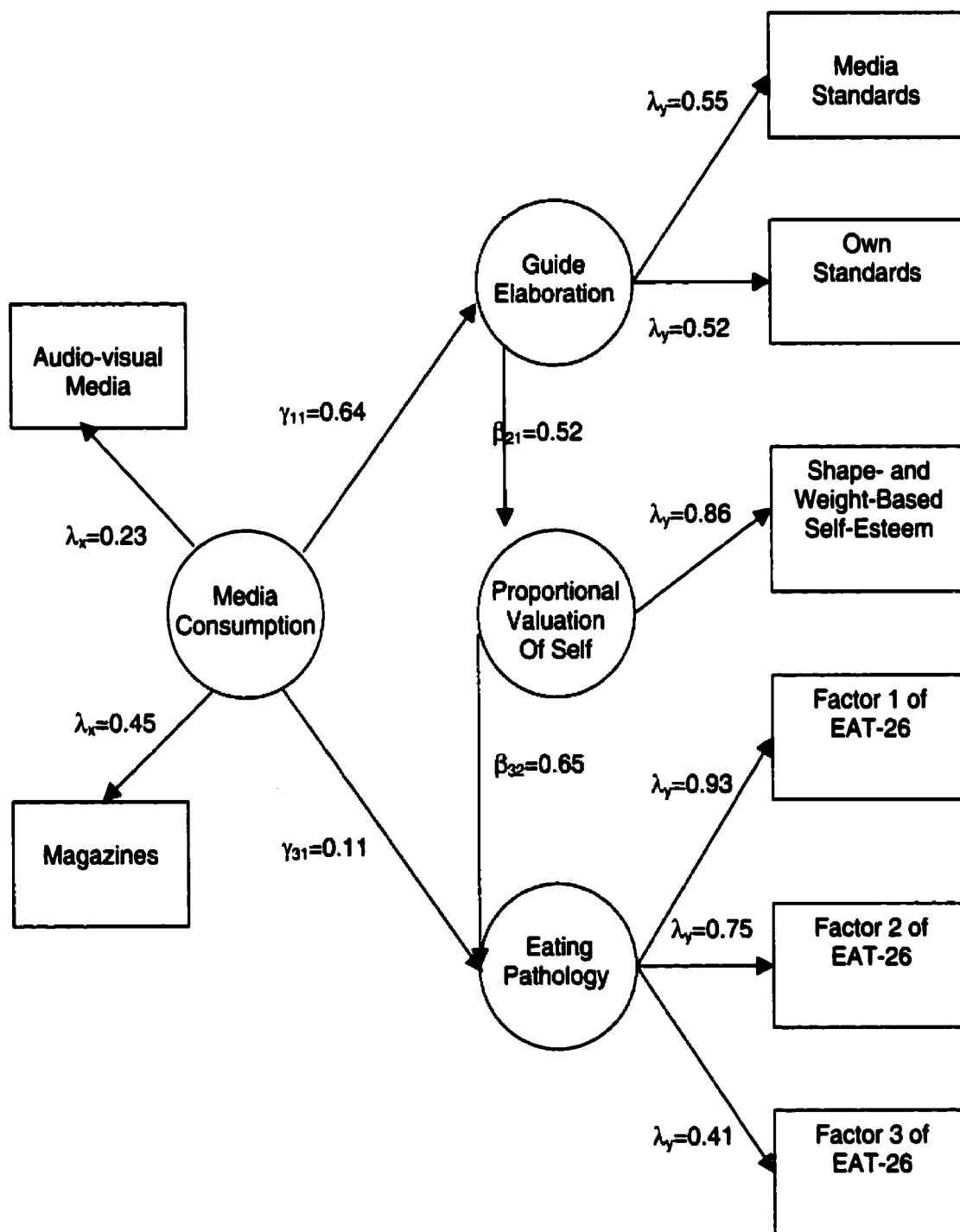
Table 9:**Effects of Media Consumption on Eating Pathology^a**

	Non-standardised	Standardised
Direct	0.10 (0.13)	0.11
Indirect Effects	0.20 (0.10)	0.22
Total Effects	0.30 (0.15)	0.33

^a standard error in brackets

Figure 5:

Standardised Solution for Mediation Model



Moderated Mediation Model

To test the hypothesis that the structural equation would not be equal over the two groups, we ran multi-samples. The mediational model was fitted to each group. Estimates for the unconstrained structural equation, with beta and gamma variant, are given in Table 10.

Table 10:

Estimates^a for the Moderated Mediator Model

Parameter	Beta and Gamma Variant	
	Low Discrepancy Group	High Discrepancy Group
β_{21}	1.16 (0.59)	1.29 (0.60)
β_{32}	0.87 (0.25)	0.66 (0.17)
γ_{11}	0.41 (0.22)	-0.19 (0.17)
γ_{31}	-0.08 (0.25)	-0.24 (0.24)
ϕ_1	1.00	1.00
ψ_1	0.13 (0.16)	0.16 (0.12)
ψ_2	0.36 (0.23)	0.42 (0.18)
ψ_3	0.45 (0.14)	0.50 (0.13)

^astandard error in brackets

Assessment of Fit

Goodness-of-fit statistics for the invariant and variant moderated mediational models were compared (see lines 3 and 4 of Table 2.). The chi-square difference of 1.11 on 4 degrees of freedom is extremely small. Going from the unconstrained

structural equation to the constrained structural equation loses almost nothing. The standardised residuals were also examined. There is one extreme outlier in the variant moderated mediational model, low mother's body image discrepancy, between F2 and Magazine, which was 43.83 (See Appendix 6.). All others were 2.01 or lower. Therefore, it seems reasonable to retain the regression coefficients. Thus, the moderated mediational model was rejected.

The findings are inconsistent with the hypothesis that mother's own body image (Mother's Self-Discrepancy as perceived by daughter) acts as a moderator on the pathway leading from media consumption, through guide elaboration and proportional valuation of self, to eating pathology.

DISCUSSION

For over two decades, scientists have written about the media's influence on women with respect to their bodies (c.f. Abramson and Valene, 1991; Berel and Irving, 1998; Brown and Jasper, 1993; Field *et al.*, 1999; Harrison and Cantor, 1997; Levine and Smolak, 1998; Posner, 1977; Waller, Shaw, Hamilton, Baldwin, Harding and Summer, 1994; Wurman, 1989; Zerbe, 1993). Research confirms modest relationship between consumption of media and disturbed eating patterns, while certain factors, such as gender-role endorsement, ideal body stereotype internalisation and body dissatisfaction mediate this relationship (Stice *et al.*, 1994). Nonetheless, specific self-evaluative processes responsible for the link between media messages and women's dysfunctional eating patterns have remained unclear. What happens when a woman sees an image of an "ideal" body? How does that lead to starving? bingeing? vomiting? fearing fat? The present study examined factors involving self-evaluation that mediate the relationship between media consumption and eating pathology. Moderation was also examined.

Specifically, the current study proposed that increased consumption of media images leads to an increase in guide elaboration devoted to body ideals, which increases the proportion of self-esteem derived from body shape and weight, thus increasing dysfunctional eating behaviours and attitudes. It was further proposed that these relationships are moderated by perception of mother's body image discrepancy.

In general, the participants in this study were average young university women. The typical participant was 19 years old, Canadian by birth, English speaking and from a middle income family. Physically, she described herself as 5'5" tall, 126 pounds, with a

medium frame and a BMI of 21. She desired to lose 11 pounds in order to weigh 115 pounds. She watched TV, films and videos for 12 hours in the previous week and read 5 magazines in the past month. Of her self-esteem, 16% came from her body shape and weight. She reported often being preoccupied with the desire to be thinner, and often being terrified about being overweight.

Structural equation modeling was used to analyse scores from the Eating Attitudes Test, Shape- and Weight-Based Self-esteem Inventory, Selves (Physical), and retrospective questions regarding magazine and audio-visual media consumption.

The first hypothesis examined was that *the mediated effect through guide elaboration and proportional valuation of self is more important than the direct effect of media consumption on eating pathology.*

All fit indices suggested that the data was an excellent fit with the mediated model. Of note, RMSEA was entirely acceptable. The standardised direct effect was non-significant at 0.11; the standardised indirect effect was significant at 0.22. Thus, the effect of media consumption on eating pathology is primarily indirect and is mediated through guide elaboration and proportional valuation of self. The total standardised effect of media consumption on eating pathology was 0.33. That is to say, for every standard deviation of change in media consumption, there is a change in eating pathology of 0.33 standard deviation units. Watching more television and reading more magazines leads to greater disturbance of eating attitudes and behaviours. Looked at from another perspective, lower media consumption is associated with decreased eating pathology.

To summarise the self-evaluative mediating pathway, the more media that is consumed, and the greater is the consumption of unrealistic, impossible-to-match

culturally ideal images. The more images consumed, the larger the “ideal body” guides grow. Greater body guide elaboration leads to a greater proportion of a woman's self-esteem derived from aspects of the body rather than other aspects of herself. The more that self-esteem is based on body, the more likely it is that self-regulation will entail pathological behaviours to get or keep one's body in the idealised state.

While previous research has focused on mediating mechanisms of gender-role endorsement, ideal body stereotype internalisation and body dissatisfaction (Stice, 1994; Stice *et al.*, 1994), the current study revealed a self-evaluative pathway. As unrealistic as media images are, the current results confirm that they nonetheless influence the self-regulatory standards that young women form to evaluate their bodies.

Although self-representation literature has traditionally focused on discrepant aspects of the self (Higgins *et al.*, 1992; Moretti and Higgins, 1990; Moretti, Higgins and Feldman, 1990), the current study took into account that both meeting and not meeting body image guides can have problematic outcomes. People with high discrepancies could be engaging in pathological behaviours, such as purgeing after bingeing, in attempts to lower discrepancy (*c.f.* Forston and Stanton, 1992). One is reminded that bulimia has been described as “failed anorexia”. However, matching body image guides through pathological self-regulation, such as restricting or purging, could describe “successful” anorexia, and thus low discrepancies could also be associated with eating pathology. In keeping with these possibilities, the current study went beyond discrepancies to examine guide elaboration.

The current study revealed that as media consumption increases, so does focus on body weight and shape in self-regulatory guides. In practical terms, a participant who watched more television and consumed more fashion magazines included a greater

number of desired attributes related to weight, silhouette and body parts in her self-regulatory guides. Commonly desired attributes included less weight, skinnier silhouette, smaller thighs, and flat stomach, among others.

The elaboration of desired self-guides leads to proportionately more self-worth being derived from the shape and weight of one's body rather than from such things as achievements, avocations or relationships. Regardless of positive or negative valence of self-esteem, when a greater proportion of self-esteem comes from how one's body looks, body image takes on increased salience. Guide elaboration works through proportional valuation of the self and body image becomes an important aspect to self-regulate. Greater self-regulation in the area of body image, whether failed or successful, results in disturbed eating attitudes and behaviours.

The second hypothesis examined was that *perception of mother's body image discrepancy moderates the mediated relationship between media consumption and eating pathology.*

To test this hypothesis, multi-sample models were tested. Participants were divided into three groups depending on whether they scored above, at or below the median on mother's perceived self-discrepancy. The pathways from media consumption, to eating pathology through guide elaboration and proportional valuation of self, were then compared for groups high and low on mother's perceived self-discrepancy while the middle group was discarded.

Data was not consistent with the moderated mediational model. Goodness-of-fit statistics suggested that the model for the group high on mother's discrepancy fit the data from the low group very well. Few differences were found between the two groups. The change in chi-square was non-significant as shown in Table 15, thus failing to

support the second hypothesis.

In summary, analyses used to test the second hypothesis confirmed the first hypothesis. Performing a multi-sample test was similar to comparing two separate sets of data and finding that they fit the mediational model proposed in Hypothesis 1. Most goodness-of-fit indices for the moderated mediational model show good fit of both high and low groups on their compromised model.

One possible explanation for the failure to support the second hypothesis is that the two groups were not sufficiently different in their levels of maternal discrepancy to detect moderational effects. Use of a different procedure to identify groups, for example selecting the top 20% versus bottom 20% of the sample, may have been more successful in detecting the moderational impact of maternal discrepancy in the model. While this was attempted on an exploratory basis, results were inconclusive due to limited sample size. More subjects would be needed for the necessary power to adequately test moderation using an extreme groups procedure.

A second suggestion is that, rather than as a moderator, a mother's standards may act as an underlying causal factor that has its own mediated pathway through self-evaluative variables to eating pathology. Future investigation of this hypothesis through structural equation modeling is warranted.

Maternal discrepancy did, however, have an impact on one relationship (See Line 3 of Table 10). For those who perceive their mothers as high on body image discrepancy, Media Consumption does not have a relationship with Guide Elaboration ($\gamma_{11} = -.19$, $s.e. = .17$). Most likely, they themselves are high on Guide Elaboration already. Increased media consumption will not increase their elaboration much more. However, for those who perceive their mothers as low on body image discrepancy,

Media Consumption does indeed have a relationship with Guide Elaboration ($\gamma_{11} = .41$, $s.e. = .22$). This finding suggests that these women may not begin with high guide elaboration, but increased consumption of media may increase their guide elaboration. This finding suggests that Maternal Discrepancy does indeed act as a moderator on this segment of the model.

Other relationships between aspects of self-evaluation and perception of mother's self-evaluation also emerged. For example, small but significant correlations were found between perception of mother's body image discrepancy and elaboration of body image attributes in own self-regulatory guide ($r=0.26$, $p<.01$), as well as between perception of mother's body image discrepancy and the proportion of self-esteem derived from shape and weight (SAWBS; $r=0.28$, $p<.01$). Yet, perception of mother's body image discrepancy does not correlate directly with EAT-26 factors. Further, *post hoc* analyses also revealed a significant correlation between participants' own body discrepancy and her perception of her mother's body discrepancy ($r=0.36$, $p<.01$). These results lead one to suspect that mother's standards do play a role, yet perhaps not in the way originally hypothesised.

In fact, *post hoc* analyses showed that daughters' engagement in oral control was correlated with the extent to which she perceived her mother as *meeting* desired standards for body image. This relationship suggests that as a daughter perceives her mother as increasingly meeting desired physical standards, the daughter herself increasingly watches what she eats, eats slowly, cuts her food into small pieces, and avoids eating when she's hungry. Pathology increases.

It seems perceived maternal self-regulatory standards may be associated with one's own standards and self-evaluation. However, perceived mother's discrepancy may

not be as influential as is mother's perceived focus on body image attributes in her own guide. Perhaps it is the perception of mother's guide elaboration that should be examined for its influence.

To preliminarily test this idea, *post hoc* analyses were performed. Perceived mother's body image discrepancy was correlated with elaboration of media guide ($r = .20, p < .05$), elaboration of own self-regulatory guide ($r = .26, p < .01$) and SAWBS ($r = .28, p < .001$). However, perceived elaboration of mother's self-regulatory own guide was correlated with magazine consumption ($r = .17, p < .05$), elaboration of media guide ($r = .25, p < .01$), elaboration of own self-regulatory guide ($r = .48, p < .001$), SAWBS ($r = .26, p < .01$), total EAT-26 score ($r = .19, p < .05$), Factor 1 of EAT-26 (Dieting; $r = .18, p < .05$), Factor 2 of EAT-26 (Bulimia and Food Preoccupation; $r = .17, p < .05$), and Factor 3 of EAT-26 (Oral Control; $r = .21, p < .01$).

These results point to the use of self-discrepancy versus guide elaboration as the most compelling reason for failure of support for the second hypothesis. These correlations may mean that someone high on these variables perceives her mother as having a larger self-guide. Future research could examine the influence of mother's guide elaboration on own guide elaboration, proportional valuation of self and disordered eating behaviour. Even media guide elaboration may be affected. A daughter may learn from her mother to focus on body image attributes in the media. Her mother may read many magazines and model for the daughter the importance of paying attention to body image ideals.

Conversely, correlations among self-evaluative aspects and perceived mother guide elaboration may simply be artifacts of the tendency for someone high on these variables to elaborate on any body image guide, whether it is her mother's, her own or

anyone else's. Future research could explore the nature of the influence of mother's perceived guide elaboration on the pathway from media consumption to eating pathology.

Regardless of what the reason is for lack of support for the second hypothesis, future research in the area of eating disorders and self-representations should focus on guide elaboration rather than on self-discrepancy.

One of the limitations considered was the issue of power. In practice, any model will be rejected as N , the sample size, becomes large. Thus, alternate goodness-of-fit statistics were examined. The residuals for the moderator model were very small indeed. A set of small residuals is indicative of a reasonable model. Replication of the study is warranted.

Results of the current study are not generalizable outside of the population sampled. Cultural differences may influence the models. The population sampled was from a western industrialised culture. Results may vary for those who come from a different background (Murray, 1999).

To illustrate the ideals that were common in the current study, an example of perception of a guide that was passed on from one mother to one daughter follows: When discussing body attributes, the daughter describes her actual self as "short, petite, soft, pretty, cute, brown hair, brown eyes, short legs, small breasts". Her desired self is "tall, thin, long legs, toned, sexy, big breasts, gorgeous". The daughter describes her perception of her mother's actual self as "attractive, short, soft, young-looking, brittle hair". The daughter believes that her mother desires to be "tall, thin, long legs, toned, soft hair". The mother and daughter sound similar. According to the daughter, both find themselves attractive. Yet, according to the daughter, both have similar ideals and

desire to be something *physically impossible* to attain (tall, long legs).

Perhaps if one could find a population where the parents' generation has been isolated from ideals depicted in media of industrialised nations, one might then be able to see if a body ideal could indeed serve as a protective factor. One such community might be the Cuban community in Miami, studied by Jane, Hunter and Lozzi (1999). They found no relationship between media consumption and EAT-26 scores. This finding could be a result of direct effects being less significant than indirect effects, as suggested by the current study. However, identification with and participation in several aspects of Cuban Hispanic culture were cited by Jane and colleagues as possible protective factors.

The general role of this more protracted and close family influence cannot be discounted, and future research should examine the role of cultural family attitudes regarding eating and on the development of attitudes toward acceptable body type more thoroughly and specifically. Other within group social contacts taking place outside the home did not appear to affect attitudes toward eating and body image, further suggesting that the home environment provides perhaps the most powerful influences in the area (p.216).

Thus, it is possible that maternal influence occurs as a protective factor when mothers have not internalised a western industrialised ideal as their standard. Indeed, the moderated mediational model may well hold when the aspects of self-evaluation that are passed on from mother to daughter are ones relatively free of western industrialised standards of beauty.

The results of the current study have several rather straightforward clinical implications. Therapeutic interventions may be aimed directly at limiting media consumption. Therapists can educate themselves on the effects of unrealistic media images that are impossible to attain. They can ensure that beauty magazines are not

present in their waiting rooms. Therapists may be wise to encourage clients to purchase fewer magazines, watch less television and to pursue activities that contribute to more balanced self-regulatory standards and promote self-esteem. A decrease in media consumption may reduce activation of maladaptive self-regulatory standards and thus reduce disordered eating patterns. In many cases, disordered eating is a symptom manifestation of other problems, such as relationship issues. Decreasing media consumption may allow a client to focus on other difficult issues.

The results of the current study have more significant clinical implications, however, regarding the importance of the self-system in therapy. Therapeutic interventions may be aimed at several targets: the actual-self, self-regulatory own guide elaboration, media guide elaboration, relations among these constructs, and the proportional valuation of self. Changes in any of these self-related constructs should produce changes in pathology. However, automatic processing is likely to sustain stability within a self-construct, rather than promote change, and is difficult to interrupt to engage in corrective controlled processes (Moretti *et al.*, 1990). The task, then, is to alter patterns of self-knowledge activation.

A therapist can enter the system from all angles. Interventions may facilitate changes in *availability* of constructs (i.e. creating new self-related constructs in memory) or *accessibility* of constructs (increasing or decreasing the ease with which existing self-constructs are activated (Moretti, *et al.*, 1990)).

To increase the availability of actual-self attributes not related to body image, one could promote activities that provide individuals with new experiences of their bodies. For example, clients may come to see themselves as healthy, graceful or strong once they have engaged in behaviours that were previously avoided or were not experienced

due to lack of opportunity. Blocks barring one from participation in these activities may be worked through in therapy, perhaps from a cognitive-behavioral perspective.

Cognitive techniques that encourage clients to attend to physical experiences, such as those involving mastery and pleasure, may also increase the availability and accessibility of physical attributes not related to body image.

Media guide elaboration can be quelled through decreasing frequency of activation of possible new body image attributes. Clients may decrease the accessibility of the media guide by turning off the television and getting rid of magazines.

Deconstructing media images may also facilitate change. Teaching a client how to spot unrealistic images, with respect to youthfulness and flawlessness, will help her not to consume all images without awareness. Once media attractiveness messages are brought into awareness, clients may be taught to use cognitive techniques to stop body image attributes from entering the realm of desirable and attainable guides.

Self-regulatory own guide elaboration may be changed through increasing availability of physical guides unrelated to body image. Group therapy may give the person new physical guide attributes worthy of attaining.

Change in proportional valuation of self may be targeted by therapists in a number of ways. Lowering the proportion of self-esteem derived from body shape and weight can be achieved by decreasing importance of body to self-esteem. For example, early experiences with significant others may have influenced the type of physical attributes an individual believes are valued by others, such as being thin. As well, the extent to which body shape and weight was valued over other aspects of the self may have been learned through childhood consequences, such as positive attention for being pretty. Failure to live up to standards may have had severe consequences in childhood,

such as ostracism. Psychodynamic therapy may help one remove unconscious constraints on self-definition. Proportional change can also occur by increasing importance of other domains of the self relevant to self-esteem, such as career, relationships, spirituality or hobbies. Systems therapy may be used to explore the role that physical attributes played in one's family, such as being good-looking, versus intelligence or competence at sports. From a cognitive perspective, identifying and drawing attention to client's positive attributes that are not related to body image can temporarily increase accessibility of those traits. When a client has many such experiences with her therapist, she can be taught to use cognitive techniques to enhance accessibility of positive attributes related to other domains of her self. Eventually, the proportion of self-esteem derived from those areas will increase, in essence decreasing the proportion of self-esteem derived from body shape and weight.

Finally, the relationships among these variables can be targeted for intervention. Clients might be encouraged to explore the costs and benefits of striving to achieve high standards of attributes related to body image. Self-regulation towards media standards has a price. Heavier clients may feel worse about themselves when viewing images of thin women as opposed to neutral images, as was shown by Henderson-King and Henderson-King (1997). Accepting the societal standard of beauty as one's own standard is likely to lead to anger, depression (Heinberg and Thompson, 1995) and disordered eating. As clients review the trade-offs, they may become less certain that they desire these attributes. As clients become aware of the tension felt when an impossible-to-attain guide is activated, such as that which occurs when the image of a fashion model is seen, they may see benefit in decreasing the amount of exposure to the image so that guide activation decreases.

It is important to note that although these therapeutic interventions have been compartmentalised on paper and seem to affect aspects of the self in isolation from each other, that is far from the truth. Intervention at any level should have a spreading effect, as constructs within the self-system activate and affect each other. However, to deal only with one aspect without knowledge of other aspects can potentially be detrimental to the client (Moretti *et al.*, 1990).

Many possibilities for further study in the area of media, self-evaluation and eating disorders have been mentioned earlier. In addition, it would also be interesting to examine how many types of media images lead through other self-evaluative standards and ultimately to other dysfunctional behaviour and attitudes. For example, the mediational model that was proposed in the current study could serve to examine the connection between consumption of violent images in sport or on computer games, and attitudes and behaviours that reflect a tolerance for violence. This pathway might be mediated by elaboration of desired standards of these games (such as domination above all other values) and proportion of self-esteem derived from realms involving domination (such as sports, sexual activity, unbalanced interpersonal relationships). Similar mediated pathways could be tested for consumption of pornographic images through to dysfunctional sexual attitudes and behaviours. This pathway might be mediated by elaboration of desired standards of these images (such as frequency or type of sexual activity) and proportion of self-esteem derived from realms involving sexual activity rather than other areas of the self. Consumption of images of people smoking or drinking through to dysfunctional addictive attitudes and behaviours and consumption of images of consumerism through to dysfunctional attitudes and behaviours around money could also be investigated. Examining how many types of

media images lead through other self-evaluative standards and ultimately to other dysfunctional behaviour and attitudes may increase knowledge of intervention potential.

The mediational model may also explain the impact of media campaigns designed to increase socially-desired behaviour. For example, consumption of desirable images of acts of environmental awareness may increase guide elaboration pertaining to social responsibility. A greater proportion of one's self-esteem may then be derived from making a positive impact on the world. Potentially, attitudes and behaviours will reflect this. Self-regulation towards these standards could mean an increase in environmentally-friendly acts and attitudes, as well as general acts of social responsibility.

REFERENCES

- Abramson, E. and Valene, P. (1991). Media use, dietary restraint, bulimia and attitudes towards obesity: A primary study. *British Review of Bulimia and Anorexia Nervosa*, 5(2), 73-76.
- Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, N.J.: Prentice-Hall.
- Bargh, J.A., Bond, R.N., Lombardi, W.J., and Tota, M.E. (1986). The addictive nature of chronic and temporary sources of construct accessibility. *Journal of Personality and Social Psychology*, 50(5), 869-878.
- Baron, R.M. and Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 6, 1173-1182.
- Berel, S. and Irving, L.M. (1998). Media and disturbed eating: An analysis of media influence and implications for prevention. *The Journal of Primary Prevention*, 18 (4), 415-430.
- Bollen, K.A. (1989). *Structural Equations with Latent Variables*. New York: Wiley.
- Brown, C. and Jasper, K. (1993). Why weight? Why women? Why now? In C. Brown and K. Jasper (Eds.) *Consuming Passions: Feminist approaches to Weight Preoccupation and Eating Disorders*. (pp.16-35.) Toronto: Second Story Press.
- Chodorow, N.J. (1978). *The Reproduction of Mothering: Psychoanalysis and the Sociology of Gender*. Berkeley: University of California.
- Costin, C. *The Eating Disorder Sourcebook*. Illinois: Lowell House, 1999.
- Cusumano, D.L. and Thompson, J.K. (1997). Body image and body shape ideals in magazines: Exposure, awareness, and internalisation. *Sex Roles*, 37, 701-721.
- Downs, A.C. and Harrison, S.K. (1985). Embarrassing age spots or just plain ugly? Physical attractiveness stereotyping as an instrument of sexism on American television commercials. *Sex Roles*, 13, 9-19.
- Eating Disorders Awareness and Prevention, Inc. (2000). *The Media, Body Image and Eating Disorders* [On-line]. URL: <http://www.edap.org/>
- Field, A.E., Cheung, L., Wolf, A.M., Herzog, D.B., Gortmaker, S.L., and Colditz, G.A. (1999). Exposure to the mass media and weight concerns among girls. *Pediatrics*, 103(3). URL: <http://www.pediatrics.org/cgi/content/full/103/3/e36>.

- Forston, M.T. and Stanton, A.L. (1992). Self-discrepancy as a framework for understanding bulimic symptomatology and associated distress. *Journal of Social and Clinical Psychology, 11*(2), 103-118.
- Garner, D.M. and Garfinkel, P.E.,(1979). The Eating Attitudes Test: An index of the symptoms of anorexia nervosa. *Psychological Medicine, 9*(2), 273-279.
- Garner, D.M., Olmsted, M.P., Bohr, Y., and Garfinkel, P.E. (1982). The EAT: Psychometric features and clinical correlates. *Psychological Medicine, 12*, 871-878.
- Geller, J., Johnston, C., and Madsen, K. (1997). A new measure of the role of shape and weight in self-concept: The Shape and Weight Based Self-Esteem Inventory. *Cognitive Therapy and Research, 21*, 5-24.
- Geller, J., Johnston, C., Madsen, K., Goldner, E.M., Remick, R.A., and Birmingham, L. (1998). Shape- and weight-based self-esteem and the eating disorders. *International Journal of Eating Disorders, 24*(3), 285-298.
- Guillen, E.O. and Barr, S.I. (1994). Nutrition, dieting, and fitness messages in a magazine for adolescent women, 1970-1990. *Journal of Adolescent Health, 15*(6), 464-472.
- Harrison, K. and Cantor, J. (1997). The relationship between media consumption and eating disorders. *Journal of Communication, 47*(1), 40-87.
- Hayduk, L.A. (1987). *Structural Equation Modeling with LISREL: Essentials and Advances*. Maryland, BA: Johns Hopkins University.
- Heinberg, L.J. and Thompson, J.K. (1995). Body image and televised images of thinness and attractiveness: A controlled laboratory investigation. *Journal of Social and Clinical Psychology, 14*(4), 325-338.
- Henderson-King, E. and Henderson-King, D. (1997). Media effects on women's body esteem: Social and individual difference factors. *Journal of Applied Social Psychology, 27*(5), 399-417.
- Higgins, E.T., (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review, 94*(3), 319-340.
- Higgins, E.T, Bond, R.N., Klein, R. and Strauman, T. (1986). Self discrepancies and emotional vulnerability: How magnitude, accessibility, and type of discrepancy influence affect. *Journal of Personality and Social Psychology, 51*(1), 5-15.
- Higgins, E.T., Vookles, J. and Tykocinski, T. (1992). Self and Health: How "patterns" of self-beliefs predict types of emotional and physical problems. *Social Cognition, 10*(1), 125-150.

- Hill, A.J., Weaver, C. and Blundell, J.E. (1990). Dieting concerns of 10-year-old girls and their mothers. *British Journal of Clinical Psychology*, 29(3), 346-348.
- Holmbeck, G.N. (1997). Towards terminological, conceptual, and statistical clarity in the study of mediators and moderator: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology*, 65, 599-610.
- Irving, L. (1990). Mirror images: Effects of the standard of beauty on the self- and body-esteem of women exhibiting varying levels of bulimic symptoms. *Journal of Social and Clinical Psychology*, 9 (2), 230-242.
- Jane, D.M., Hunter, G.C. and Lozzi, B.M. (1999). Do Cuban American women suffer from eating disorders? Effects of media exposure and acculturation. *Hispanic Journal of Behavioral Sciences*, 21(2), 212-218.
- Kenny, D. (2000). Structural Equation Modeling [On-line]. URL: [http:// Directory: nw3.nai.net/ File: -dakenny/causal.m.htm](http://Directory:nw3.nai.net/File:-dakenny/causal.m.htm)
- Kenny, D.A., Kashy, D.A., and Bolger, N. (1998). Data analysis in Social Psychology. In D.T.Gilbert, S.T.Fiske, and G.Lindzey (Eds.), *Handbook of Social Psychology*, Vol.1 (4th ed.). (pp.233-265). Boston:McGraw-Hill.
- Kilbourne, J. (1989). *Still Killing Us Softly*. Film. Cambridge, MA.
- Klem, L. (1994). Path analysis. In L.G.Grimm and P.R.Yarnold (Eds.), *Reading and Understanding Multivariate Statistics* (pp.65-97). Washington: American Psychological Association.
- Koslowsky, M., Scheinberg,Z., Bleich, A., Mark, M., Apter, A., Danon,Y., and Solomon, Z. (1992). The factor structure and criterion validity of the short form of the Eating Attitudes Test. *Journal of Personality Assessment*, 58(1), 27-35.
- Lee, S., (1993). How abnormal is the desire for slimness? A survey of eating attitudes and behaviour among Chinese undergraduates in Hong Kong. *Psychological Medicine*, 23(2), 437-451.
- Leichner, P., Steiger, H., Puentes-Neuman, G., Perreault, M., et Gottheil, N. (1993). Validation d'une echelle d'attitudes alimentaires aupres d'une population quebecoise francophone. *Revue canadienne de psychiatrie*, 39(1), 49-54.
- Levine, M.P. and Smolak, L. (1998). The mass media and disordered eating: Implications for primary prevention. In W.Vandereycken and G. Noordenbos (Eds) *The Prevention of Eating Disorders*. (pp.23-56) New York: New York University Press.
- Long, J.S. (1983a). *Confirmatory Factor Analysis: A Preface to LISREL*. Beverly Hills: Sage Publications.

- Long, J.S. (1983b). *Covariance Structure Models: An Introduction to LISREL*. Beverly Hills: Sage Publications.
- Moretti, M.M. and Higgins, E.T. (1990). Relating self-discrepancy to self-esteem: The contribution of discrepancy beyond actual-self ratings. *Journal of Experimental Social Psychology*, 26(2), 108-123.
- Moretti, M.M. and Higgins, E.T. (1999). Internal representations of others in self-regulation: A new look at a classic issue. *Social Cognition*, 17(2), 186-208.
- Moretti, M.M., Higgins, E.T. and Feldman, L.A. (1990). The self-system in depression: Conceptualization and treatment. In C.D. McCann and N.S. Endler (Eds.), *Depression: New directions in theory, research and practice*, (pp. 127-156). Toronto, ON: Wall and Emerson.
- Murray, S. (1999). Eating disorders and criticism of cultural ideals. *European Eating Disorders Review*, 7, 204-212.
- Murray, S.H., Touyz, S.W. and Beumont, P.J.V. (1996). Awareness and perceived influence of body ideals in the media: A comparison of eating disorder patients and the general community. *Eating Disorders*, 4(1), 33-46.
- Myers, P.N. and Biocca, F.A. (1992). The elastic body image: The effect of television advertising and programming on body image distortions in young women. *Journal of Communication*, 42 (3), 108-133.
- Nasser, M. (1994). The psychometric properties of the Eating Attitude Test in a non-western population. *Social Psychiatry and Psychiatric Epidemiology*, 29(2), 88-94.
- National Eating Disorders Information Centre (2000). URL: <http://www.nedic.on.ca>
- Pike, K.M., and Rodin, J., (1991). Mothers, daughters and disordered eating. *Journal of Abnormal Psychology*, 100(2), 198-204.
- Posner, J. (1977). Old and female: The double whammy. *Essence*, 2(1), 41-48.
- Silverstein, B., Perdue, L., Peterson, B., and Kelly, E. (1986). The role of the mass media in promoting a thin standard of bodily attractiveness for women. *Sex Roles*, 14, 519-532.
- Smolak, L. (1996). Methodological implications of a developmental psychopathology approach to study of eating problems. In L. Smolak, M.P. Levine, and R. Striegel-Moore (Eds.), *The developmental psychopathology of eating disorders: Implications for research, prevention, and treatment*. (pp. 31-55). Mahwah: Lawrence Erlbaum.

- Smye, V., Cockell, S.J., Srikameswaran, S. and Geller, J. (2000). *Relationships Among daughter, Mother and father Eating Disorder Beliefs and Symptoms*. Poster presented at Eating Disorder Conference 2000, B.C., Canada.
- Snyder, R. (1997). Self-discrepancy theory, standards for body evaluation, and eating disorder symptomatology among college women. *Women and Health, 26(2)*, 69-84.
- Steiner-Adair, C. (1986). The body politic: Normal female adolescent development and the development of eating disorders. *Journal of the American Academy of Psychoanalysis, 14*, 95-114.
- Stice, E. (1994). Adverse effects of the media portrayed thin-ideal on women and linkages to bulimic symptomatology. *Journal of Social and Clinical Psychology, 13(3)*, 388-308.
- Stice, E. and Shaw, H.E. (1994). Adverse effects of the media portrayed thin-ideal on women and linkages to bulimic symptomatology. *Journal of Social and Clinical Psychology, 13(3)*, 288-308.
- Stice, E., Schupak-Neuberg, E., Shaw, H.E. and Stein, R.I.(1994). Relation of media exposure to eating disorder symptomatology: An examination of mediating mechanisms. *Journal of Abnormal Psychology, 103*, 836-840.
- Strauman, T.J. (1989). Self-discrepancies in clinical depression and social phobia: Cognitive structures that underlie emotional disorders. *Journal of Abnormal Psychology, 98*, 14-22.
- Strauman, T.J. and Glenberg, A.M. (1994). Self-concept and body-image disturbance: Which self-beliefs predict body size overestimation? *Cognitive Therapy and Research, 18(2)*, 105-125.
- Strauman, T.J. and Higgins, E.T. (1987). Automatic activation of self-discrepancies and emotional syndromes: When cognitive structures influence affect. *Journal of Personality and Social Psychology, 53(6)*, 1004-1014.
- Strauman, T.J., Vookles, J., Berenstein, V., Chaiken, S. and Higgins, E.T. (1991). Self-discrepancies and vulnerability to body dissatisfaction and disordered eating. *Journal of Personality and Social Psychology, 61(6)*, 946-956.
- Szymanski, M.L. and Cash, T.F. (1995). Body-image disturbances and self-discrepancy theory: Expansion of the body-image ideals questionnaire. *Journal of Social and Clinical Psychology, 14(2)*, 134-146.
- Van Hook, E. and Higgins, E.T. (1988). Self-related problems beyond the self-concept: Motivational and consequences of discrepant self-guides. *Journal of Personality and Social Psychology, 55(4)*, 625-633.

- Waller, G. and Shaw, J. (1994). The media influence on eating problems. In B.Dolan and I.Gitzinger (Eds.) *Why Women? Gender issues and eating disorders*. (pp.44-54).
- Waller, G., Hamilton, K. and Shaw, J. (1992). Media influences on body size estimation in eating disordered and comparison subjects. *British Review of Bulimia and Anorexia Nervosa*, 6, 81-87.
- Waller, G., Shaw, J., Hamilton, K., Baldwin, G., Harding, T. and Summer, A. (1994). Beauty is in the eye of the beholder: Media influences on the psychopathology of eating problems. *Appetite*, 23, 287.
- Wiseman, C.V., Gray, J.J., Mosimann, J.E., and Ahrens, A.H. (1992). Cultural expectations of thinness in women: An update. *International Journal of Eating Disorders*, 11 (1), 85-89.
- Wolf, N. (1990). *The Beauty Myth: How Images of Beauty Are Used Against Women*. Toronto: Random House.
- Wurman, V. (1989). A feminist interpretation of college student bulimia. In L.C. Whitaker and W.N. Davis (Eds.) *The Bulimic College Student: Evaluation, Treatment and Prevention*. (pp.167-180). New York: Haworth Press
- Zerbe, K.J. (1993). *The Body Betrayed: A Deeper Understanding of Women, Eating Disorders and Treatment*. California: American Psychiatric Press.

Appendix 1:

Physical Selves

As you fill out this questionnaire, keep in mind that a minimum of five adjectives is required for each list. However, the more adjectives you are able to list, the better it is. Ten adjectives are preferred.

PHYSICAL SELF QUESTIONNAIRE

Part 1: Beliefs about your PHYSICAL self.

Your **actual PHYSICAL** self:

In the following questionnaire, you will be asked to list the physical attributes that you believe you actually possess.

Your **desired PHYSICAL** self:

You will also be asked to list the physical attributes that you desire: the type of body you wish for, or think you should have.

In addition to listing physical attributes, you will be asked to rate the **extent** to which you desire or believe you actually possess each attribute. Make these **ratings after** you have listed the attribute.

First, list the physical attributes that **YOU** see yourself as **actually** having.

For each attribute, **rate the extent** to which **YOU** see yourself as **actually** possessing the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely
EXTENT			

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Please list the physical attributes that you most **desire** for **yourself**: the type of body you **wish for** or think you **should** have.

For each attribute, **rate the extent** to which **you wish** to possess the attribute or believe you **should** possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

EXTENT

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Part 2: Beliefs that your mother holds about her physical self.

Please list the physical attributes that you believe your mother sees herself as actually having.

For each attribute, rate the extent to which your mother believes she actually possesses the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

EXTENT

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Please list the physical attributes that you believe your **mother** most **desires for herself**: the type of body she wishes for herself or thinks she should have. For each attribute, **rate the extent** to which your **mother wishes** to possess the attribute or believes she **should** possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

EXTENT

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Part 3: Beliefs that others hold for you about your physical self.

Please list the physical attributes that you believe are most **desired** for **you by your mother**: the type of body she wishes for you or thinks you should have.

For each attribute, **rate the extent** to which your **mother wishes you** to possess the attribute or believes you **should** possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

EXTENT

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Please list the physical attributes that you believe are most **desired** for **you by your father**: the type of body he wishes for you or thinks you should have. For each attribute, **rate the extent** to which your **father wishes you** to possess the attribute or believes you **should** possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

EXTENT

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Please list the physical attributes that your peers most desire for you: the type of body they idealize or expect you to have. For each attribute, rate the extent to which your peers wish you to possess the attribute or believe you should possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

EXTENT

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Please list the physical attributes that you believe are most desirable for young women as portrayed by the media through what we see in advertisements, magazines, films and television. For each attribute, rate the extent to which the attribute is desirable for young women according to the media, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

EXTENT

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Appendix 2:

Media Consumption Questionnaire

What is the most recent movie that you have seen in a theatre?

What is the most recent video that you have seen at home or at someone else's home?

What are your favorite television shows?

What other programs do you tend to watch?

Now think back to **this past week**. Please **take the time** to think about each day and night **individually** and to answer as **accurately** and **fully** as possible. Refer back to the previous page if you need to **refresh your memory**.

1. Last **Saturday**, I participated in the following activities:

I spent _____ hours watching television
_____ hours watching movies
_____ hours watching videos

2. Last **Sunday**, I participated in the following activities:

I spent _____ hours watching television
_____ hours watching movies
_____ hours watching videos

3. Last **Monday**, I participated in the following activities:

I spent _____ hours watching television
_____ hours watching movies
_____ hours watching videos

4. Last **Tuesday**, I participated in the following activities:

I spent _____ hours watching television
_____ hours watching movies
_____ hours watching videos

5. Last **Wednesday**, I participated in the following activities:

I spent _____ hours watching television

_____ hours watching movies

_____ hours watching videos

6. Last **Thursday**, I participated in the following activities:

I spent _____ hours watching television

_____ hours watching movies

_____ hours watching videos

7. Last **Friday**, I participated in the following activities:

I spent _____ hours watching television

_____ hours watching movies

_____ hours watching videos

Please make a check beside each magazine that you have looked at in the past month.

-
- All About You!
- American Cinematographer
- Aquelarre
- Attitude
- Be Slim
- Biography
- Boutique
- Bridges
- Canadian Brides
- Clothes Show
- Complete Woman
- Curve
- Diana
- Donna
- Ebony
- Elle
- Entertainment Weekly
- Essentials
- Fab
- Allure
- American Health
- Arena
- BBW
- Better Homes & Garden
- Body & Soul
- Brides and Setting Up Home
- Brigitte
- Chatelaine
- Company
- Cosmopolitan
- Details
- Diet & Exercise
- Donne
- Elegant Bride
- Elm Street
- Esquire
- Estylo
- Faces In Pop

- Family Circle
- Fashion Almanac
- Fashion Guide
- FIT
- Fitness Plus
- Freundin
- George
- Glamour
- GQ
- Harper's
- Harper's Queen
- Health & Fitness
- Heart's Soul
- In Style
- Intimo Piu Mare
- Jane
- L'Officiel Homme
- Latina
- Linea Sposi
- Loaded
- MacLean's
- Maiden China
- Marie Claire
- Fashion
- Fashion Forecast
- FHI
- Fitness
- Flare
- Fur Sie
- Girlfriend
- Good Housekeeping
- Guys
- Harper's Bazaar
- Health
- Healthy & Natural Journal
- Icon
- International Mele
- Ironman
- Jump
- Ladies' Home Journal
- Libas
- Living Fit
- Look
- Mademoiselle
- Mariages
- Massage

- Max Mixle
- McCall's Patterns
- Minx
- Moda Book Collezioni
- Model Talent
- Mondo Uomo
- MS
- Natural Way
- New Yorker
- Notorious
- Out
- Petra
- Premiere
- Radiance
- Redbook
- San Francisco
- Self
- Sex Life
- She
- Silva
- Sky International
- Sport's Street Collezioni
- Sposa Bella
- McCall's
- Men's Perspective
- Mirabella
- Mode
- Modern Woman
- More
- Natural Living
- New Woman
- Newsweek
- Orient Beauty
- People
- Point of View
- Prima
- Reader's Digest
- Royalty
- Scene
- Seventeen
- Shape
- Shopping Collection
- Single Living
- Sophisticate's Hairstyle Guide
- Sposa
- Spy

- Strength
- Tamana
- Teen
- Textile View Magazine
- Tiger Beat
- Today's Black Woman
- Top Model
- Total Fitness
- Town & Country
- Twist
- Vancouver
- Vegetarian Times
- Vogue
- Vogue Sposa
- Walking
- Woman's Day
- Woman's Life
- XL
- Your Health
- Styling News
- Tatter
- Teen Beat
- The Cigar Monthly
- Time
- Today's Woman
- Toronto Life
- Total Health
- TV Guide
- US
- Vanity Fair
- Verge
- Vogue Patterns
- Vogue Sposi
- Weight Watcher's Magazine
- Woman's Day Beauty
- Woman's World
- XXL
- Zen

Other: _____

Appendix 3:

Eating Attitudes Test

Please place an (X) under the column which applies best to each of the numbered statements. All of the results will be strictly confidential. Most of the questions directly relate to food or eating, although other types of questions have been included. Please answer each question carefully. Thank you.

1. () () () () () () () Am preoccupied with the desire to be thinner
2. () () () () () () () Am preoccupied with the thoughts of having fat on my body
3. () () () () () () () Am terrified about being overweight
4. () () () () () () () Engage in dieting behaviour
5. () () () () () () () Feel extremely guilty after eating
6. () () () () () () () Think about burning up calories when I exercise
7. () () () () () () () Like my stomach to be empty
8. () () () () () () () Feel uncomfortable after eating sweets
9. () () () () () () () Enjoy eating new and rich foods
10. () () () () () () () Other people think I am too thin
11. () () () () () () () Feel that others would prefer if I ate more
12. () () () () () () () Particularly avoid foods with a high carbohydrate content
13. () () () () () () () Avoid foods with sugar in them
14. () () () () () () () Eat diet foods

15. () () () () () () () Am aware of the calorie contents of foods I eat
16. () () () () () () () Find myself preoccupied with food
17. () () () () () () () Feel that food controls my life
18. () () () () () () () Display self-control around food
19. () () () () () () () Give too much time and thought to food
20. () () () () () () () Have gone on eating binges where I feel I'm not able to stop
21. () () () () () () () Cut my food into smaller pieces
22. () () () () () () () Take longer than others to eat meals
23. () () () () () () () Have the impulse to vomit after meals
24. () () () () () () () Vomit after I have eaten
25. () () () () () () () Feel that others pressure me to eat
26. () () () () () () () Avoid eating when I am hungry

Appendix 4:

Shape- and Weight-Based Self-Esteem Inventory

DIMENSIONS OF SELF-ESTEEM INVENTORY

ID# _____ DATE _____

OUR OPINION OF OURSELVES IS BASED ON HOW WE FEEL ABOUT OUR DIFFERENT PERSONAL ATTRIBUTES.

STEP 1: Please read through the list below and PLACE AN "X" on the line next to each attribute that is important to how you have felt about yourself in the last four weeks.

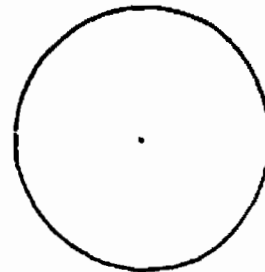
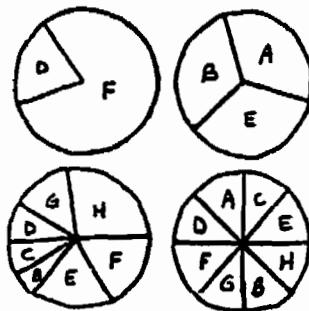
STEP 2: Now, look over the attributes you have selected, and RANK ORDER them in terms of how much your opinion of yourself in the last four weeks has been based on each attribute. The numbers should not necessarily reflect how satisfied you have been with the attributes, but rather how important the attribute has been to how you feel about yourself.

STEP 3: Using the attributes you selected, DIVIDE THE CIRCLE below so that the size of each section is a reflection of how much your opinion of yourself in the last four weeks has been based on that attribute (larger pieces should indicate that a greater part of your opinion of yourself has been based on that attribute, for example). Place the letters corresponding to the attributes inside the pieces of the circle.

- A: Your Intimate or Romantic Relationships
e.g., as reflected in the level of closeness you feel in close relationships
- B: Your Body Shape and Weight
e.g., your actual current shape or weight
- C: Your Competence at School/Work
e.g., as reflected by grades or work evaluation
- D: Your Personality
e.g., warmth, level-headedness, openness, self-control
- E: Your Friendships
e.g., as reflected by the number or quality of friendships
- F: Your Face
e.g., how "good looking" you are
- G: Your Personal Development
e.g., your sense of morality, ethics, or spirituality
- H: Your competence at activities other than school/work
e.g., your competence in music, sports, hobbies
- I: Other
Please describe: _____

EXAMPLES:

YOUR CIRCLE:



Appendix 5:

Demographic Questionnaire

Please complete the following questions as honestly as possible:

Age: _____

Were you born in Canada? _____

If "no", how many years have you lived in Canada? _____

First language _____

Heritage:

Asian _____

Black _____

Caucasian _____

East Indian/Pakistani _____

Latina _____

Middle-Eastern _____

Native Indian _____

Other: _____

My family's income bracket is:

(please circle) low medium high

My mother is alive:

(please circle) yes no

Present Height:

_____ feet _____ inches

OR

_____ cm

Present Weight:

_____ pounds

OR

_____ kg

My body frame is:

(please circle)

small

medium

large

I would like to weigh:

_____ pounds

OR

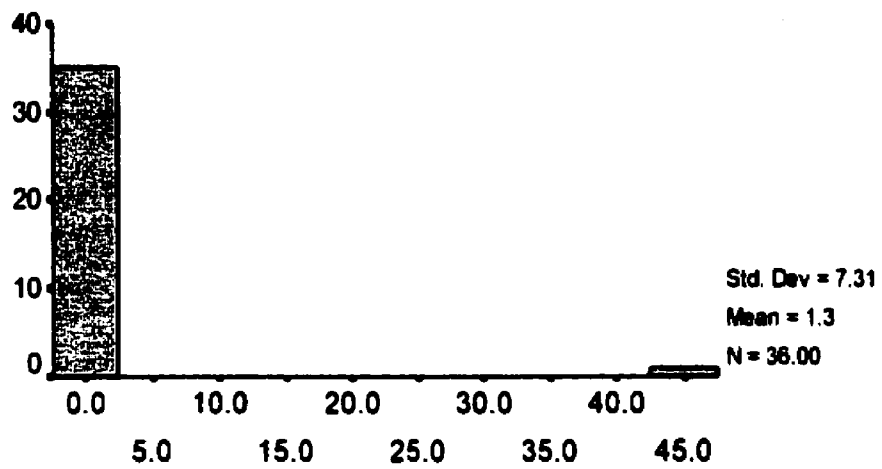
_____ kg

Appendix 6:

Histogram of Standardized Residuals

for Low Perceived Mother's Body Image Discrepancy

Variant Moderated Mediation Model



STLOMOVA