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Do family factors mediate the effects of self-objectifying media on eating disorder tendencies in college women?

Melanie Anne Fling
University of Dayton

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DO FAMILY FACTORS MEDIATE THE EFFECTS
OF SELF-OBJECTIFYING MEDIA ON
EATING DISORDER TENDENCIES
IN COLLEGE WOMEN?

Thesis

Submitted to

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In Partial Fulfillment of the Requirements for

The Degree

Master of Arts in Clinical Psychology

By

Melanie Anne Fling

UNIVERSITY OF DAYTON

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APPROVED BY:



Reeb, N. Roger
Chairperson, Thesis committee



Zois, Catherine
Thesis committee member



Cook, Rebecca
Thesis committee member



David W. Biers
Chairperson, Department of Psychology

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ABSTRACT

DO FAMILY FACTORS MEDIATE THE EFFECTS OF SELF-OBJECTIFYING MEDIA ON EATING DISORDER TENDENCIES IN COLLEGE WOMEN?

Name: Fling, Melanie Anne
University of Dayton

Advisor: Dr. Roger N. Reeb

The present study examined the family process and family climate variables that may contribute to the development of eating disorder tendencies in college women. For this study, the first hypothesis stated that these family variables would predict eating disorder tendencies in college women. This hypothesis was supported by correlation analyses. The second hypothesis stated that family climate variables would account for a significant level of unique variance in eating disorder tendencies, above and beyond the variance in eating disorder tendencies that is explained by family process variables. This hypothesis was supported by multiple regression analyses. Therefore, the present study replicates past research showing that family climate variables explain a significant amount of variance in eating disorder tendencies beyond the level explained by family process variables. The third hypothesis stated that there would be a change in body image as a result of viewing self-objectifying media. This hypothesis was partially supported by performing t-tests on measures of body image completed before and after viewing self-objectifying media. The fourth hypothesis was that family process variables and family climate variables predict responsiveness to self-objectifying media exposure. This hypothesis was also partially supported by correlational analyses. Prevention and treatment implications of the findings are discussed. Recommendations for future research are presented. Overall, the findings contributed to the literature on the etiology of eating disorders.

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CHAPTER 1

INTRODUCTION

Eating Disorders represent a central focus of health problems among young females. This project attempted to identify target areas for future prevention and intervention programs for young females with eating disorder tendencies. Past research has demonstrated the importance of family variables in contributing to eating disorders in young females (Laliberte, Boland, and Leichner, 1999). In addition, past research has shown that self-objectifying media contributes to vulnerabilities (e.g. maladaptive body image of body shape and weight) associated with the development of eating disorder tendencies (Morry & Staska, 2001). However, there is a dearth of research examining the extent to which a tendency toward maladaptive reactivity to self-objectifying media is mediated by family factors.

The introduction will have four primary sections. The first section will include a description of eating disorders according to criteria from the DSM-IV-TR. In the second section, the influence of media's portrayal of thin images of women will be discussed. The role of the media in the development and maintenance of eating disorders will be noted as well as the media's impact on body image for women. In the third section, the effect of family variables on eating disorder tendencies will be discussed. More specifically, the previous research relating both "traditional family process variables" (expressiveness, cohesion, and conflict) and "family climate variables" (family's excessive concern regarding weight and body size, family's excessive concern about socially-desirable appearances, and family's excessive emphasis on

achievement) will also be reviewed. The fourth section sets the stage for the present study and delineates the hypotheses examined.

Description of Eating Disorders

The two most well-established eating disorders include anorexia nervosa and bulimia nervosa. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000), anorexia nervosa is characterized by a refusal to maintain a normal body weight. The individual with anorexia nervosa experiences an intense fear of gaining weight or becoming fat, and displays a significant disturbance in the perception of his/her body shape or size. If the individual is postmenarcheal, she will experience amenorrhea. There are two subtypes of anorexia specified, including the restricting type and the binge-eating/purging type. In the restricting subtype, the individual has engaged in such behaviors as dieting, fasting, or excessive exercise to accomplish weight loss. In the binge-eating/purging subtype, the individual has engaged in such behaviors as binge-eating and/or purging, self-induced vomiting or the misuse of laxatives, diuretics, or enemas.

According to the DSM-IV-TR, bulimia nervosa is described as "binge eating and inappropriate compensatory methods to prevent weight gain" (p.589). An individual diagnosed with bulimia must experience recurrent episodes of binge eating, and "recurrent inappropriate compensatory behavior in order to prevent weight gain," such as self-induced vomiting, misuse of substances (laxatives, diuretics, enemas, or other medications), fasting, or excessive exercise (p.594). This binge eating and inappropriate compensatory behaviors must occur on average at least twice a week for three months. As with anorexia, individuals diagnosed with bulimia also experience a disturbed perception of their body shape and weight. There are two types of bulimia, including the purging type and the nonpurging type. The purging type describes

individuals who regularly engage in behaviors including self-induced vomiting or the misuse of laxatives, enemas, or diuretics. The nonpurging type describes individuals who use other inappropriate compensatory behaviors, such as fasting or excessive exercise. The feature that differentiates bulimia nervosa from anorexia nervosa—binge-eating/purging type is that, with the binge-eating/purging type of anorexia, the individual must have a body weight of 85% less than what is expected for her age and height.

The onset of anorexia nervosa typically occurs during adolescence, whereas the onset of bulimia nervosa extends from adolescence to early adulthood. According to the DSM-IV-TR, the lifetime prevalence rate of anorexia among females is 0.5% and the prevalence of bulimia among females is between 1% and 3%. The lifetime prevalence for anorexia and bulimia among males is one-tenth that among females.

The DSM-IV-TR notes that both anorexia nervosa and bulimia nervosa are most common among females in western societies. Eating disorders are not only occurring in the United States, but in other countries that are influenced by western culture. In recent studies, other cultures have been found to be influenced by media images as well. In a study conducted in Australia, 869 schoolgirls between the ages of 14-16 years were measured for eating disorder tendencies. It was found that two thirds of the sample perceived themselves as being fat, when in actuality only 16% of them were considered to be overweight. It was also found that 87% of the sample desired the thin “ideal” body shape that is portrayed by the media. Grigg, Bowman, and Redman (1996) found that one third of the females in the study had used at least one of the extreme weight loss practices within the previous month, including crash dieting (22%), fasting (21%), and smoking (12%). Another non-western culture that has been recently linked to eating disorder tendencies is Fiji. Ann Becker, an anthropologist in Fiji, has researched the eating habits of teenage girls.

Western television arrived to Fiji in 1995, and in 1998 she conducted a study on teenage girls finding that 74% of them felt that they were too big or too fat. This was surprising due to the fact that, previously in Fiji, there was a preference for large builds of both sexes (Becker, 1995). Although it is difficult to prove that this phenomenon is due solely to the introduction of Western television, it is a cause for great concern.

The prevalence of eating disorders, including both anorexia nervosa and bulimia, has shown a marked increase in the United States over the past three decades (Levitt, 1997). Research on the etiology of eating disorders suggests that a “biopsychosocial” model may be best in explaining the etiology. According to Polivy and Herman (2002), “This model has the advantage of taking into account all sorts of factors—ranging from the broadly cultural to the narrowly biological, with stops along the way from familial, social, cognitive, learning, personality, and other factors” (p.191). While multiple factors may contribute to the development of eating disorders tendencies in girls and young women, this study examined variables centering around the effects of media and family.

The Impact Of Media on Eating Disorders

Media plays a significant role in today’s society. The media has become an important part of everyday life in Western society. The media can be seen as one of the most powerful cultural influences to young people and is often responsible for influencing our perceptions of what is defined as “normal.” Television and printed advertisements influence what we wear, what we eat, even who we vote for. As reviewed below, research suggests that the effects of media may contribute to eating disorder tendencies.

Types of Media

Both print media as well as certain types of television media have been researched in order to uncover the effect that exposure to media may have on body image and eating disorder tendencies. This particular study will concentrate on the effect that self-objectifying television media and magazine exposure have on young women. Self-objectification refers to the tendency for some individuals to think about and value their own bodies from a third-person perspective, focusing on observable body attributes rather than from a first-person perspective, which focuses on non-observable attributes (Morry & Staska, 2001). According to Morry and Staska (2001), the self-objectification theory states that women experience negative consequences (e.g. increased probabilities to experience body shame) as a result of whether they feel satisfied or dissatisfied with their bodies. Self-objectification represents a growing problem for women in today's society who are often searching for the "ideal" body type. This viewpoint of self-objectification often starts as early as adolescence. According to Fredrickson and Roberts (1997), females begin to experience objectification in their daily lives during adolescence. In adolescence, the female's body starts to develop sexually, and becomes subject to objectifying glances, verbal, and nonverbal appraisals, and physical advances from others with greater frequency.

Several studies have examined the effects of self-objectifying media. In a study of 150 undergraduate students, Morry and Staska (2001) found that regular exposure to beauty magazines predicted both self-objectification and disordered eating behaviors among women. This particular study measured the number and the specific types of magazines read by participants in the previous month. Participants completed questionnaires about their eating attitudes, sociocultural attitudes, feelings about their body shape, and concern with appearance. Relative to those women who do not read beauty or fitness magazines, women who read beauty

magazines had a greater concern about their physical appearance. An additional study by Lavine, Sweeney, & Wagner (1999) found that women exposed to television advertisements that were sexually objectifying perceived their current body size to be larger and reported greater body dissatisfaction relative to women who viewed either non-objectifying advertisements or no advertisements at all.

In a study by Fouts and Burggraf (1999), it was found that the presentations of age and weight for the central female characters in prime-time television misrepresents women in our culture. Young female characters tend to be overrepresented on television. In Fouts and Burggraf's analysis of 28 different prime-time shows, 69% of the lead female roles were between the ages of 20 and 35, whereas according to the U.S. Census Bureau (2000), only 21% of the female population is between the ages of 20 and 35. This study also showed that out of the 52 lead characters, 33% of these were below average in weight, 60% were average in weight, and 7% were above average in weight. The actual prevalence rate of women below average weight is 25% in 20 to 25 year olds. The rate of women above average in weight is 26% of 20 to 34 year olds (National Center for Health Statistics, USA, 1994). Thus, the image of the female body portrayed on television is not a "real-life" representation of typical women in our culture.

Although both print media and television media may contribute to eating disorder tendencies, some researchers believe that print media may affect young women more than televised media. According to the Uses and Gratification theory (Rubin, 1994), people use the media in different ways to derive different gratifications such as diversion, relaxation, entertainment, escape, information, personal identity or as a resource for behavioral or appearance standards. According to Harrison and Cantor (1997), the prime purpose of television is entertainment, whereas young women's self-reports indicated that they read beauty and fitness

magazines to gain information about beauty, fitness, grooming, and style. Thus, the presentation of thin ideal messages in television programs tends to be implicit rather than explicit. Therefore, according to Vaughan and Fouts (2003), magazines are more likely to involve a greater emotional investment, a closer examination of thin models, and a greater degree of social comparison than television.

Changes in the Representation of Body Image

Two forms of media that represent societal standards of ideal women are the Miss America Pageant and Playboy magazine. Perhaps one of the most famous studies on the cultural expectations of body image was performed by Garner and Garfinkel (1980). It is a classic study that reviewed data from the Miss America Pageant and Playboy magazine from 1959-1978. It was found that there was a definite shift in ideal body size over the 20 year period. Over the years, pageant contestant's weight decreased significantly and, for most of the years, pageant winners weighed significantly less than other contestants. It was also found that for *Playboy* centerfolds, the average weight for age and height had also significantly decreased over the 20 years. There was also a significant decrease in bust, waist, and hip measurements. It was hypothesized that these changes in measurements may indicate a selection bias for more skeletal characteristics. This information is startling because at the conclusion of the study, the average American woman under 30 had actually gained over five pounds. This particular study also examined popular women's magazines. It was found that, over this 20-year time period, there was also a significant increase in diet articles in these magazines.

In another study, Wiseman, Gray, Mosimann, and Ahrens (1992) examined Miss America Pageant contestants and Playboy centerfolds from 1979 to 1988. It was found that these women had a body weight of 13% to 19% below the expected weight for women in that age group. Over

this period, 69% of Playboy centerfolds and 60% of Miss America Pageant contestants had body weights of 15% or more below the expected weight for their age and height. According to the DSM-IV-TR, one criterion for anorexia nervosa is the refusal to maintain a normal body weight. To be considered underweight, an individual must weigh less than 85% of what is considered the normal weight for that individual's age and height. This means that many of these women in this study may have at least one symptom of an eating disorder. In this 10-year period, it seems as if the ideal body weight had leveled off at 13% to 19% below the expected weight. It is suggested that this may be due to the fact that any lower body weight would be potentially dangerous and almost impossible due to health concerns (Wiseman, Gray, Mosimann, and Ahrens, 1992).

Media has been linked to eating disorder tendencies in numerous studies. Levitt (1997) conducted a study on the influence of media figures on behavior. Levitt administered questionnaires to 124 women. The questionnaires asked the women to do the following: list the associations they had with the term eating disorder; list fictional characters from television shows and rate them on an attractiveness scale; estimate the percentage of young women who diet strictly, as well as the percentage who binge eat and vomit; and indicate whether their own behavior had been influenced by media figures. Levitt found that the majority of young women see eating disordered behavior as being quite common. Although most of them stated that they only knew on average three women who dieted strictly, and 0.5 women who participated in binge eating and vomiting, they still estimated a high prevalence of eating disorder tendencies in young women. They estimated that 62.4% of young women diet strictly and that 36.7% of young women binge eat and vomit. It is hypothesized that this large estimation might be due to the fact that the media attention to eating disorders has increased. In addition, out of the 124 subjects, 80.5% had bought clothes to resemble a model/actor, 69% had dieted, and 33.6% of them had

dieted to look like a model/actor. It was found that most women in this survey had admitted to altering their appearance or behavior in some way to model a media figure. This study conveys the importance of media in shaping young women's behavior. A majority of the participants admitted to modeling someone in the media. Further, they greatly overestimated the prevalence of eating disorders among young women, perhaps due to the increasing attention to eating disorders in the media.

Harrison (1997) conducted a study of 232 young women to examine the link between college women's disordered eating tendencies and interpersonal attraction to female media personalities of various body sizes. These participants were asked to rate their attraction to women on six popular television shows. These shows were specifically chosen because they represented thin, average, and large depicted women (e.g., Beverly Hills 90210, Seinfeld, and Roseanne). The results indicated that interpersonal attraction to thin/provocative media personalities positively predicted general eating disorder symptomatology, drive for thinness, anorexia, bulimia, perfectionism, and a personal sense of ineffectiveness, whereas attraction to average or heavy media personalities did not.

Body Image and Media

Another issue that is closely related to media influence on eating disorder tendencies is body image. Researchers have examined the effect of media exposure on body image and body dissatisfaction. Body image is described as the physical and cognitive representation of the body which incorporates attitudes of acceptance and rejection (Bullerwell-Ravar, 1991).

According to Posavac, Posavac, and Posavac (1998), if females perceive a discrepancy between the accepted standard of female attractiveness and their own bodies, they may become concerned that their own weight is not acceptable. In this study, 136 female undergraduate

students completed a survey describing their eating disorder symptomatology. They were shown slides portraying fashion models, as well as a neutral stimulus of automobiles, and then asked to fill out a measure that recorded their concern with their weight. It was predicted that females scoring high in body dissatisfaction would report more weight concern following the media exposure than females low in body dissatisfaction. The study concluded that women who were initially very satisfied with their bodies did not report more concern with their weight following exposure to media images. When there was a definite discrepancy in body shape between the participant and the media figure, a higher concern with body weight was found.

In a meta-analysis conducted by Groesz, Levine, and Murnen (2002), 25 studies were reviewed to examine the effects of mass media images of the ideal slender body type on body image. In general, the results indicated that body image was significantly more negative after viewing thin media images than after viewing average size models, plus size models, or inanimate objects. This study suggests that the mass media, including magazines and television, promote a thin standard of beauty that may contribute to negative feelings that some women have about their weight and shape. Groesz, Levine, and Murnen argued that mass media transmits an "ideal" slender body type that elicits or promotes body dissatisfaction.

In sum, the influence of media on women in our society is obvious from the extent of research on the topic. The research suggests that the media may be a contributing factor in the development and maintenance of eating disorder tendencies. However, there are other factors to consider as well. As reviewed below, certain family characteristics are believed to contribute to the development of eating disorders.

The Impact of Family Variables on Eating Disorders

Ideas on the etiology of eating disorders vary among different perspectives. Although a cultural context involving media has been proposed for the etiology of eating disorders, it is not the sole contributor. If self-objectifying media represented a direct cause of eating disorder pathology, then one would expect that eating disorders would be even more prominent among women in Western culture. The next section will review family variables that have been linked to eating disorder tendencies.

The Role of Traditional Family Process Variables in Eating Disorder Pathology

As reviewed below, lack of expressiveness, excessive cohesion (enmeshment), and conflict are family process variables associated with the development of eating disorders.

Expressiveness. Individuals with eating disorders tend to rate their families as low in expressiveness (Johnson & Flach, 1985; Ordman & Kirschenbaum, 1992). In a study by Stern, Dixon, Jones, Lake, Nemzer, and Sansone (1989), the Family Environmental Scale was administered to individuals diagnosed with anorexia nervosa, individuals diagnosed with bulimia nervosa, and "normal" individuals. According to Stern and colleagues, individuals with eating disorders reported that their families were less supportive of each other and less encouraging to the open expression of feelings than the normal comparison group. Although other family factors have been consistently associated with eating disorders, the most consistently abnormal finding in the group of individuals with eating disorders was the report of their families being low in expressiveness (Stern et al., 1989).

Cohesion. Family cohesiveness is a variable that is often studied in family therapy. It can be defined as the level of emotional connectedness, or the degree to which boundaries are permeable among family members (Minuchin, Rosman, & Baker 1978). Minuchin and

colleagues theorized that family cohesion can be seen along a continuum. At one end of the continuum, boundaries were overly rigid, creating “disengagement.” At the opposite end of the continuum, boundaries are nonexistent, creating “enmeshment.” Minuchin et al. refers to enmeshment as “an extreme form of proximity and intensity in family interactions” (p.30), while families experiencing disengagement are described as having overly rigid boundaries in which communication and protective functions of the family are impaired. It is suggested that when the boundaries among family members are highly permeable, enmeshment may occur. According to Minuchin, problems with individuation and differentiation in adolescence and young adulthood are a result of these dysfunctional patterns of interaction and role structure within families. Minuchin et al. (1978) hypothesized that the deterioration of the anorexic individual’s physical and psychological state is an attempt to create a harmony among family members by reducing the parent’s vulnerability or marital strains. Therefore, the anorexic individual is sacrificing her own development and the opportunity to form a separate identity from her family.

In a study by Rowa, Kerig, and Geller (2001), participants were separated into two groups. One of these groups consisted of women who met the criteria for anorexia nervosa, and the other group represented the “normal” women. Both groups were given a scale that measured parent-child interactions, as well as boundaries. The women diagnosed with anorexia in this study reported more problems with boundaries involving mothers and fathers than the “normal” group. The specific boundary problems involving mothers and fathers that were reported by the women with anorexia included intrusiveness, role-reversal, and enmeshment. The women in the study also reported high levels of enmeshment and role reversal with their mothers.

Conflict. Another family variable that is often associated with eating-disordered families is conflict (Byely, Archibald, Graber, & Brooks-Gunn, 2000). Research has consistently found

that individuals diagnosed with bulimia tend to report that their families are higher in conflict (Ordman & Kirschenbaum, 1986; Laliberte, Boland, & Leichner, 1999). In a study by Lattimore, Wagner, and Gowers (2000), mothers and their daughters diagnosed with anorexia were paired to examine conflict resolution styles. They found that mothers and daughters tended to use destructive communication patterns rather than constructive communication patterns. They also found that the mother-daughter pairs showed more frequent disagreement, blame, and negative affect than mother-daughter pairs in the normal group.

Not only do families with an eating-disordered member tend to be higher in conflict, they often have poor conflict resolution (Moreno, Selby, Aved, & Besse, 2000). In a study by Kog and Vandereycken (1989), it was consistently found that eating disordered families discussed fewer disagreements between parents and children. This has previously been labeled "conflict avoidance" by Minuchin et al. (1978).

The Contribution of Family Climate Variables to Eating Disorders

According to Laliberte, Boland, and Leichner (1999), the content of what is expressed, valued, and modeled in the family environment should be strongly related with the content of the symptom that emerges from the patient. Therefore, if family members put a strong emphasis on weight and appearance, then that value may be internalized, and even expressed in symptomatology in some cases.

Laliberte and colleagues (1999) conducted a study examining the "family climate" that most often occurs with eating disorders. They examined the "traditional family process variables" of expressiveness, cohesion, and conflict, but they also investigated "family climate variables." Three family climate variables were identified as being associated with eating disorders. These variables included the family's concern for weight and shape, perceptions of the

family's concern for social appearances, and perceptions of the family's emphasis on achievement. These three variables were combined to form one factor titled the "Family Appearance/ Achievement factor." This factor explained 19% of the variance in disturbed eating behaviors. This factor was also indicated to be a more powerful predictor of disturbed eating behaviors than the traditional family process variables of expression, cohesiveness, and conflict. Jessup and Reeb (2003) found that, even after statistically controlling for general psychopathology and the traditional family process variables noted above, the family climate variables accounted for a statistically significant level of variance in eating disorder tendencies in college females.

The Present Study: The Role of Family in Mediating the Effects of Media

The extent to which family variables mediate the effects of self-objectifying media has not been examined; however, a recent study by Haworth-Hoepfner (2000) investigated the role of the family and culture in general on the etiology of eating disorders, and a brief discussion of this work sets the stage for the present study. According to Haworth-Hoepfner (2000), "...culture does play a role in the production of eating disorders, but...this influence is mediated through groups, like the family, in which the fundamental work of identity is carried on." Walsh (1993) suggests that the family acts as a mediator of culture by becoming an influence in the development of the self and the self-image of young individuals. In Haworth-Hoepfner's study (2000), in-depth interviews were conducted with 32 women regarding areas such as body satisfaction/dissatisfaction, family relationships, weight and identity in culture, and sources of bodily identity. Half of the women had been clinically diagnosed with an eating disorder. Qualitative comparative analysis was conducted to examine patterns of similarities and differences among the cases. Consistent with other research, this study concluded that eating

disorders developed under conditions of critical family environments, coercive parental control, and a central discourse on weight. However, the results also suggested that these characteristics do not operate as single factors, but work in a combination with other factors in the development and maintenance of eating disorders. As discussed below, Haworth-Hoepfner concluded that there are several other pathways through which the family may mediate the effects of culture in the development of eating disorders.

First, having a main discourse on weight can create an inherent value of being thin in some individuals. According to Haworth-Hoepfner, a main discourse refers to the presence of an ongoing dialogue between parents and children in regards to weight, suggesting that weight is a central theme or focus in the family. Therefore, being part of the family means accepting this attitude. This in turn may become an internalized way to mark membership in the family group. Second, in some families, general discourse on weight and dieting might be prominent. This discourse may also include negative comments about overweight individuals. These remarks may reflect the attitude that a successful, motivated member of society is thin. In order for the family members to view themselves as successful, they have to measure up to that thin standard. Third, in families where critical comments are made about weight and appearance, the need for self-improvement may be stressed. In families where parents exert control, resistance might emerge concerning food. Food restriction or refusal may be used for the child or adolescent to reassert personal control over their environment and/or body. Since society recognizes the quest for a thin body as a type of self-improvement, this could represent a final way in which family mediates culture (Haworth-Hoepfner, 2000).

The first objective of this present study is to replicate past research by demonstrating that family process variables (cohesiveness, expressiveness, and conflict) and family climate

variables (family's excessive concern regarding weight and body size, family's excessive concern about socially-desirable appearances, and family's excessive emphasis on achievement) predict eating disorder tendencies in college women. The second objective of this present study is to determine the extent to which family climate variables account for a significant level of unique variance in eating disorder tendencies, above and beyond the variance in eating disorder tendencies that is explained by family process variables. The third objective of this present study is to determine if there is a change in body image as a result of viewing self-objectifying media. The fourth objective of this present study is to determine if the family process variables and family climate variables predict responsiveness of an individual to self-objectifying media exposure. In other words, is it the case that the relationship between exposure to self-objectifying media (printed or televised) and eating-related problems (negative body image, eating disorder tendencies) is mediated by particular family process variables and family climate variables?

CHAPTER II

METHOD

Participants

The sample consisted of 83 female undergraduate students at a private Midwestern university. Participants ranged in age from 18 to 23 years of age. Participants were recruited from Psychology 101 (Introductory Psychology) and received course related credit for their participation. Prior to data collection, the study was approved by the Research Review and Ethics Committee, Department of Psychology, University of Dayton. Procedures complied with the Ethical Principles of Psychologists (American Psychological Association, 2002). The correlations between the demographic variables and other variables examined in this present study can be seen in Table 1. This analysis did present several significant correlations among different demographic variables. For instance, one interesting finding is that weight was positively correlated with some eating disorder tendencies.

Measures

Demographic Questionnaire.

This form (Appendix A) requests background information, including the individual's age, height, weight, and desired weight, as well as each parent's occupation, income, and educational level. This questionnaire also requests information regarding whether the individual is currently involved in therapy with a mental health practitioner. Finally, the questionnaire requests information regarding the current marital status of the individual's biological parents.

Table 1

Relationship Between Demographic Variables and Eating Disorder Tendencies

(N = 83)

Demographic Variables	AGE	HGT	WGT	DWT	FED	MED
Eating Disorder Inventory-3 Subscales						
EDI total	.137 (.216)	.114 (.307)	.290 (.008)	.067 (.548)	.042 (.705)	-.157 (.157)
Drive for Thinness	.162 (.143)	.219 (.047)	.267 (.015)	.119 (.284)	.009 (.933)	-.197 (.075)
Bulimia	-.010 (.925)	-.027 (.811)	.060 (.588)	-.077 (.491)	-.099 (.376)	-.010 (.927)
Body Dissatisfaction	.152 (.171)	.069 (.533)	.338 (.002)	.079 (.476)	.125 (.258)	-.154 (.165)
Low Self Esteem	-.070 (.532)	.024 (.832)	.057 (.606)	-.034 (.760)	-.029 (.794)	-.020 (.854)
Personal Alienation	-.087 (.436)	-.019 (.865)	-.035 (.755)	-.118 (.289)	-.016 (.885)	-.073 (.513)
Interpersonal Insecurity	-.102 (.360)	-.015 (.890)	.022 (.846)	-.002 (.988)	.068 (.542)	-.110 (.323)
Interpersonal Alienation	-.007 (.950)	.071 (.526)	.071 (.526)	-.017 (.880)	-.082 (.459)	-.102 (.357)
Interoceptive Deficits	-.059 (.599)	-.080 (.472)	.012 (.911)	-.040 (.717)	-.013 (.904)	-.077 (.486)
Emotional Dysregulation	-.008 (.943)	-.148 (.181)	-.004 (.973)	-.106 (.342)	.172 (.121)	-.078 (.484)
Perfectionism	-.092 (.407)	-.049 (.657)	.103 (.353)	.010 (.929)	-.143 (.196)	.090 (.421)
Asceticism	.163 (.140)	.120 (.278)	.130 (.241)	.012 (.911)	-.010 (.931)	-.137 (.687)
Maturity Fears	-.134 (.227)	.014 (.904)	-.005 (.965)	.030 (.786)	-.010 (.931)	.045 (.687)

Note. AGE = age; HGT = height; WGT = weight; DWT = desired weight; FED = father's education; MED = mother's education.

Demographic Variables

	AGE	HGT	WGT	DWT	FED	MED
Body Esteem Scale						
Sexual Attractiveness (time 1)	-.006 (.955)	-.047 (.671)	-.095 (.394)	-.028 (.804)	.109 (.327)	-.107 (.334)
Weight Concern (time 1)	-.212 (.055)	-.047 (.675)	-.413 (.000)	-.172 (.120)	-.067 (.548)	.084 (.448)
Physical Condition (time 1)	.052 (.642)	.093 (.405)	-.164 (.138)	.024 (.830)	-.269 (.014)	.126 (.258)
Sexual Attractiveness (time 2)	-.036 (.744)	-.056 (.612)	-.187 (.090)	-.108 (.332)	.136 (.219)	-.092 (.408)
Weight Concern (time 2)	-.213 (.053)	-.026 (.817)	-.368 (.001)	-.131 (.240)	-.037 (.739)	.159 (.150)
Physical Condition (time 2)	.056 (.615)	.165 (.136)	-.117 (.293)	.077 (.491)	-.230 (.036)	.163 (.141)
Sexual Attractiveness difference	-.089 (.423)	-.038 (.736)	-.291 (.008)	-.240 (.029)	.105 (.346)	.020 (.857)
Weight Concern difference	-.024 (.833)	.041 (.710)	.054 (.629)	.073 (.510)	.073 (.511)	.219 (.046)
Physical Condition difference	.012 (.917)	.218 (.048)	.128 (.249)	.154 (.165)	.087 (.434)	.117 (.292)
Self-Objectification Scale						
Pre-score	-.106 (.341)	-.106 (.342)	-.097 (.385)	.029 (.795)	-.037 (.736)	.192 (.081)
Post-score	-.124 (.266)	-.042 (.707)	-.041 (.714)	.071 (.523)	-.054 (.628)	.280 (.010)
Difference Score	-.062 (.575)	.118 (.287)	.102 (.357)	.100 (.370)	-.045 (.688)	.237 (.031)
Body Shape Questionnaire	.046 (.681)	-.005 (.966)	.093 (.401)	.032 (.772)	.024 (.826)	-.157 (.157)

Note. AGE = age; HGT = height; WGT = weight; DWT = desired weight; FED = father's education; MED = mother's education.

Family-Related Predictors

The Family Social Appearance Orientation Scale (FSAOS). The FSAOS (Appendix B) consists of seven true-false items from the Public Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975), in addition to nine items added by Laliberte and colleagues. This scale was rewritten at the family level of analysis by Laliberte and colleagues in 1999. They added the nine items to capture microlevel family behaviors that they thought were relevant to social appearance orientation. An example of a rewritten item is: "I'm concerned about what other people think of me" to "Family members are concerned about what other people think of them." Participants are asked to rate each of the 16 items as "true" or "false." Items that are rated as "false" receive a score of 0, and items rated as "true" receive a score of 1. None of the items on this scale required reverse scoring. The total score of all 16 items represents the individual's perception of his/her family's orientation to social appearance. Scores can range from 0 to 16, with higher scores indicating perceptions of greater family orientation to social appearance, and lower scores representing perceptions of lesser family orientation to social appearance. This scale has acceptable internal reliability, with coefficients alpha ranging from .71 to .94 (Laliberte et al., 1999). In the present study, the coefficient alpha was .79. The public Self-Consciousness Scale has good test-retest reliability, with correlations ranging from .73 to .80. With regard to validity, the FSAOS has been shown to correlate with the relevant family measures (Laliberte et al., 1999).

The Family Environment Scale (FES). The FES (Appendix C; Moos & Moos, 1994) measures 10 dimensions of family environment, including Cohesion, Expressiveness, Conflict, Independence, Achievement Orientation, Intellectual-Cultural Orientation, Active-Recreational Orientation, Moral-Religious Emphasis, Organization, and Control. These 10 subscales assess

three underlying sets of dimensions, including the Relationship Dimension, the Personal Growth Dimension, and the System Maintenance Dimension.

The Relationship Dimension includes the Cohesion Subscale (the degree of commitment, help, and support family members provide for one another), the Expressiveness Subscale (the extent to which family members are encouraged to express feelings directly), and the Conflict Subscale (the amount of openly expressed anger and conflict among family members). A low score on the Cohesion Subscale indicates a lesser degree of commitment, help, and support among family members, whereas a high score represents a greater degree of commitment, help, and support among family members. A low score on the Expressiveness Subscale represents a lack of encouragement among families to express feelings directly, whereas a high score represents increased encouragement for families to express feelings directly. A low score on the Conflict Subscale indicates a lack of openly expressed anger and conflict among family members, whereas a high score on the Conflict Subscale indicates a greater amount of openly expressed anger and conflict among family members.

The Personal Growth and System Maintenance Dimensions assess the linkages between the families and the larger social context and the internal family functioning respectively. The Personal Growth Dimension includes the Independence Subscale (extent to which family members are assertive, self-sufficient, and make their own decisions), the Achievement Orientation Subscale (how much activities are cast into an achievement-oriented or competitive framework), the Intellectual-Cultural Orientation Subscale (level of interest in political, intellectual, and cultural activities), the Active-Recreational Orientation Subscale (amount of participation in social and recreational activities), and the Moral-Religious Emphasis Subscale (emphasis on ethical and religious issues and values). For the Independence Subscale, a low

score would indicate a lack of assertiveness, self-sufficiency, and decision-making among family members, whereas a high score would indicate greater assertiveness, self-sufficiency, and decision-making. For the Achievement Orientation Subscale, a low score would represent a lack of competitive nature in activities among family members, whereas a high score would indicate a greater competitive nature in activities among family members. For the Intellectual-Cultural Orientation Subscale, a low score would indicate a lower level of interest in political, intellectual, and cultural activities, whereas a high score would represent a greater level of interest in political, intellectual, and cultural activities. For the Active-Recreational Subscale, a low score would represent a lesser amount of participation in social and recreational activities, whereas a high score would represent a greater amount of participation in social and recreational activities. For the Moral-Religious Subscale, a low score would represent a lesser emphasis on ethical and religious issues and values, whereas a high score would indicate a greater emphasis on ethical and religious values.

The System Maintenance Dimension includes the Organization Subscale (degree of importance of clear organization and structure in planning family activities and responsibilities) and the Control Subscale (how much set rules and procedures are used to run family life). For the Organization Subscale, a low score would indicate a lesser degree of importance of clear organization and structure in planning family activities and responsibilities, whereas a high score would represent a higher degree of importance of clear organization and structure in planning family activities and responsibilities. For the Control Subscale, a low score would indicate a lesser degree to which set rules and procedures are used to run family life, whereas a high score would indicate a greater degree to which set rules and procedures are used to run family life.

The FES does not yield a total score; rather, a total score for each of the ten dimensions is calculated. It consists of 90 “true-false” items. None of the items on this scale require reverse scoring. It is a commonly used measure in family therapy and research. Concerning reliability, previous research has indicated that internal consistency is acceptable with alpha coefficients ranging from .61 to .78 across the subscales. In the present study, the coefficient alpha levels were as follows: Cohesion (alpha = .75); Expressiveness (alpha = .62); Conflict (alpha = .70); Independence (alpha = .49); Achievement Orientation (alpha = .43); Intellectual-Cultural Orientation (alpha = .56); Active-Recreational Orientation (alpha = .69); Moral-Religious Emphasis (alpha = .62); Organization (alpha = .66); and Control (alpha = .61). Test-Retest reliability at two months ranged from .68 to .86 across the subscales, and at four months ranged from .64 to .86. The FES has also demonstrated adequate validity with multiple populations, including young women with eating disorders. For instance, scales on the FES correlate with corresponding measures of family variables such as cohesiveness, expressiveness, conflict, achievement orientation, and systems maintenance (Moos & Moos, 1994).

Measure of Eating Disorder Tendencies

The Eating Disorders Inventory-3 (EDI-3). The EDI-3 (Appendix D; Garner, 1991) measures eating-disordered thoughts, habits and behaviors. This scale does not yield a total score; however, it does cover 12 dimensions, including Drive for Thinness, Bulimia, Body Dissatisfaction, Low Self-Esteem, Personal Alienation, Perfectionism, Interpersonal Insecurity, Interpersonal Alienation, Interoceptive Deficits, Emotional Dysregulation, Asceticism, and Maturity Fears. Three of these dimensions (Drive for Thinness, Bulimia, and Body Dissatisfaction) are labeled Eating Disorder Risk scales. To determine the Eating Disorder Risk Composite (EDRC), the T scores for the Drive for Thinness, Bulimia, and Body Dissatisfaction

Subscales are summed. High scores on these scales place the individual at increased risk for developing an eating disorder. The remaining nine dimensions represent psychological constructs that have conceptual relevance to the development and maintenance of eating disorders. High scores on these dimensions are indicative of symptomatic responses.

The EDI-3 consists of 91 items. For each item, participants are asked to indicate the extent to which the problem applies to them, ranging from 4 (always), 3 (usually), 2 (often), 1 (sometimes), and 0 (rarely or never). The items listed on the following subscales are reverse scored: Drive for Thinness Subscale (7, 11, 16, 25, 32, and 49); Bulimia Subscale (4, 5, 28, 38, 46, 53, 61, and 64); Body Dissatisfaction Subscale (2, 9, 45, 47 and 59); Low Self-Esteem Subscale (10, 27, and 41); Personal Alienation Subscale (18, 24, 56, and 84); Interpersonal Insecurity Subscale (34 and 87); Interpersonal Alienation Subscale (54, 65, and 74); Interoceptive Deficits Subscale (8, 21, 33, 40, 44, 51, 60, and 77); Emotional Dysregulation Subscale (67, 70, 72, 79, 81, 83, 85, and 90); Perfectionism Subscale (13, 29, 36, 43, 52, and 63); Asceticism Subscale (66, 68, 75, 78, 82, 86, and 88); and Maturity Fears Subscale (3, 6, 14, 35, and 48).

Concerning reliability, the internal consistency alpha coefficients range from .44 to .93. In the present study, the coefficient alpha levels were as follows: Drive for Thinness (alpha = .92); Bulimia (alpha = .85); Body Dissatisfaction (alpha = .92); Low Self-Esteem (alpha = .81); Personal Alienation (alpha = .80); Perfectionism (alpha = .76); Interpersonal Insecurity (alpha = .85); Interpersonal Alienation (alpha = .72); Interoceptive Deficits (alpha = .86); Emotional Dysregulation (alpha = .63); Asceticism (alpha = .66); and Maturity Fears (alpha = .81). Test-retest reliability administered between one and seven days apart had coefficients ranging from

.86 to .98. The original EDI scale maintained a degree of convergent validity with other eating disorder scales, with correlations generally around .80 (Garner, Olmstead, & Polivy 1984).

Measure of Magazine Exposure

An adapted version of the Magazine Exposure Scale (Appendix E), developed by Morry and Staska (2001) will be utilized in this study. This scale was developed to measure individual's exposure to ideal body images presented in the media. Individuals were asked to indicate the number of magazines they had examined during the past month by placing an "X" next to those magazine titles. This adapted version pertains specifically to females, and the inclusion of certain magazines was changed. The beauty magazines utilized in the adapted scale include *YM* (Young and Modern), *Mademoiselle*, *Vogue*, *Cosmopolitan*, *Seventeen*, *Glamour*, *Elle*, *Vanity Fair*, *Self*, *Marie Claire*, *People*, *Star*, and *Rolling Stone*. A number of filler magazines were also included: *Reader's Digest*, *MacLean's*, *Time*, *National Enquirer*, *Newsweek*, and *People*. Each beauty and fitness magazine endorsed was given a score of 1, and each beauty and fitness magazine not endorsed was given a score of 0. Filler magazines were given a score of 0, regardless of whether or not they were endorsed. None of the items on this scale require reverse scoring. The total number of beauty and fitness magazines endorsed was then summed to provide an index of ongoing exposure, with scores ranging from 0 to 13. A high score on this scale represents greater exposure to beauty and fitness magazines, whereas a low score on this scale indicates a lack of exposure to beauty and fitness magazines. While reliability coefficients are not available for this instrument, it seems likely that there would be at least fairly good temporal consistency for the types of magazines that young females read. In the present study the coefficient alpha was .72. With regards to validity, scores on this instrument were found to predict internalization of the

ideal form as thin, greater concern regarding physical appearance, and disordered eating behaviors in women (Morry & Staska, 2001).

Measures of Perception of Body Weight and Shape

The Body Esteem Scale (BES). The BES (Appendix F; Franzoi & Shields, 1984) will be utilized to measure the participants' concern with their body weight and shape. This scale consists of 35 items that asks respondents to indicate the valence and strength of their feelings toward their body weight and shape. For each item, a Likert-like scale is used, ranging from 1 ("Have strong negative feelings"), 2 ("Have moderate negative feelings"), 3 ("Have no feelings one way or the other"), 4 ("Have moderate positive feelings"), and 5 ("Have strong positive feelings"). None of the items on this scale require reverse scoring. There are three subscales: Sexual Attractiveness, Weight Concern, and Physical Condition. This scale does not yield a total score.

The Sexual Attractiveness subscale measures women's attitudes toward body parts and functions related to facial attractiveness and sexuality. Scores on this subscale range from 10 to 50. The Weight concern subscale measures women's attitudes toward body parts that can be physically altered through controlling food intake. Scores on this subscale range from 9 to 45. The Physical Condition Subscale deals with women's attitudes toward their stamina, strength, and agility. Scores on this subscale range from 7 to 35. To determine the individual's score for a particular subscale, the items for each subscale are summed, with high scores indicating positive feelings toward the attributes measured by that particular subscale, and low scores representing negative feelings toward the attributes measured by that particular subscale. The Body Esteem Scale has demonstrated satisfactory reliability. For females, coefficients alpha were .78 for the attractiveness factor, .87 for the weight concern factor, and .82 for the general physical condition

factor. In the present study the alpha coefficients were as follows: Sexual Attractiveness ($\alpha = .83$); Weight Concern ($\alpha = .92$); and Physical Condition ($\alpha = .88$). The Body Esteem Scale has also demonstrated convergent validity with other measures of self-esteem and has demonstrated satisfactory internal consistency (Franzoi & Herzog, 1986; Franzoi & Shields, 1984).

The Body Shape Questionnaire (BSQ). The BSQ (Appendix G; Cooper, Taylor, Cooper, & Fairborn, 1987) consists of 34 items measuring concerns about body shape, which is recognized as a central feature in anorexia nervosa. These 34 items were rewritten at a family level by Laliberte (1999) and colleagues to assess the participant's perceptions of her family's concern about weight and shape. For example, the statement "Has feeling bored made you brood about your shape?" was changed to "A family member has felt bored and brooded about her shape." For each item, a Likert scale is used, ranging from 1 (never), 2 (rarely), 3 (sometimes), 4 (often), 5 (very often), and 6 (always). The individual items were summed to yield a composite score ranging from 34 to 204, with higher scores indicating perceptions of greater family concern with body shape and weight, and lower scores indicating perceptions of less family concern regarding body shape and weight. None of the items on this scale require reverse scoring. Previous research has found that this scale has adequate internal reliability with alpha coefficients ranging from .71 to .94. In the present study, the alpha coefficient was .97. According to Cooper et al., the concurrent and discriminant validity of this measure have been shown to be good, and the scale has also been shown to have some value in predicting eating-disordered behaviors (Cooper et al., 1987).

The Self-Objectification Questionnaire (SOQ). This scale (Appendix H; Noll and Fredrickson, 1998) "assesses the extent to which individuals view their bodies in observable,

appearance-based (objectified) terms versus nonobservable, competence-based (nonobjectified) terms" (p.628). This scale was based on the Objectification Theory, which suggests that women are socialized to treat themselves as objects to be evaluated on the basis of appearance (Fredrickson & Roberts, 1997). Although this scale was developed from the Body Esteem Scale, it differs in that it is not a measure of individual's satisfaction with their bodies, but it assesses how concerned individuals are with their own appearance without a judgmental or evaluative component. For example, suppose that two different women indicate on the Body Esteem Scale that they have negative feelings regarding their hips; one of these women may indicate on the SOQ that the hip measurement is important to her physical self-concept, whereas the other woman may indicate on the SOQ that the hip measurement is not important to her physical self-concept.

The scale asks participants to rank a list of body attributes in ascending order of how important each is to their physical self-concept, with 1 indicating "most important" and 10 indicating "least important." This scale is comprised of two subscales, the competence-based scale and the appearance-based scale. These body attributes consist of five that are appearance based (physical attractiveness, weight, sex appeal, measurements, and muscle tone) and five that are competence based (muscular strength, physical coordination, health, physical fitness, and physical energy level). The competence based attributes are considered to be non-observable attributes. All of the competence attributes were drawn from the Body Esteem Scale (Franzoi & Shields, 1984). Scores are computed by first giving each attribute a ranking number as follows: Most Important = 9, Second Most Important = 8...and so on to Least Important = 0. None of the items on this scale require reverse scoring. Next, the sum of the ranks for appearance related items and competence related items are computed separately. Appearance- related items include:

weight, sex appeal, physical attractiveness, firm/sculpted muscles, and measurements (e.g., items c, e, f, h, and j). Competence related items include: physical coordination, health, strength, energy level/stamina, and physical fitness (e.g., items a, b, d, g, and i). Finally, the sum of competence ranks is subtracted from the sum of appearance ranks. Scores range from -25 to +25. Higher scores (>0) indicate a greater emphasis on appearance, interpreted as higher self-objectification. Lower scores (<0) indicate a greater emphasis on competence-related factors. The Self-Objectification Questionnaire has demonstrated satisfactory construct validity, correlating positively with the Appearance Anxiety Questionnaire and the Body Image Assessment (Noll, 1996). In the present study, the alpha coefficient for the competence-based scale was .59, and the alpha coefficient for the appearance-based scale was .53.

Procedure

Participants were recruited from a pool of psychology students on a voluntary basis. The session included two steps. In the first step, the participants read and signed an informed consent form (Appendix I). Subsequently, each participant completed the following measures: the Eating Disorder Inventory-3 (EDI-3), the Family Environment Scale (FES); the Family Social Appearance Orientation Scale (FSAOS); the Body Shape Questionnaire (BSQ), and an adapted version of the Magazine Exposure Scale. The first step was completed in a group format with an average of three participants per group. After completing the first step, the participants were given a 15-minute time slot in which they were required to return to the lab to view the self-objectifying media clip. These time slots were scheduled within an hour of the time that they completed step one of the study. When the participants returned for their individual sessions (step 2), they completed the following psychometric instruments before and after viewing a self-objectifying video: the Body Esteem Scale (BES) and the Self-objectification Questionnaire

(SOQ). The self-objectifying media consisted of a 12-minute video clip from the *Sports Illustrated* Swimsuit video. This method allowed for an examination of the extent to which family variables mediate (i.e., predict changes in) body image in response to self-objectifying televised media. All participants were debriefed after completing the study (Appendix J).

CHAPTER III

RESULTS

The presentation of data analysis results is divided into four sections. The first section presents results of correlational analyses that examined the extent to which family process variables and family climate variables account for a significant level of variance in eating disorder tendencies in college women. The second section presents the results of hierarchical multiple regression analyses that focused on family climate variables hypothesized to account for unique variance in eating disorder tendencies after statistically controlling for variance accounted for by family process variables. The third section presents results of analyses examining change in body image as a result of viewing self-objectifying media. The fourth section reports results of analyses examining whether family variables predict changes in body image that occur in response to viewing self-objectifying media.

Predictors of Eating Disorder Tendencies

The first objective of this present study was to replicate past research by demonstrating that family process variables (cohesiveness, expressiveness, and conflict) and family climate variables (family's excessive concern regarding weight and body size, family's excessive concern about socially-desirable appearances, and family's excessive emphasis on achievement) predict eating disorder tendencies in college women. The relevant results related to this hypothesis are illustrated in Table 2.

Table 2
Relationship Between Family Variables and Eating Disorder Tendencies

(N = 83)											
Family Environment Scale											
Eating Disorder Inventory-3 Subscales		COH	EXP	CON	IND	ACO	ICO	ARO	MRE	ORG	COT
		FSAOS									
		TOT									
EDI total		-.186 (.092)	.032 (.777)	.143 (.196)	.056 (.615)	-.037 (.742)	-.078 (.481)	-.008 (.942)	-.166 (.133)	-.009 (.933)	.076 (.496)
Drive for Thinness		-.091 (.416)	.096 (.386)	.121 (.274)	.083 (.456)	.003 (.977)	-.098 (.378)	-.020 (.855)	-.091 (.411)	.059 (.597)	.165 (.136)
Bulimia		-.348 (.001)	-.071 (.525)	.224 (.041)	.081 (.465)	-.047 (.673)	-.002 (.986)	-.045 (.684)	-.249 (.023)	-.122 (.271)	-.080 (.473)
Body Dissatisfaction		-.123 (.267)	.024 (.831)	.077 (.487)	.006 (.954)	-.051 (.644)	-.079 (.480)	.022 (.842)	-.133 (.230)	-.002 (.983)	.063 (.569)
Low Self Esteem		-.146 (.187)	-.077 (.486)	.155 (.162)	.001 (.992)	.054 (.626)	-.134 (.227)	-.045 (.688)	-.139 (.211)	.025 (.825)	.255 (.020)
Personal Alienation		-.424 (.000)	-.228 (.038)	.177 (.109)	-.078 (.484)	.047 (.674)	-.114 (.305)	-.239 (.030)	-.263 (.016)	-.132 (.234)	.134 (.227)
Interpersonal Insecurity		-.330 (.002)	-.235 (.032)	.142 (.199)	-.005 (.964)	.059 (.598)	-.257 (.019)	-.484 (.000)	-.284 (.009)	.233 (.034)	.114 (.306)
Interpersonal Alienation		-.398 (.000)	-.191 (.084)	.303 (.005)	-.099 (.375)	.110 (.321)	-.090 (.419)	-.190 (.086)	-.170 (.124)	-.127 (.252)	.121 (.278)
Interceptive Deficits		-.396 (.000)	-.145 (.192)	.194 (.078)	-.036 (.743)	-.026 (.813)	-.147 (.184)	-.263 (.016)	-.269 (.014)	-.293 (.007)	-.050 (.656)
											.035 (.751)

Note. COH = Cohesion; EXP = Expressiveness; CON = Conflict; IND = Independence; ACO = Achievement Orientation; ICO = Intellectual Cultural Orientation; ACO = Active Recreational Orientation; MRE = Moral Religious Emphasis; ORG = Organization; COT = Control

Family Environment Scale		FSAOS									
		COH	EXP	CON	IND	ACO	ICO	ARO	MRE	ORG	COT
		TOT									
Time 1	Emotional Dysregulation	-.353 (.001)	-.013 (.906)	.325 (.003)	-.257 (.019)	.177 (.110)	-.075 (.501)	-.133 (.230)	-.143 (.197)	-.159 (.152)	.020 (.861)
	Perfectionism	-.214 (.052)	-.103 (.355)	.189 (.087)	-.126 (.255)	.402 (.000)	-.051 (.644)	-.191 (.084)	-.015 (.894)	.159 (.150)	.218 (.048)
	Asceticism	-.301 (.006)	-.028 (.800)	.196 (.075)	-.113 (.307)	.208 (.059)	-.004 (.973)	-.004 (.973)	-.092 (.409)	-.025 (.819)	.116 (.297)
	Maturity Fears	-.502 (.000)	-.136 (.219)	.230 (.037)	-.219 (.047)	.087 (.434)	-.048 (.664)	-.267 (.015)	-.117 (.291)	-.247 (.024)	.068 (.542)
	Body Esteem Scale										
Time 2	Sexual Attractiveness	.087 (.435)	.046 (.678)	-.097 (.382)	-.120 (.280)	.146 (.189)	-.014 (.901)	.009 (.934)	.197 (.074)	.347 (.001)	.088 (.428)
	Weight Concern	.116 (.297)	-.062 (.578)	-.082 (.459)	-.031 (.781)	.182 (.100)	.094 (.396)	-.001 (.990)	.194 (.079)	.124 (.263)	-.009 (.936)
	Physical Condition	.275 (.012)	.014 (.903)	-.190 (.085)	.016 (.884)	.091 (.415)	.187 (.091)	.254 (.021)	.248 (.024)	.385 (.000)	.049 (.659)
	Sexual Attractiveness	.071 (.524)	.031 (.783)	-.141 (.205)	-.046 (.680)	.154 (.165)	-.011 (.920)	.061 (.584)	.137 (.216)	.300 (.006)	.005 (.965)
	Weight Concern	.020 (.854)	-.143 (.198)	-.063 (.571)	-.063 (.573)	.109 (.326)	.051 (.645)	-.056 (.616)	.151 (.172)	.103 (.356)	-.010 (.931)
	Physical Condition	.160 (.149)	.001 (.996)	-.161 (.145)	.015 (.893)	.077 (.489)	.075 (.496)	.197 (.074)	.215 (.051)	.355 (.001)	-.010 (.927)

Note. COH = Cohesion; EXP = Expressiveness; CON = Conflict; IND = Independence; ACO = Achievement Orientation; ICO = Intellectual Cultural Orientation; ACO = Active Recreational Orientation; MRE = Moral Religious Emphasis; ORG = Organization; COT = Control

Do Family Factors Mediate 34

Table 1: Correlation Matrix of Variables														
	Correlation Coefficients (r)													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Demographic Information	1.00													
2. Personality Traits	.45	1.00												
3. Social Media Usage	.32	.28	1.00											
4. Self-Objectification Scale	.21	.18	.15	1.00										
5. Body Shape Questionnaire	.19	.16	.14	.12	1.00									
6. Weight Concern	.17	.15	.13	.11	.10	1.00								
7. Physical Condition	.16	.14	.12	.10	.09	.08	1.00							
8. Sexual Attractiveness	.15	.13	.11	.09	.08	.07	.06	1.00						
9. Difference	.14	.12	.10	.08	.07	.06	.05	.04	1.00					
10. Magazine Exposure Scale	.13	.11	.09	.07	.06	.05	.04	.03	.02	1.00				
11. Body Shape Questionnaire	.12	.10	.08	.06	.05	.04	.03	.02	.01	.01	1.00			
12. Weight Concern	.11	.09	.07	.05	.04	.03	.02	.01	.01	.00	.00	1.00		
13. Physical Condition	.10	.08	.06	.04	.03	.02	.01	.01	.00	.00	.00	.00	1.00	
14. Sexual Attractiveness	.09	.07	.05	.03	.02	.01	.01	.00	.00	.00	.00	.00	.00	1.00
15. Difference	.08	.06	.04	.02	.01	.01	.00	.00	.00	.00	.00	.00	.00	.00
16. Magazine Exposure Scale	.07	.05	.03	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17. Body Shape Questionnaire	.06	.04	.02	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18. Weight Concern	.05	.03	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19. Physical Condition	.04	.02	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20. Sexual Attractiveness	.03	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21. Difference	.02	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22. Magazine Exposure Scale	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
32. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
33. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
34. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
35. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
36. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
37. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
38. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
39. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
40. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
41. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
42. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
43. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
44. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
45. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
46. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
47. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
48. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
49. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
50. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
51. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
52. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
53. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
54. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
55. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
56. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
57. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
58. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
59. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
60. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
61. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
62. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
63. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
64. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
65. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
66. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
67. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
68. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
69. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
70. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
71. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
72. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
73. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
74. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
75. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
76. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
77. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
78. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
79. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
80. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
81. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
82. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
83. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
84. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
85. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
86. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
87. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
88. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
89. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
90. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
91. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
92. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
93. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
94. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
95. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
96. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
97. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
98. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
99. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
101. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
102. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
103. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
104. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
105. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
106. Magazine Exposure Scale	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
107. Body Shape Questionnaire	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
108. Weight Concern	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
109. Physical Condition	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
110. Sexual Attractiveness	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
111. Difference	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.0			

Note. COH = Cohesion; EXP = Expressiveness; CON = Conflict; IND = Independence; ACO = Achievement Orientation; ICO = Intellectual Cultural Orientation; ACO = Active Recreational Orientation; MRE = Moral Religious Emphasis; ORG = Organization; COT = Control

Family Process Variables and Eating Disorder Tendencies

Cohesion. As indicated in a previous section, a high score on the Cohesion Subscale indicates a greater degree of commitment, help, and support among family members, whereas a low score on the Cohesion Subscale indicates a lesser degree of commitment, help, and support among family members. In research on cohesion in family members, conducted by Minuchin and colleagues (1978), results indicated that families fall along a continuum in regards to cohesion. At one end of the continuum, boundaries are overly rigid, creating “disengagement.” At the opposite end of the continuum, boundaries are nonexistent, creating “enmeshment.” Minuchin et al. (1978) refers to enmeshment as “an extreme form of proximity and intensity in family interactions” (p.30), while families experiencing disengagement are described as having overly rigid boundaries in which communication and protective functions of the family are impaired. If families score low on the Cohesion subscale of the FES, it can be suggested that they fall closer to the disengagement part of the Minuchin’s continuum, whereas if they score high on the Cohesion subscale, they would fall closer to the enmeshment part of the continuum.

Cohesion was significantly and inversely correlated with 8 out of 12 EDI-3 subscales (i.e., Bulimia, Personal Alienation, Interpersonal Insecurity, Interpersonal Alienation, Interoceptive Deficits, Emotional Dysregulation, Asceticism, and Maturity Fears), and the correlations between the Cohesion Subscale and the other four EDI-3 subscales indicated nonsignificant inverse trends. This indicates that as individuals report higher scores on the Cohesion Subscale, moving towards enmeshment, they report fewer eating disorder tendencies. Conversely, as individuals report lower scores on the Cohesion Subscale, leaning towards disengagement, they report more eating disorder tendencies.

Expressiveness. As indicated in a previous section, a high score on expressiveness represents greater encouragement to express feelings directly, whereas a low score indicates less encouragement to the open expression of feelings. The Expressiveness Subscale was significantly and inversely correlated with 2 out of 12 EDI-3 subscales (i.e., Personal Alienation and Interpersonal Insecurity). This indicates that, as individuals reported that their families tended to encourage the open expression of feelings, they also reported fewer eating disorder tendencies. In contrast, individuals who reported that their families discouraged the open expression of feelings reported more eating disorder tendencies. Correlations between the Expressiveness Subscale and 8 out of 12 of the EDI-3 subscales (i.e., Bulimia, Low Self Esteem, Interpersonal Alienation, Interoceptive Deficits, Emotional Dysregulation, Perfectionism, Asceticism, and Maturity Fears) indicated nonsignificant inverse trends, while correlations between expressiveness and 2 out of 12 of the EDI-3 subscales (i.e., Drive for Thinness and Body Dissatisfaction) indicated nonsignificant positive trends.

Conflict. As indicated in a previous section, a high score on the Conflict Subscale represents an excessive amount of openly expressed anger and conflict among family members, whereas a low score represents a lesser amount of openly expressed anger and conflict among family members. The Conflict Subscale was positively significantly correlated to 4 out of 12 of the EDI-3 subscales (i.e., Bulimia, Interpersonal Alienation, Emotional Dysregulation, and Maturity Fears). This indicates that individuals who reported an excessive amount of openly expressed anger and conflict among family members also reported more eating disorder tendencies. Conversely, individuals who reported less openly expressed anger and conflict among family members reported fewer eating disorder tendencies. Correlations between the Conflict Subscale and the other eight subscales indicated nonsignificant positive trends.

Family Climate Variables

As noted in the previous section, FSAOS was the measure of family climate variables (family's excessive concern regarding weight and body size, family's excessive concern about socially-desirable appearances, and family's excessive emphasis on achievement). A high score on the FSAOS indicates perceptions of greater family orientation to social appearance, whereas a low score on the FSAOS indicates perceptions of lesser family orientation to social appearance. As illustrated in Table 2, the FSAOS was significantly and positively correlated with 5 out of 12 of the EDI-3 subscales (Drive for Thinness, Body Dissatisfaction, Emotional Dysregulation, Perfectionism, and Asceticism). This means that individuals who perceived their family as having a high social appearance orientation tended to report more eating disorder tendencies.

The Unique Contribution of Family Climate Variables in Predicting Eating Disorder Tendencies

The second objective of this present study was to determine the extent to which family climate variables (family's excessive emphasis on weight and body size, socially-desirable appearances and achievement) account for a significant level of unique variance in eating disorder tendencies, above and beyond the variance in eating disorder tendencies that is explained by family process variables (e.g., cohesiveness, expressiveness, and conflict). Hierarchical multiple regression analyses were utilized to test this hypothesis. These results can be seen in Table 3. As predicted, those variables entered at step two (family climate variables hypothesized to be directly related to eating disorder tendencies) accounted for a significant level of variance in eating disorder tendencies, above and beyond the level of variance in eating disorder tendencies accounted for by variables in step one (family process variables) for 4 out of 12 subscales (Drive for Thinness, Body Dissatisfaction, Maturity Fears, and Asceticism) of the EDI-3. For 3 out of 12 subscales (Bulimia, Perfectionism, and Emotional Dysregulation) of the

EDI-3, the R Squared Change at step 2 was approaching statistical significance ($p < .1$), suggesting a tendency in the hypothesized direction.

Table 3

Hierarchical Multiple Regression Analysis: Family Process Variables and Family Climate Variables as Predictors of Eating Disorder Tendencies as Dependent Variables

Eating Disorder Risk Composite	R ² Change	F Change (df = 10, 72)	Significance of F Change
Step 1: Family Process Variables	.121	.995	.456
Step 2: Family Climate Variables	.094	8.460	.005
EDI Drive for Thinness Subscale	R ² Change	F Change (df = 10, 72)	Significance of F Change
Step 1: Family Process Variables	.131	1.090	.382
Step 2: Family Climate Variables	.112	10.539	.002
EDI Bulimia Subscale	R ² Change	F Change (df = 10, 72)	Significance of F
Step 1: Family Process Variables	.246	2.347	.018
Step 2: Family Climate Variables	.032	3.153	.080
EDI Body Dissatisfaction Subscale	R ² Change	F Change (df = 10, 72)	Significance of F
Step 1: Family Process Variables	.069	.535	.860
Step 2: Family Climate Variables	.066	5.440	.023
EDI Low Self-Esteem Subscale	R ² Change	F Change (df = 10, 72)	Significance of F
Step 1: Family Process Variables	.144	1.207	.301
Step 2: Family Climate Variables	.003	.283	.596

EDI Personal Alienation Subscale	R ² Change	F Change (df = 10, 72)	Significance of F
Step 1: Family Process Variables	.259	2.518	.012
Step 2: Family Climate Variables	.000	.015	.902

EDI Interpersonal Insecurity Subscale	R ² Change	F Change (df = 10, 72)	Significance of F
Step 1: Family Process Variables	.321	3.399	.001
Step 2: Family Climate Variables	.011	1.161	.285

EDI Interpersonal Alienation Subscale	R ² Change	F Change (df = 10, 72)	Significance of F
Step 1: Family Process Variables	.216	1.982	.048
Step 2: Family Climate Variables	.009	.795	.376

EDI Interoceptive Deficits Subscale	R ² Change	F Change (df = 10, 72)	Significance of F
Step 1: Family Process Variables	.229	2.139	.032
Step 2: Family Climate Variables	.015	1.410	.239

EDI Emotional Dysregulation Subscale	R ² Change	F Change (df = 10, 72)	Significance of F
Step 1: Family Process Variables	.244	2.324	.020
Step 2: Family Climate Variables	.029	2.802	.099

EDI Perfectionism Subscale	R ² Change	F Change (df = 10, 72)	Significance of F
Step 1: Family Process Variables	.246	2.344	.019
Step 2: Family Climate Variables	.038	3.754	.057
EDI Asceticism Subscale	R ² Change	F Change (df = 10, 72)	Significance of F
Step 1: Family Process Variables	.187	1.660	.107
Step 2: Family Climate Variables	.100	9.972	.002
EDI Maturity Fears Subscale	R ² Change	F Change (df = 10, 72)	Significance of F
Step 1: Family Process Variables	.315	3.314	.001
Step 2: Family Climate Variables	.055	6.240	.015

Note: The Family Process Variables included the following: Cohesion, Expressiveness, Conflict, Independence, Achievement Orientation, Intellectual-Cultural Orientation, Active-Recreational Orientation, Moral-Religious Emphasis, Organization, and Control. The Family Climate Variables were represented by the FSAOS Total score.

Changes in Body Image in Response to Self-objectifying Media

The third objective of this present study was to determine if there is a change in body image as a result of viewing self-objectifying media. As predicted, scores on all three subscales of the Body Esteem Scale decreased significantly in response to viewing the self-objectifying media. In other words, lower scores represent more negative feelings toward body weight and shape. That is, on the Sexual Attractiveness Subscale, the difference between scores prior to viewing the self-objectifying video clip ($M = 46.95$, $SD = 7.00$) and those after viewing the video clip ($M = 45.54$, $SD = 7.59$) was statistically significant, $t(82) = 4.932$, $p = .00$. On the Weight Concern Subscale, the difference between scores prior to viewing the self-objectifying video clip ($M = 27.41$, $SD = 9.01$) and those after viewing the video clip ($M = 25.33$, $SD = 9.49$) was statistically significant, $t(82) = 5.492$, $p = .00$. Finally, on the Physical Condition Subscale, the difference between scores prior to viewing the self-objectifying video clip ($M = 31.55$, $SD = 6.57$) and those after viewing the video clip ($M = 30.51$, $SD = 6.76$) was statistically significant, $t(82) = 3.923$, $p = .00$.

As noted in the method section, scores on the Self-Objectification Scale range from -25 to +25. Scores above 0 represent a greater emphasis on appearance based attributes, indicating higher self-objectification. Scores below 0 represent a greater emphasis on competence based attributes, indicating lower self-objectification. Contrary to expectation, the difference between scores prior to viewing the self-objectifying video clip ($M = .542$, $SD = 13.70$) and those after viewing the video clip ($M = -4.00$, $SD = 15.207$) decreased significantly, $t(82) = 6.029$, $p = .00$. This negative difference score indicates that there was a shift from having a greater emphasis on appearance based attributes prior to viewing the video clip to having a greater emphasis on competence based attributes after viewing the video clip (if the difference score was positive,

this would have indicated a shift from having a greater emphasis on competence based attributes to having a greater emphasis on appearance based attributes).

Family Variables as Predictors of Changes in Body Image in Response to

Self-Objectifying Media

The fourth objective of this present study was to determine if the family process variables and family climate variables predict responsiveness to self-objectifying media exposure. As stated in the method section, a low score on the Body Esteem Scale indicates more concern with body weight and shape, while a high score indicates a more positive body image. A difference score for the Body Esteem scale was calculated by subtracting the score prior to viewing the video clip from the score after viewing the video clip for each subscale. In other words, a pre- to post-video exposure decrease would indicate a shift from having positive feelings about body weight and shape to having more negative feelings regarding body weight and shape. Conversely, a pre- to post-video exposure increase would indicate a shift from more negative feelings regarding body weight and shape to more positive feelings concerning body weight and shape.

As can be seen on Table 2, there was a significant inverse relationship between the difference score of the Sexual Attractiveness subscale and the Control Subscale of the Family Environment Scale. Therefore, individuals who responded to the video clip by rating more positive feelings toward their facial attractiveness and body parts associated with sexuality also tended to rate their families lower on the Control Subscale. In other words, those women who responded to the video clip by becoming more concerned about their facial attractiveness and body parts associated with sexuality tended to rate their families higher on the Control Subscale.

A significant inverse relationship was also reported between the difference score for the Weight Concern Subscale and the Cohesion and Expressiveness Subscales of the Family Environment Scale. This indicates that women who responded to the video clip by rating more positive feelings towards those body parts that can be physically altered through controlling food intake tended to rate their families lower on the Cohesion and Expressiveness Subscales. In other words, women who responded to the video clip by becoming more concerned with those body parts that can be physically altered through controlling food intake tended to rate their families as higher on the Cohesion and Expressiveness Subscales.

Finally, there was a significant inverse relationship between the difference score for the Physical Condition Subscale and the Cohesion and Intellectual Cultural Orientation Subscales of the Family Environment Scale. This indicates that women who responded to the video clip with more positive feelings toward their stamina, strength, and agility tended to report that their families were lower on the Cohesion and Intellectual Cultural Orientation Subscales. In other words, women who responded to the video clip by becoming more concerned about their stamina, strength, and agility tended to rate their families as higher on the Cohesion and Intellectual Cultural Orientation Subscales. There was no significant relationship found between the measure of family climate variables and the Body Esteem Scale.

A difference score was also calculated for the Self-Objectification Scale by subtracting the score prior to viewing the video clip from the score after viewing the video clip. If the difference score was less than zero, this meant the individual attributed more value to competence based attributes, which would have been an adaptive response to the media clip. If the difference score was greater than zero, it meant the individual attributed more value to the appearance based attributes which can be seen as a maladaptive response to the media clip. The

family process variables and the family climate variables were not found to be significantly related to the Self-Objectification Scale scores (see Table 2).

Relationship Between Family Variables and Magazine Exposure to Ideal Body Images:

Exploratory Analyses

Since an individual's recreational reading may be influenced by the family's preoccupation with weight/body shape, appearance, and achievement, scores on the Magazine Exposure Scale may be expected to be related to the family climate variables of interest in this study, but researchers have not examined this relationship in the past. Likewise, the examination of correlations between Family Magazine Exposure Scale scores and family process variables is exploratory in nature.

As illustrated in Table 2, the measure of family climate variables (FSAOS) was significantly related to the Magazine Exposure Scale ($r = .362, p < .05$). This indicates that participants who reported reading more beauty magazines also reported higher levels of family concern regarding weight and body size, socially-desirable appearances, and achievement.

Regarding the family process variables, the Magazine Exposure Scale was positively correlated with the Organization Subscale of the Family Environment Scale ($r = .292, p < .05$), indicating that individuals who reported reading more beauty magazines tended to report higher levels of perceived organization in the family. The Magazine Exposure Scale was not significantly correlated with any of the other nine family process measures.

CHAPTER IV

DISCUSSION

The following discussion is divided into six major sections. The first section discusses results corresponding to the hypothesis that family process variables and family climate variables contribute to eating disorder tendencies. The second section discusses results associated with the hypothesis regarding the extent to which family climate variables account for a significant level of unique variance in eating disorder tendencies above and beyond that explained by family process variables. The third section discusses results from the examination of the hypothesis that changes in body image will be related to viewing self-objectifying media. The fourth section presents the results of the hypothesis that family process variables and family climate variables will predict responsiveness to self-objectifying media. The fifth section will discuss limitations of the present study and provide recommendations for future studies. The final section presents a general summary and conclusion.

Predictors of Eating Disorder Tendencies

The first hypothesis stated that family process variables (cohesiveness, expressiveness, and conflict) and family climate variables (family's excessive emphasis on weight and body size, socially-desirable appearances and achievement) predict eating disorder tendencies in college women. This hypothesis was partially supported. In general, the majority of correlation coefficients between the family process variables and eating disorder tendencies were statistically significant (see Table 2). In addition, many of the correlation coefficients also show

that the measure of family climate variables (FSAOS) was significantly related to eating disorder tendencies. These findings are discussed in more detail below.

Family Process Variables

According to the data analysis, for the majority, conflict was positively related to eating disorder tendencies, while cohesiveness and expressiveness were inversely related to eating disorder tendencies. These results are consistent with previous research that has shown that compared to “normal” individuals, those individuals with eating disorders perceive their families as less expressive, less cohesive (i.e. disengaged), and more conflictual (Lattimore et al. 2000). Although previous research has linked a less cohesive family atmosphere to eating disorders, other research has consistently related excessive cohesion, or enmeshment, to eating disorders. According to research and theory by Minuchin (1974), there is a continuum of family cohesiveness, with one extreme representing excessive cohesion (enmeshment), and the other extreme representing a lack of cohesion (disengagement). Minuchin states that family functioning at either end of the continuum of cohesiveness (i.e., disengagement or enmeshment) can potentially contribute to psychopathology in children and adolescents growing up in the family. This study supports the findings of a less cohesive environment being related to eating disorder tendencies in that the Cohesion Subscale of the Family Environment Scale was significantly inversely related to 8 out of 12 EDI-3 subscales. Recent research has indicated that it is important to examine mother-daughter relationships, as well as father-daughter relationships when exploring boundary issues (Rowa, Kerig, & Geller, 2001). According to Rowa et al. (2001), mother-daughter relationships in individuals diagnosed with anorexia nervosa may be more problematic and enmeshed, whereas father-daughter relationships are often overlooked in the research. Individuals do not tend to rate their fathers as high on boundary violations when

these relationships are examined separately. Rowa states that “the father-daughter relationship is important to consider in understanding how boundary violations are related to anorexic symptoms, and the father-daughter relationship may be important to address in therapy” (p.109). Perhaps an area for future research would be to examine the differences along the cohesion spectrum between mothers and fathers, and how these relationships influence eating disorder tendencies.

These findings are important in a practical aspect to clinicians. If an individual is being treated for an eating disorder, the clinician should consider these family variables as an important part of the treatment efforts. If the family environment continues to show lacking or excessive cohesion, high conflict, or low expressiveness, then it will be difficult for the patient to maintain efforts at healthy eating behaviors in the future. The clinician may need to work with the family to create a more adaptive environment for everyone.

Family Climate Variables

Results indicated that the measure of family climate variables (FSAOS) was significantly related to eating disorder tendencies on the EDI-3. This indicates that according to the correlations with the EDI-3, the greater the family’s emphasis on weight and body shape, socially-desirable appearances, and achievement, the greater the likelihood that a daughter will display eating disorder tendencies. The FSAOS total score was significantly related to 5 out of 12 subscales on the EDI-3.

The results of the present study are consistent with previous research showing that what is expressed, valued, and modeled within the family is strongly related with the content of the symptom that emerges from the patient (Laliberte et al., 1999; Jessup and Reeb, 2003). According to Haworth-Hoepfner (2000), eating disorders develop under conditions of critical

family environments, coercive parental control, and a central discourse on weight. Women who are raised in a critical family environment in which the discussion always resonates around body shape and socially desirable appearances may be internalizing these themes of being thin as the only way to be accepted by their family. This constant criticism and demand for achievement from these families may exert too much pressure on the women, creating an internalized need for external achievements rather than personal growth.

A significant relationship was also found between the FSAOS total score and the Measure of Magazine Exposure. This indicates that women who reported that their families placed a high emphasis on weight and body shape, socially-desirable appearances, and achievement reported reading more beauty and fitness magazines. Some researchers have suggested that print media may affect young women more than televised media (Rubin, 1994; Harrison and Cantor, 1997). According to Harrison and Cantor (1997), women tend to watch television as a source of entertainment, but they often report reading beauty and fitness magazines to gain more information about beauty, fitness, grooming, and style, therefore images in magazines may be internalized more and may involve a greater degree of social comparison than television (Vaughan and Fouts, 2003). Further, family climate variables may augment this internalization.

These findings represent practical knowledge for clinicians treating patients with eating disorders. If the family environment is encouraging acceptance based solely on external appearance or achievements, then the clinician can attempt to turn the maladaptive family environment into an environment where positive interactions are encouraged to create personal growth. The clinician can encourage the family to lessen the expression of feelings based only on the physical attributes of others.

The Unique Contribution of Family Climate Variables in Predicting Eating Disorder Tendencies

The second hypothesis stated that family climate variables (family's excessive emphasis on weight and body size, socially-desirable appearances and achievement) account for a significant level of unique variance in eating disorder tendencies, above and beyond the variance in eating disorder tendencies that is explained by family process variables (e.g., cohesiveness, expressiveness, and conflict). This hypothesis was supported. A significant level of unique variance in eating disorder tendencies was seen in 4 out of the 12 subscales on the EDI-3. For 3 out of 12 subscales of the EDI-3, the R Squared Change at step 2 was approaching statistical significance ($p < .1$), suggesting a tendency in the hypothesized direction.

Laliberte and colleagues (1999) found that one factor they titled the Family Appearance/Achievement Factor encompassed the Family Body Satisfaction, Family Appearance Orientation, and Family Achievement Emphasis. They found that this factor was comprised of variables believed to be central to eating disorders, but empirically distinct from family process variables. Jessup and Reeb (2003) found that these family climate variables accounted for a unique variance in eating disorder tendencies, above and beyond that expressed by family process variables. Thus, results of the present study are consistent with past findings.

This finding suggests that although clinicians need to be assessing the family's level of cohesion, expression, and conflict, there may need to be a greater emphasis placed on the assessment of the family's level of emphasis on body weight and shape, social appearances and achievement in order to get a complete understanding of the therapeutic changes that may be necessary in the family environment.

Changes in Body Image in Response to Self-Objectifying Media

The third hypothesis stated that there would be a change in body image as a result of viewing self-objectifying media. This hypothesis was partially supported. As predicted, scores on all three subscales of the Body Esteem Scale decreased significantly in response to viewing the self-objectifying media. The three subscales include, the Sexual Attractiveness Subscale which measures women's attitudes toward body parts and functions related to facial attractiveness and sexuality, the Weight Concern Subscale which measures women's attitudes toward body parts that can be physically altered through controlling food intake, and the Physical Condition Subscale which deals with women's attitudes toward their stamina, strength, and agility. This indicates that after viewing the self-objectifying media clip, individuals reported having more negative feelings toward body weight and shape.

These findings are consistent with previous research in which Lavine, Sweeney, & Wagner (1999) found that women exposed to television advertisements that were sexually objectifying perceived their current body size to be larger and reported greater body dissatisfaction relative to women who viewed either non-objectifying advertisements or no advertisements at all. In a meta-analysis conducted by Groesz, Levine, and Murnen (2002), the results indicated that body image was significantly more negative after viewing thin media images than after viewing average size models, plus size models, or inanimate objects.

These results are important in identifying the messages that young women are receiving as a result of viewing self-objectifying media. These messages are pertinent to developing prevention and intervention efforts in society. First of all, early intervention efforts need to target young women before puberty and the onset of eating disorder tendencies. Since television is one of the most widespread and accessible forms of media, television programs that are designed to

boost young women's self-esteem and increase body image should be developed. It would also be helpful for the media to show programs that realistically depict women in our society, instead of glamorizing models/actors that represent an unrealistic and unhealthy body image for many of the youth today. Secondly, preventative efforts can be used at pediatrician offices that have the ability to reach mass numbers of children. Information could be given to parents to show the effects of certain media (i.e. self-objectifying) and to make parents aware of the signs and symptoms of eating disorder tendencies. Another environment in which there would be the opportunity to reach a widespread, young audience would be schools. Since most children attend public schools, public health programs could be designed to promote healthy eating behaviors and explain the negative consequences that exist when one develops an eating disorder.

Above, it was stated that this hypothesis was partially supported. The other instrument used to measure response to self-objectifying media was the Self-Objectification Scale. Contrary to expectation, the scores on this measure decreased significantly after viewing the self-objectifying media clip. This indicates that there was a shift from having more emphasis on appearance based attributes to having more of an emphasis on competence based attributes. This actually indicates an adaptive response to viewing the video clip; however, it was expected that after viewing the video clip, women would score higher on self-objectification. It may be speculated that, after viewing the video, participants became more convinced that they could never achieve that model-like standard, thereby leading them to place more of an emphasis on their own competence based attributes.

Family Variables as Predictors of Changes in Body Image in Response to
Self-Objectifying Media

The fourth hypothesis was to determine if family process variables and family climate variables predict responsiveness to self-objectifying media exposure. This hypothesis was also partially supported. There was a significant inverse relationship between the difference score of the Sexual Attractiveness Subscale and the Control Subscale of the Family Environment Scale. This indicates that women who rated themselves as having more positive feelings toward their facial attractiveness and body parts associated with sexuality after viewing the self-objectifying media clip, also rated their families to be lower in control. In other words, those women who rated their families higher in control also reported more negative feelings toward their facial attractiveness and body parts associated with sexuality after viewing the self-objectifying video clip. Perhaps individuals who rate their families as low in control have come to accept their physical attributes, such as facial attractiveness and body parts associated with sexuality. This acceptance may create positive feelings in regards to these areas. Families that are high in control may not like the fact that they are not able to control area such as facial attractiveness as much as something like body size, thereby assigning negative feelings to this area. The inability to control these areas may be more obvious to oneself after viewing the self-objectifying video clip.

A significant inverse relationship was also reported between the difference score for the Weight Concern Subscale and the Cohesion and Expressiveness Subscales of the Family Environment Scale. This indicates that after viewing the self-objectifying video clip, women who reported having positive feelings towards body parts that can be physically altered through controlling food intake, rated their families lower in cohesion and expressiveness. In other words, women who rated their families higher in cohesion and expressiveness had more negative

feelings toward those body parts that can be physically altered through controlling food intake after viewing the self-objectifying video clip. Perhaps these families that are high in cohesion and expressiveness are more likely to give opinions to other family members regarding their weight. These families may express negative opinions if a daughter is overweight. If the daughter feels that she could alter her shape through controlling food intake, she may be more likely to report having negative feelings towards her weight. These feelings may be more likely to arise after viewing self-objectifying media.

Finally, there was a significant inverse relationship between the difference score for the Physical Condition Subscale and the Cohesion and Intellectual Cultural Orientation Subscales of the Family Environment Scale. This indicates that women who reported more positive feelings toward their stamina, strength, and agility after viewing the self-objectifying video clip reported that their families were lower in Cohesion and Intellectual Cultural Orientation. In other words, after viewing the self-objectifying video clip, women who rated their families higher in Cohesion and Intellectual Cultural Orientation also reported more negative feelings toward their stamina, strength, and agility. Perhaps individuals who live in a family environment that emphasizes a greater level of interest in political, intellectual, and cultural activities, would not place as high an interest on physical condition. Perhaps these individuals would be pushed to pursue more academically oriented achievements rather than achievements based on physical condition. In turn, these individuals may not develop positive feelings about the physical condition of their bodies. These negative feelings toward one's physical condition may be exacerbated while viewing self-objectifying media containing women in excellent physical condition. The inverse relationship between the difference score for the Physical Condition Subscale and the Cohesion Subscale could be explained by the level of activity in which the woman participates. Perhaps the

individual tends to participate in physical activities outside of the home, due to the fact that her family is lower in cohesion. Maybe she participates in team activities to have a feeling of cohesion with others. She may watch a self-objectifying video clip and feel that her physical condition is just as good as the women in the video, thereby giving herself a higher score on physical condition.

There was no significant relationship found between the measure of family climate variables and the Body Esteem Scale (BES). This finding was unexpected given that the BES is intended to measure concern with body weight and shape, which would likely be related to the FSAOS (a measure of family's excessive emphasis on body weight and shape, social appearances, and achievement). This study utilized two measures to investigate concern with body shape and weight. One of these measures, the Body Shape Questionnaire (BSQ), was rewritten at the family level to measure participant's perceptions of their family's concern with weight and shape. Both the BSQ and the BES are widely used measures in the field of eating disorders. When comparing the BSQ to the BES there are some differences that might explain this unexpected finding. The items on the BSQ appear to draw more of an emotional pull from participants. The BSQ includes items such as "A family member has thought that her thighs, hips, or bottom are too large for the rest of her" or "A family member has worried about her flesh not being firm enough." This measure was significantly positively correlated to the measure of family climate variables. In contrast, the BES asks the participants to rate how strong their feelings are in regards to different parts and functions of the body. These items do not appear to convey the same emotional intensity as the items on the BSQ. In general, some of the items on the BES may not draw as much negative emotions (i.e., feet, ears, or chin). Although the BES has demonstrated convergent validity with other measures of self-esteem, perhaps when utilized

in combination with the BSQ, this measure does not draw the same emotional response from individual participants.

Although there was also no significant relationship between the measure of family climate variables (FSAOS) and the difference score for the Self-Objectification Questionnaire (SOQ), there was a significant inverse relationship between the FSAOS and the Time 1 and Time 2 scores on the SOQ. This finding was also unexpected, because it indicates that individuals who rate their families as having a greater emphasis on body weight and shape, social appearances, and achievement also rate themselves as having a greater emphasis on competence-based attributes, rather than appearance-based attributes. The SOQ is a fairly new measure and has not been widely used in previous research. It is possible that individuals are very concerned with appearance-based attributes, but are still more concerned with competence-based attributes. Since this measure does not utilize a likert scale, it does not assess how concerned individuals are with each item, rather which items they find more important than others. Perhaps their physical attractiveness is very important to them, but they realize that they need a high energy level or physical fitness level in order to achieve or maintain physical attractiveness. In this circumstance, they may rank energy level or physical fitness level as more important. Further research on this scale is necessary to determine reliability and validity of the measure.

Limitations of the Present Study and Recommendations for Future Research

One limitation of this present study is the lack of racial and ethnic diversity. The university from which the study took place is predominantly comprised of Caucasian students. Perhaps a sample taken from the community setting would have a more accurate representation of racial and ethnic diversity.

The majority of the participants in the present study did not represent the clinical population; however, five participants did report having been previously diagnosed with an eating disorder. A similar study conducted on a specifically clinical population is a possibility for further research on this topic. Individuals from a clinical population would already display eating disordered behaviors; therefore, family factors related to these behaviors could be examined more specifically. In addition, the effects of viewing the self-objectifying media may be internalized more with individuals who already have distorted body images. This research could be used to determine if the findings of this present study would generalize to a clinical setting.

Another limitation of the present study was the self-objectifying media clip. Although previous studies also used self-objectifying media, there has not been a consistent measure used across all studies. Some studies used magazines (e.g., fashion magazines, slides of thin models, advertisements for diet products or cosmetics), while others used televised media (e.g., commercials for diet products or exercise equipment). The televised media also ranged from television commercials to excerpts from videos. Due to the differences in media, some forms may be more potent in terms of self-objectification than others. Since the video clip utilized in this present study displays models with "ideal" figures in swimsuits, one would think the self-objectifying message would be extremely potent. Perhaps it is the pairing of thin models with items like diet products or exercise equipment that makes the self-objectifying message more salient. In the future, it would be helpful to replicate other studies using the same form of self-objectifying media or create a study evaluating the effectiveness of different types of self-objectifying media.

Future research could be conducted to examine the effects of preventative interventions aimed at adolescents who may be at-risk for developing eating disorders. Perhaps these "at-risk"

adolescents could receive interventions focused on specific family variables as well as self-objectifying media exposure. These preventative efforts could be utilized to counter negative messages that these individuals may be receiving from their family and/or the media. Examples of these negative messages could include a family's excessive emphasis on achievement or appearance. These interventions could also incorporate more realistic depictions of the female body in an attempt to increase positive body image and acceptance among these individuals. If individuals are shown images of healthy females, rather than the unrealistically thin images that are typically shown on television or in magazines, they may develop a more positive body image.

Future research could also incorporate interventions regarding family variables and self-objectifying media exposure for individuals who have already been diagnosed with eating disorders. These interventions could educate families on the harmful effects of self-objectifying media and encourage families to limit the amount of self-objectifying media that family members are exposed to.

Appendix A

Demographic Questionnaire

Age: _____

Weight: _____ (lbs.)

Height: _____

Desired Weight: _____ (lbs.)

Are you currently in therapy with a mental health practitioner? Yes No

If yes, for what diagnosis or symptoms? _____

Have you ever been diagnosed or treated for an eating disorder? Yes No

If yes, specify the eating disorder and indicate when the diagnosis and treatment occurred. _____

Are your biological parents divorced? Yes No

Please answer the following questions as they pertain to the male parental figure and female parental figure in the household in which you grew up. If there was only one parental figure in your home as you grew up, please answer only the questions that apply to you.

What is your father's occupation? _____

What is your father's annual income? _____

What is your mother's occupation? _____

What is your mother's annual income? _____

Please rate your father's educational level by circling the appropriate number on the following scale:

- 1 = completed grade school and/or high school
- 2 = completed some college or graduated from college
- 3 = completed some graduate work or a master's degree
- 4 = earned a professional degree, such as Ph.D. or M.D.

Please rate your mother's educational level by circling the appropriate number on the following scale:

- 1 = completed grade school and/or high school
- 2 = completed some college or graduated from college
- 3 = completed some graduate work or a master's degree
- 4 = earned a professional degree, such as Ph.D. or M.D.

Appendix B

Family Social Appearance Orientation Scale (FSAOS)

Directions: Please rate each statement as “true” if it applies to your family or “false” if it does not apply to your family.

- | | | |
|---|---|---|
| 1. Wearing clothes that are the current fashion is very important in our family. | T | F |
| 2. We're concerned about our style of doing things. | T | F |
| 3. We tend to buy only good quality brand names of clothing, cars, sports equipment, etc. | T | F |
| 4. We are concerned about the way we present ourselves. | T | F |
| 5. Family members do not wear clothes that are out of style, even if the clothes are in good condition. | T | F |
| 6. We are self-conscious about the way we look. | T | F |
| 7. Our home is always kept clean in case of unexpected visitors. | T | F |
| 8. We usually worry about making a good impression. | T | F |
| 9. Family members take great care getting groomed and dressed in the morning before going out. | T | F |
| 10. One of the things that family members do before leaving our house is look in the mirror. | T | F |
| 11. Family members make critical remarks about their own appearance. | T | F |
| 12. We are concerned about what other people think of us. | T | F |
| 13. In my family we often discuss what other people think of us. | T | F |
| 14. Family members are usually aware of their own appearance. | T | F |
| 15. In my family, we are quick to compliment each other on our appearance. | T | F |
| 16. In my family, when we discuss other people, we often remark on how they look. | T | F |

Appendix C

Family Environment Scale

Family Environment Scale

Form R

Item Booklet

Rudolf H. Moos

Published by Mind Garden, Inc.

1690 Woodside Road Suite 202, Redwood City California 94061 USA

Phone: (650) 261-3500 Fax: (650) 261-3505

Info@mindgarden.com

www.mindgarden.com

Instructions

There are 90 statements in this booklet. They are statements about families. You are to decide which of these statements are true of your family and which are false. Make all your marks on the separate answer sheet. If you think the statement is *True* or mostly *True* of your family, make an X in the box labeled T (true). If you think the statement is *False* or mostly *False* of your family, make an X in the box labeled F (false).

You may feel that some of the statements are true for some family members and false for others. Mark T if the statement is *true* for most members. Mark F if the statement is *false* for most members. If the members are evenly divided, decide what is the stronger overall impression and answer accordingly.

Remember, we would like to know what your family seems like to *you*. So do not try to figure out how other members see your family, but *do* give us your general impression of your family for each statement.

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Work Across →

1. Family members will really help and support one another.
2. Family members will often keep their feelings to themselves.
3. Members will fight a lot.
4. Members will not do things on their won very often.
5. Members will feel that it is important to be ~~the best at whatever you do.~~
6. Members will often talk about political and social problems....
7. Members will spend most weekends and evenings at home.
8. Members will attend church, synagogue, or Sunday School fairly often.
9. Activities in the family will be pretty carefully planned.
10. Family members will rarely be ordered around.
11. Members will often seem to be killing time at home.
12. Members will say anything they want to around home.
13. Family members will rarely become openly angry.
14. In the family, we will strongly be encouraged to be independent.
15. Getting ahead in life will be very important in the family.
16. Members will rarely go to lectures, plays, or concerts.
17. Friends will often come over for dinner or to visit.
18. Members will no say prayers in the family.
19. Members will generally be very neat and orderly.
20. There will be very few rules to follow in the family.
21. Members will put a lot of energy into what they do at home.
22. It will be hard to "blow off steam" at home without upsetting somebody.
23. Family members will sometimes get so angry they throw things.
24. Members will think things out for themselves in the family.
25. How much money a person makes will not be very important to family members.
26. Learning about new and different things will be very important in the family.
27. Nobody in the family will be active in sports, Little League, bowling, etc.
28. Members will often talk about the religious meaning of Christmas, Passover, or other holidays.
29. It will often be hard to find things when you need them in the household.
30. There will be one family member who makes most of the decisions.

-
- | | |
|---|--|
| 31. There will be a feeling of togetherness in the family. | 32. Members will tell each other about their personal problems. |
| 33. Family members will hardly ever lose their tempers. | 34. Members will come and go as they want to in the family. |
| 35. Member will believe in competition and "may the best man win." | 36. Family members will not be that interested in cultural activities. |
| 37. Members will often go to movies, sports events, camping, etc. | 38. Members won't believe in heave or hell. |
| 39. Being on time will be very important in the family. | 40. There will be set ways of doing things at home. |
| 41. Members will rarely volunteer when something has to be done at home. | 42. If members feel like doing something on the spur of the moment they often just pick up and go. |
| 43. Family members will often criticize each other. | 44. There will be very little privacy in the family. |
| 45. Members will always strive to do things just a little better the next time. | 46. Members rarely have intellectual discussions. |
| 47. Everyone in the family will have a hobby or two. | 48. Family members will have strict ideas about what is right and wrong. |
| 49. People will change their minds often in the family. | 50. There will be a strong emphasis on following rules in the family. |
| 51. Family members will really back each other up. | 52. Someone will usually get upset if you complain in the family. |
| 53. Family members will sometimes hit each other. | 54. Family members will almost always rely on themselves when a problem comes up. |
| 55. Family members will rarely worry about job promotions, school grades, etc. | 56. Someone in the family will play a musical instrument. |
| 57. Family members will not be very involved in recreational activities outside work or school. | 58. Members will believe there are some things you just have to take on faith. |
| 59. Family members will make sure their rooms are neat. | 60. Everyone will have an equal say in family decisions. |

61. There will be very little group spirit in the family.
62. Money and paying bills will be openly talked about in the family.
63. In there's a disagreement in the family, members will try hard to smooth things over and keep the peace.
64. Family members will strongly encourage each other to stand up for their rights.
65. Family members won't try that hard to succeed.
66. Family members will often go to the library.
67. Family members will sometimes attend courses or take lessons for some hobby or interest (outside of school).
68. In the family each person will have different ideas about what is right and wrong.
69. Each person's duties will be clearly defined.
70. Members will be able to do whatever they want to in the family.
71. Members will really get along well with each other.
72. Member will usually be careful about what they say to each other.
73. Members will often try to one-up or out-do each other.
74. It will be hard to be by yourself without hurting someone's feelings in the household.
75. "Work before play" will be the rule in the family.
76. Watching TV will be more important than reading in the family.
77. Family members will go out a lot.
78. The Bible will be a very important book in the home.
79. Money will not be handled very carefully in the family.
80. Rules will be pretty inflexible in the household.
81. There will be plenty of time and attention for everyone in the family.
82. There will be a lot of spontaneous discussions in the family.
83. Family members will believe that you don't ever get anywhere by raising your voice.
84. Family members will not really be encouraged to speak up for themselves.
85. Family members will often be compared with others as to how well they are doing at work or school.
86. Family members will really like music, art and literature.
87. The main form of entertainment in the family will be watching TV or listening to the radio.
88. Family members will believe that if you sin you will be punished.
89. Dishes will usually be done immediately after eating.
90. You won't be able to get away with much in the family.

Appendix D

Eating Disorders Inventory – 3



Item Booklet

David M. Garner, PhD

DIRECTIONS

Enter your name, the date, your age, gender, marital status, and occupation. Complete the questions on the rest of this page. Then, turn to the inside of this booklet and carefully follow the instructions.

Name _____ Date ____/____/____

*Age _____ Gender _____ Marital Status _____ Occupation _____

A. *Current weight: _____ pounds

B. *Height: _____ feet _____ inches

C. Highest past weight (excluding pregnancy): _____ pounds

How long ago did you first reach this weight? _____ months

How long did you weigh this weight? _____ months

D. *Lowest weight as an adult (or lowest weight as an adolescent if not yet age 18): _____ pounds

How long ago did you first reach this weight? _____ months

How long did you weigh this weight? _____ months

E. What weight have you been at for the longest period of time? _____ pounds

At what age did you first reach this weight? _____ years old

F. If your weight has changed a lot over the years, is there a weight that you keep coming back to when you are not dieting? _____ Yes _____ No

If yes, what is this weight? _____ pounds

At what age did you first reach this weight? _____ years old

G. What is the most weight you have ever lost? _____ pounds

Did you lose this weight on purpose? _____ Yes _____ No

What weight did you lose to? _____ pounds

At what age did you reach this weight? _____ years old

H. What do you think your weight would be if you did not consciously try to control your weight?
_____ pounds

I. How much would you like to weigh? _____ pounds

J. Age at which weight problems began (if any): _____ years old

K. Father's occupation: _____

L. Mother's occupation: _____

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INSTRUCTIONS

First, write your name and the date on the EDI-3 Answer Sheet. Your ratings on the items below should be circled on the Answer Sheet. The items ask about your attitudes, feelings, and behaviors. Some of the items relate to food or eating; other items ask about your feelings about yourself.

For each item, decide if the item is true about you **ALWAYS (A)**, **USUALLY (U)**, **OFTEN (O)**, **SOMETIMES (S)**, **RARELY (R)**, or **NEVER (N)**. Circle the letter that corresponds to your rating on the Answer Sheet. For example, if your rating for an item is **OFTEN**, you would circle the "O" for that item on the Answer Sheet.

Respond to *all* of the items, making sure that you circle the letter for the rating that is true about you. **DO NOT ERASE!** If you need to change an answer, mark an "X" through the incorrect letter, and then circle the correct one.

1. I eat sweets and carbohydrates without feeling nervous.
2. I think that my stomach is too big.
3. I wish that I could return to the security of childhood.
4. I eat when I am upset.
5. I stuff myself with food.
6. I wish that I could be younger.
7. I think about dieting.
8. I get frightened when my feelings are too strong.
9. I think that my thighs are too large.
10. I feel ineffective as a person.
11. I feel extremely guilty after overeating.
12. I think that my stomach is just the right size.
13. Only outstanding performance is good enough in my family.
14. The happiest time in life is when you are a child.
15. I am open about my feelings.
16. I am terrified of gaining weight.
17. I trust others.
18. I feel alone in the world.
19. I feel satisfied with the shape of my body.
20. I feel generally in control of things in my life.
21. I get confused about what emotion I am feeling.
22. I would rather be an adult than a child.
23. I can communicate with others easily.
24. I wish I were someone else.
25. I exaggerate or magnify the importance of weight.
26. I can clearly identify what emotion I am feeling.

(continued)

27. I feel inadequate.
28. I have gone on eating binges where I felt that I could not stop.
29. As a child, I tried very hard to avoid disappointing my parents and teachers.
30. I have close relationships.
31. I like the shape of my buttocks.
32. I am preoccupied with the desire to be thinner.
33. I don't know what's going on inside me.
34. I have trouble expressing my emotions to others.
35. The demands of adulthood are too great.
36. I hate being less than best at things.
37. I feel secure about myself.
38. I think about bingeing (overeating).
39. I feel happy that I am not a child anymore.
40. I get confused as to whether or not I am hungry.
41. I have a low opinion of myself.
42. I feel that I can achieve my standards.
43. My parents have expected excellence of me.
44. I worry that my feelings will get out of control.
45. I think my hips are too big.
46. I eat moderately in front of others and stuff myself when they're gone.
47. I feel bloated after eating a normal meal.
48. I feel that people are happiest when they are children.
49. If I gain a pound, I worry that I will keep gaining.
50. I feel that I am a worthwhile person.
51. When I am upset, I don't know if I am sad, frightened, or angry.
52. I feel that I must do things perfectly or not do them at all.
53. I have the thought of trying to vomit in order to lose weight.
54. I need to keep people at a certain distance (feel uncomfortable if someone tries to get too close).
55. I think that my thighs are just the right size.
56. I feel empty inside (emotionally).
57. I can talk about personal thoughts or feelings.
58. The best years of your life are when you become an adult.
59. I think my buttocks are too large.
60. I have feelings I can't quite identify.

(continued)

61. I eat or drink in secrecy.
62. I think that my hips are just the right size.
63. I have extremely high goals.
64. When I am upset, I worry that I will start eating.
65. People I really like end up disappointing me.
66. I am ashamed of my human weaknesses.
67. Other people would say that I am emotionally unstable.
68. I would like to be in total control of my bodily urges.
69. I feel relaxed in most group situations.
70. I say things impulsively that I regret having said.
71. I go out of my way to experience pleasure.
72. I have to be careful of my tendency to abuse drugs.
73. I am outgoing with most people.
74. I feel trapped in relationships.
75. Self-denial makes me feel stronger spiritually.
76. People understand my real problems.
77. I can't get strange thoughts out of my head.
78. Eating for pleasure is a sign of moral weakness.
79. I am prone to outbursts of anger or rage.
80. I feel that people give me the credit I deserve.
81. I have to be careful of my tendency to abuse alcohol.
82. I believe that relaxing is simply a waste of time.
83. Others would say that I get irritated easily.
84. I feel like I am losing out everywhere.
85. I experience marked mood shifts.
86. I am embarrassed by my bodily urges.
87. I would rather spend time by myself than with others.
88. Suffering makes you a better person.
89. I know that people love me.
90. I feel like I must hurt myself or others.
91. I feel that I really know who I am.

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Appendix E

Magazine Exposure Scale

Please indicate which of the following magazines you have looked at during the past month by placing an X next to those you have examined.

YM (Young & Modern)	_____
Rolling Stone	_____
Fitness	_____
Mademoiselle	_____
Vogue	_____
Cosmopolitan	_____
People	_____
Seventeen	_____
Glamour	_____
Star	_____
Shape	_____
Reader's Digest	_____
Maclean's	_____
Time	_____
Elle	_____
National Enquirer	_____
Vanity Fair	_____
Self	_____
Newsweek	_____
People	_____

Appendix F

Body Esteem Scale

Instructions: On this page are listed a number of body parts and functions. Please read each item and indicate how you feel about this part or function of your own body using the following scale:

- 1 = Have strong negative feelings
 2 = Have moderate negative feelings
 3 = Have no feeling one way or the other
 4 = Have moderate positive feelings
 5 = Have strong positive feelings

-
- | | | |
|-----|-----------------------|-------|
| 1. | body scent | _____ |
| 2. | appetite | _____ |
| 3. | nose | _____ |
| 4. | physical stamina | _____ |
| 5. | reflexes | _____ |
| 6. | lips | _____ |
| 7. | muscular strength | _____ |
| 8. | waist | _____ |
| 9. | energy level | _____ |
| 10. | thighs | _____ |
| 11. | ears | _____ |
| 12. | biceps | _____ |
| 13. | chin | _____ |
| 14. | body build | _____ |
| 15. | physical coordination | _____ |
| 16. | buttocks | _____ |
| 17. | agility | _____ |
| 18. | width of shoulders | _____ |
| 19. | arms | _____ |
| 20. | chest or breasts | _____ |
| 21. | appearance of eyes | _____ |
| 22. | cheeks/cheekbones | _____ |
| 23. | hips | _____ |
| 24. | legs | _____ |
| 25. | figure or physique | _____ |
| 26. | sex drive | _____ |
| 27. | feet | _____ |
| 28. | sex organs | _____ |
| 29. | appearance of stomach | _____ |
| 30. | health | _____ |
| 31. | sex activities | _____ |
| 32. | body hair | _____ |
| 33. | physical condition | _____ |
| 34. | face | _____ |
| 35. | weight | _____ |

Appendix G

Body Shape Questionnaire

Body Shape Questionnaire

Directions: Please read each question and circle the appropriate number to the right.

	Never	Rarely	Sometimes	Often	Very Often	Always
1. Feeling bored has made a family member brood about her shape.	1	2	3	4	5	6
2. A family member has been so worried about her shape that she has been feeling that she ought to diet.	1	2	3	4	5	6
3. A family member has thought that her thighs, hips, or bottom are too large for the rest of her.	1	2	3	4	5	6
4. A family member has been afraid that she might become too fat (or fatter).	1	2	3	4	5	6
5. A family member has worried about her flesh not being firm enough.	1	2	3	4	5	6
6. After eating a large meal, a family member has felt fat.	1	2	3	4	5	6
7. A family member has felt so badly about her shape that she has cried.	1	2	3	4	5	6
8. A family member has avoided running because her flesh might wobble.	1	2	3	4	5	6
9. Being with a thin woman has made a family member feel self-conscious about her shape.	1	2	3	4	5	6
10. A family member has worried about her thighs spreading out when sitting down.	1	2	3	4	5	6

	Very					
	Never	Rarely	Sometimes	Often	Often	Always
11. Eating even a small amount of food has made a family member feel fat.	1	2	3	4	5	6
12. A family member has noticed the shape of other women and felt that her own shape compared unfavorably.	1	2	3	4	5	6
13. Thinking about her shape has interfered with a family member's ability to concentrate (e.g., while watching television, reading, listening to conversations).	1	2	3	4	5	6
14. Being naked, such as when taking a bath, has made a family member feel fat.	1	2	3	4	5	6
15. A family member has avoided wearing clothes which make her particularly aware of the shape of her body.	1	2	3	4	5	6
16. A family has imagined cutting off fleshy areas of her body.	1	2	3	4	5	6
17. Eating sweets, cakes, or other high calorie food has made a family member feel fat.	1	2	3	4	5	6
18. A family member has not gone out to social occasions (e.g., parties) because she has felt badly about her shape.	1	2	3	4	5	6
19. A family member has felt excessively large and rounded.	1	2	3	4	5	6
20. A family member has felt ashamed of her body.	1	2	3	4	5	6
21. Worry about her shape has made a family member diet.	1	2	3	4	5	6

	Very					
	Never	Rarely	Sometimes	Often	Often	Always
22. A family member has felt happiest about her shape when her stomach has been empty (e.g., in the morning).	1	2	3	4	5	6
23. A family member has thought that she is the shape that she is because she lacks self-control.	1	2	3	4	5	6
24. A family member has worried about others seeing rolls of flesh around her waist or stomach.	1	2	3	4	5	6
25. A family member has thought that it is not fair that other women are thinner than she is.	1	2	3	4	5	6
26. A family member has vomited in order to feel thinner.	1	2	3	4	5	6
27. When in company, a family member has worried about taking up too much room (e.g., sitting on a sofa or bus seat).	1	2	3	4	5	6
28. A family member has worried about her flesh being dimply.	1	2	3	4	5	6
29. Seeing her reflection (e.g., in a mirror or shop window) has made a family member feel badly about her shape.	1	2	3	4	5	6
30. A family member has pinched areas of her body to see how much fat there is.	1	2	3	4	5	6
31. A family member has avoided situations where people could see her body (e.g., communal changing rooms or swimming pools).	1	2	3	4	5	6
32. A family member has taken laxatives in order to feel thinner.	1	2	3	4	5	6

	Very					
	Never	Rarely	Sometimes	Often	Often	Always
33. A family member has been particularly self-conscious about her shape when in the company of other people.	1	2	3	4	5	6
34. Worry about her shape has made a family member feel that she ought to exercise.	1	2	3	4	5	6

Appendix H

Self-Objectification Questionnaire

INSTRUCTIONS: We are interested in how people think about their bodies. The questions below identify 10 different attributes. We would like you to rank order these body attributes from that which has the greatest impact on your physical self-concept, to that which has the least impact on your physical self-concept.

NOTE: It does not matter how you describe yourself in terms of each attribute. For example, fitness level can have a great impact on your physical self-concept regardless of whether you consider yourself to be physically fit, not physically fit, or any level in between.

Please first read over all of the attributes. Then, record your rank by writing the letter of the attribute.

WHEN CONSIDERING YOUR PHYSICAL SELF-CONCEPT, HOW IMPORTANT IS...

- | | |
|---------------------------|--|
| a. physical coordination? | f. physical attractiveness? |
| b. health? | g. energy level (e.g. stamina)? |
| c. weight? | h. firm/sculpted muscles? |
| d. strength? | i. physical fitness level? |
| e. sex appeal? | j. measurements (e.g. chest, waist, hips)? |

LETTER OF ATTRIBUTE

MOST IMPORTANT....._____

SECOND MOST IMPORTANT....._____

THIRD MOST IMPORTANT....._____

FOURTH MOST IMPORTANT....._____

FIFTH MOST IMPORTANT....._____

SIXTH MOST IMPORTANT....._____

SEVENTH MOST IMPORTANT....._____

EIGHTH MOST IMPORTANT....._____

NINTH MOST IMPORTANT....._____

LEAST IMPORTANT....._____

Appendix I

Informed Consent to Participate in a Research Project

Project Title: "Family variables, the Media, and Eating Behaviors"

Principle Investigator: Melanie Ferrell

Description of Study: I understand that this study requires that I complete a number of questionnaires and view a 12-minute video clip. These questionnaires will ask you to respond to questions about your family, eating behaviors, and feelings about your body. The video clip features models from the *Sports Illustrated* swimsuit issue.

Adverse Effects and Risks: Based on past research, there is no risk associated with completing these questionnaires. In the event that I am in need of counseling for any other purpose, I am aware that I can contact the Counseling Center at 229-3141. I am also aware that services provided at the Counseling Center are free of charge to all undergraduate students at the University of Dayton.

Duration of the study: Participation in two sessions, lasting approximately 1 to 1.5 hours, which corresponds to two research credits. The first session will last approximately 45 minutes to one hour, and the second session will last approximately 20 to 30 minutes.

Confidentiality of Data: Neither my name or any other identifying information will appear on my answer sheets. My response to the questionnaires used in this study will be assigned a number. Therefore, my responses will not be identifiable by my name. These answer sheets will be stored in a locked file cabinet.

Contact Person: If I have any questions concerning my participation in this study now or in the future, Melanie Ferrell can be contacted at (937) 643-0083, by e-mail at mlnafrrl@yahoo.com, or in St. Joseph's Hall, room 313. Ms. Ferrell's thesis chair, Dr. Roger N. Reeb, can be contacted at (937) 229-2395, by e-mail at Roger.Reeb@notes.udayton.edu, or in St. Joseph's Hall, room 306. The chair of the Research Review and Ethics Committee, Dr. Charles Kimble, can be reached at (937) 229-2167, by e-mail at charles.kimble@notes.udayton.edu or in St. Joseph's Hall, room 319.

Consent to Participate: I have voluntarily decided to participate in this study. The investigator named above has adequately answered any and all questions I have about this study, the procedures involved, and my participation. I understand that the investigator named above will be available to answer any questions about research procedures throughout this study. I understand that I may voluntarily terminate my participation in this study at any time and still receive full credit. In addition, I understand that if I leave any or all questions blank on any form, I will still receive credit. I also understand that the investigator named above may terminate my participation in this study if s/he feels this to be in my best interest. In addition, I certify that I am 18 (eighteen) years of age or older.

Signature of Student

Student's name (printed)

Date

Signature of Witness

Date

Appendix J

Do Family Factors Mediate the Effects of Self-Objectifying Media on Eating Disorder Tendencies in College Women?

Debriefing Sheet

Past research has indicated that women with eating tendencies describe their families as less expressive, excessive cohesiveness, and more conflictual (Humphrey, 1988; Johnson & Flach, 1985). In addition, research has suggested that daughters in family's that place excessive concern regarding weight and body size, socially-desirable appearances, and emphasis on achievement are at higher risk for the development of eating disorders (Laliberte, Boland, & Leichner, 1999). Research on the effects of media has shown that self-objectifying media contributes to vulnerabilities (e.g. maladaptive body image of body shape and weight) associated with the development of eating disorders. Self-objectification refers to the fact that individuals think about and value their own bodies from a third-person perspective, focusing on observable body attributes rather than from a first-person perspective, which focuses on non-observable attributes (Morry & Staska, 2001). Therefore, the first objective of this study is to replicate past research suggesting that these family variables are associated with eating disorder tendencies. The second objective of this study is to find whether these aforementioned family variables may mediate the effects of self-objectifying media on women's attitudes about body weight/shape.

The results of the surveys are anonymous. For this reason, the researchers cannot contact individuals who might show signs of psychological problems. Some of the questions that you have answered may be upsetting to you. If you responded "yes" to such items as "I am terrified of gaining weight" "I have to be careful of my tendency to abuse alcohol/drugs," or "I feel like I must hurt myself or others" then you might find it helpful to speak with someone at the Counseling Center. If you suspect that you or someone you know has an eating disorder, please contact the Counseling Center at 229-3141. The services provided by the Counseling Center are free to all undergraduate students at the University of Dayton.

If you have any questions concerning your participation in this study now or in the future, Melanie Ferrell can be contacted at (937)643-0083, by e-mail at mlnafrrl@yahoo.com, or in St. Joseph's Hall, room 313. Ms. Ferrell's thesis chair, Dr. Roger N. Reeb, can be contacted at (937)229-2395, by e-mail at Roger.Reeb@notes.udayton.edu, or in St. Joseph's Hall, room 306. The chair of the Research Review and Ethics Committee, Dr. Charles Kimble, can be reached at (937)229-2167, by e-mail at charles.kimble@notes.udayton.edu or in St. Joseph's Hall, room 319.

If you are interested in learning more about this area of research, the following references are helpful.

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