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# Perceptions of Parents, Self, and God as Predictive of Symptom Severity Among Women Beginning Inpatient Treatment for Eating Disorders

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PERCEPTIONS OF PARENTS, SELF, AND GOD AS PREDICTIVE OF SYMPTOM  
SEVERITY AMONG WOMEN BEGINNING INPATIENT TREATMENT  
FOR EATING DISORDERS

by

Melissa H. Smith

A dissertation submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Department of Counseling Psychology and Special Education

Brigham Young University

August 2006

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GRADUATE COMMITTEE APPROVAL

of a dissertation submitted by

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This dissertation has been read by each member of the following graduate committee and by majority vote has been found to be satisfactory.

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As chair of the candidate's graduate committee, I have read the dissertation of Melissa H. Smith in its final form and have found that (1) its format, citations, and bibliographical style are consistent and acceptable and fulfill university and department style requirements; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory to the graduate committee and is ready for submission to the university library.

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## ABSTRACT

# PERCEPTIONS OF PARENTS, SELF, AND GOD AS PREDICTIVE OF SYMPTOM SEVERITY AMONG WOMEN BEGINNING INPATIENT TREATMENT FOR EATING DISORDERS

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Department of Counseling Psychology and Special Education

Doctor of Philosophy

The present investigation examined whether perceptions of parents, self, and God among women beginning inpatient treatment for eating disorders was predictive of symptom severity. The sample included 464 women (ages 12 to 56 years) beginning inpatient treatment for eating disorders at a private treatment facility, with the majority being Caucasian. Participants completed study measures as part of an initial battery of assessment measures, and included indices of eating disorder symptomology, parental relationships, self-esteem, and religious well-being. Multiple regression analysis showed perceptions of self and parents to be significant predictors, however perceptions of God failed to predict eating disorder symptom severity. Differences between perceptions of mothers and fathers were also found. Implications and recommendations for future research and practice are discussed.

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TABLE OF CONTENTS

COPYRIGHT ..... ii

GRADUATE COMMITTEE APPROVAL ..... iii

FINAL READING APPROVAL AND ACCEPTANCE ..... iv

ABSTRACT ..... v

ACKNOWLEDGMENTS ..... vi

TABLE OF CONTENTS ..... vii

LIST OF TABLES ..... xi

INTRODUCTION ..... 1

    Parent-Perception and Self-Perception ..... 2

    God-Perception ..... 6

    Rationale for the Current Investigation ..... 12

    Problem to be Investigated ..... 14

    Purpose of the Present Study ..... 15

        Research Hypotheses ..... 18

            Hypothesis #1 ..... 18

            Hypothesis #2 ..... 18

            Hypothesis #3 ..... 18

            Hypothesis #4 ..... 19

    Comprehensive Review of the Literature ..... 19

        Diagnosis of Eating Disorders ..... 19

        Multidimensional Risk Factors ..... 20



Sociocultural Influences . . . . .	20
Cultural Influences . . . . .	22
Familial Influences . . . . .	23
Individual Influences . . . . .	23
Demographic Variables as Predictors . . . . .	24
Eating Disorders and Perceptions of Parents . . . . .	24
Parental Acceptance-Rejection Theory (PAR) . . . . .	26
Mother-Daughter Relationship . . . . .	28
Father-Daughter Relationship . . . . .	31
Eating Disorders and Self-Perception . . . . .	34
Identity Formation . . . . .	36
Body Image . . . . .	38
Control and Coping Behavior . . . . .	41
Eating Disorders and Religious Well-Being . . . . .	42
Perfectionism . . . . .	46
Unworthiness . . . . .	47
Self-Control . . . . .	48
Dependency . . . . .	48
Approval-Seeking . . . . .	50
METHOD . . . . .	52
Population . . . . .	52
Sample . . . . .	52

Procedures .....	56
Instruments .....	56
Parent Perception Predictor Variables .....	57
Parental Acceptance-Rejection Questionnaire .....	57
Attitudes Toward Parents Scale .....	57
Self-Esteem Predictor Variable .....	59
Multidimensional Self-Esteem Inventory .....	59
Religious Well-Being Predictor Variable .....	60
Spiritual Well-Being Scale .....	60
Eating Disorder Symptom Severity Criterion Variables .....	61
Eating Attitudes Test .....	61
Body Shape Questionnaire .....	61
Demographic Predictor Variables .....	62
Age of Onset .....	63
Comorbid Diagnosis .....	63
History of Childhood Sex Abuse .....	63
Methods of Analysis and Variables .....	63
RESULTS .....	67
Hypothesis #1 .....	67
Hypothesis #2 .....	70
Hypothesis #3 .....	72
Hypothesis #4 .....	74

Summary of Results .....	76
DISCUSSION .....	78
Findings .....	79
Conclusions .....	83
Methodological Strengths .....	84
Limitations of the Study .....	84
Recommendations for Future Research .....	85
Implications and Recommendations for Practice .....	86
REFERENCES .....	87
APPENDIX .....	108
Journal Article .....	108

## LIST OF TABLES

Tables for Dissertation	Page	
Table 1	Participant Description	54
Table 2	Correlations, Means, and Standard Deviations of Variables	58
Table 3	Stepwise Multiple Regression Analysis for Perceptions of Parents Variables Predicting Eating Attitudes Test (EAT)	68
Table 4	Stepwise Multiple Regression Analysis for Perceptions of Parents Variables Predicting Body Shape Questionnaire (BSQ)	68
Table 5	Paired T-test on Differences between MARQ and FARQ Variables	69
Table 6	Paired T-test on Differences between AFS and AMS Variables	70
Table 7	Stepwise Multiple Regression Analysis for Perceptions of Self Variable Predicting Eating Attitudes Test (EAT)	71
Table 8	Stepwise Multiple Regression Analysis for Perceptions of Self Variable Predicting Body Shape Questionnaire (BSQ)	71
Table 9	Stepwise Multiple Regression Analysis for Perceptions of God Variable Predicting Eating Attitudes Test (EAT)	73
Table 10	Stepwise Multiple Regression Analysis for Perceptions of God Variable Predicting Body Shape Questionnaire (BSQ)	73
Table 11	Stepwise Multiple Regression Analysis for Model of Best Fit among Perceptions of Parents, Self, and God Variables Predicting Eating Attitudes Test (EAT)	75
Table 12	Stepwise Multiple Regression Analysis for Model of Best Fit among Perceptions of Parents, Self, and God Variables Predicting Body Shape Questionnaire (BSQ)	75

## INTRODUCTION

Anorexia nervosa and bulimia nervosa have received a great deal of media attention and have been the focus of much research. The debilitating effects of these disorders continue to plague individuals, especially young women, with research estimating that 95% of individuals with anorexia and 90% of individuals with bulimia are women (Killian, 1994). Consequently, most research and treatment interventions focus on women.

Certain groups are at heightened risk for the development of eating disorders. Eating disorders typically affect white, middle-to-upper class females, but more diverse populations, including Hispanics, Blacks, and lower socioeconomic groups are increasingly affected (Phelps & Bajorek, 1991). Women ages 12 to 25 are at greatest risk for the development of eating disorders (Garfinkel, Garner, & Goldbloom, 1987; Hesse-Biber & Marino, 1991; Pumariega & LaBarbera, 1986). Also at risk are those individuals who, by career choice, have heightened pressure to maintain a thin body shape (e.g., ballet dancers and models) (Garner & Garfinkel, 1980; Santonastaso, Friederici, & Favaro, 1999).

Much research has investigated the relationship between perceptions of parents, perceptions of self, and eating disorders. In contrast, there is a dearth of research regarding eating disorders and religious well-being, although there have been contributions implicating the importance of investigating religion and spirituality in conjunction with eating disorders (Richards et al., 1997; Joughin, Crisp, Halek, & Humphrey, 1992; Graham, Spencer, & Andersen, 1991; Warren et al., 1994). These

investigations highlight the value of understanding an eating disordered individual's religious life and spirituality, as these factors may have important implications for etiology, prevention, and treatment of eating disorders.

Currently, it appears as though there have been no investigations of the relationship between perceptions of parents, self, and God as related to eating disorder symptom severity, even though these three variables have been identified as potentially important to understanding the eating disordered individual. Thus, the present literature review documented the historical line of research and the current relevance of the present investigation.

#### *Parent-Perception and Self-Perception*

Research literature on attachment between children and parents proves enlightening to the current investigation. Research on attachment focuses on the earliest interactions between children and parents, with specific regard to how emotional connections are developed between child and caregiver, and how these ties are either strengthened or weakened over the course of a person's development. Children develop expectations about how their parents will care for them through daily interactions. These expectations, according to Bowlby (1969, 1982 as in Dozier, Stovall, & Albus, 1999), "then serve as the basis for infants' working models of the self and of the other" (Bowlby (1969, 1982 as in Dozier, Stovall, & Albus, 1999, p. 497). Thus, based on interactions with primary caregivers, children develop expectations and beliefs of others and, perhaps more importantly, of themselves. Therefore, perceptions of parents, at least initially, may be inextricably tied to perceptions of self.

As a result of repeated interactions with caregivers, children develop expectations about others, and these interactions guide future cognitive, behavioral, and emotional responses in social interactions with others. Additionally, these expectations are tied to mental perceptions of the self, that is, beliefs regarding how an individual views himself or herself, including whether one is worthy of protection, care, and love (Kirkpatrick, 1999).

For instance, children who experience their caregivers as warm and responsive will perceive themselves as loved and valued, and will turn to others with the expectation that needs will be met. In contrast, children who perceive their caregivers as cold and rejecting will view themselves as rejected and unloved, and will in turn perceive others as unloving and rejecting. As a result, these children may develop alternative strategies to cope with emotional distress (Bretherton, 1985; Cummings & Cicchetti, 1990; Dozier et al., 1999; Main & Goldwyn, in press). The current investigation hypothesized that one such alternative coping strategy presents itself in the form of an eating disorder.

Dozier et al (1999) argued that insecure coping strategies are either aimed at minimizing or maximizing the expression of attachment needs. Minimizing strategies include children defensively turning away from the emotional distress that results from caregiver unavailability. As a result, these individuals do not have free access to their emotions and develop a negative, even unrealistic view of parents' emotional availability (Dozier et al., 1999; Main & Goldwyn, in press). Maximizing strategies involve children defensively turning their attention towards their emotional distress regarding caregiver availability. These individuals are described as enmeshed in their concerns about

caregiver availability, and thus have difficulty assessing whether threats to caregiver availability exist (Dozier et al., 1999).

Some contend that both minimizing and maximizing strategies put individuals at greater risk for psychopathology (Cole-Detke & Kobak, 1996; Dozier et al., 1999; Rosenstein & Horowitz, 1996; Patrick, Hobson, Castle, Howard, & Maughan, 1994). For those individuals relying on minimizing strategies, they are more likely to develop externalizing disorders because of continued efforts to turn away from self without resolution of negative perceptions of parents (Dozier et al., 1999). Those who rely on maximizing strategies are at greater risk for internalizing disorders because “attention is riveted on caregiver availability, and negative representations remain painfully alive” (Dozier et al., 1999).

Bowlby (1973) argued that individuals will come to feel out of control and worthless if they perceive the caregiver message that they are incapable of behaving independently or that they are unlovable. Certainly, these are common strains for the woman with an eating disorder. Further, as described above, some researchers contend that the use of minimizing strategies, or attempts to turn away from emotions, leads to externalizing disorders such as eating disorders. For instance, Cole-Detke and Kobak (1996) argued that the eating disordered woman may attempt to control her emotional world through turning away from her own feelings of distress—in essence, turning away from self—and instead attempting to control eating behavior.

Research on early attachment and later development of eating disorders points to some interesting findings. First, women with anorexia tend to perceive their parents



negatively, and women with eating disorders, in general, describe lower parental care than do other individuals (Dozier et al., 1999; Palmer, Oppenheimer, & Marshall, 1988).

Second, and particularly interesting to the current investigation, is that women with eating disorders describe their fathers as rejecting and emotionally unavailable (Cole-Detke & Kobak, 1995; Dozier et al., 1999; Rhodes & Kroger, 1992). Third, women with eating disorders often perceive their mothers as perfectionistic, domineering, and overprotective (Dozier et al., 1999; Minuchin, Rosman, & Baker, 1980), and finally, women with eating disorders view their parents as unsupportive of independence (Dozier et al., 1999; Kenny & Hart, 1992).

Another investigation provided support for family modes of interaction consistent with the findings provided above. Humphrey (1989) found parents that communicated double messages, for example, supporting a daughter while concurrently calling into question ability, resulted in feelings of inadequacy and confusion. Thus, on the one hand there may be a perfectionistic, overcontrolling mother subverting her daughter's attempts at independence, and a cold, emotionally rejecting father, culminating in a daughter feeling rejected, worthless, incapable, and controlled (Dozier et al., 1999).

Perhaps what emerges from investigations of attachment and eating disorders is a picture of a young woman turning away from emotional distress through externalizing strategies, including attempting to control her world through attempting to control her eating behavior and body. These women divert attention to their bodies, eating behavior, and other external pursuits (Cole-Detke & Kobak, 1996) because, according to Dozier et al (1999), they are unable to examine their own psychological states. This diversion

allows women with eating disorders to avoid attachment concerns by focusing on the “more external and more ‘attainable’ goal of body change” (Dozier et al., 1999; also Cole-Detke & Kobak, 1996).

### *God-Perception*

The current investigation hypothesized that one’s view of parents, one’s view of self, and one’s view of God may be predictive of eating disorder symptom severity. As has been discussed above, attachment issues can significantly contribute to one’s view of others and of self. However, as conceived by Bowlby (1973), attachment processes have the potential for application to many settings and many phenomenon, including religious or spiritual beliefs and behavior, and may, according to Kirkpatrick (1999), provide an important and “unique window into attachment processes in adulthood (p. 804).”

One important view of religious well-being that is enlightening to discussions of attachment is the idea of a relationship with God. In a national Gallup survey, people reported overwhelmingly that the statement most consistent with their view of faith is relationship with God (51%, as compared to only 19%, 4%, and 20% for alternatives) (Gallup & Jones, 1989). Several other investigations also supported the importance of relationship with God as central to religious and spiritual beliefs, and validated the importance of understanding spiritually-minded individuals’ relationships with God (Greeley, 1981; Kirkpatrick & Shaver, 1992, Kirkpatrick, 1999; Stark, 1965; Wenegrat, 1989). It is important to note, however, that it may be equally important to understand an individual’s relationship with other religious figures in addition to God, such as Jesus, Mary, or Buddha.

In addition to the value of understanding one's relationship with God, is the value of understanding the emotions of religion. Very often individuals describe feeling love in their relationship with God, thus feeling love in one's relationship with God in many ways reflects love with early attachment figures, such as parents (Greeley, 1990). Kirkpatrick (1999) contends that "the form of 'love' experienced in the context of a relationship with God resembles much more closely the prototypical attachment of a child to his or her mother" (p. 805). Thus, it seems reasonable that one's relationship with parents is very likely related to one's relationship with God, and vice versa (Greeley, 1990).

Perceptions of God have been an important part of research in the psychology of religion, with most queries examining whether perceptions of God are more like mother or father figures (Freud, 1961; Kirkpatrick, 1999). Results have been conflicting, however, and conclusions support the idea that perceptions of God reflect both typical maternal and paternal qualities (Godin & Hallez, 1965; Nelson & Jones, 1957; Strunk, 1959; Vergote & Tamayo, 1981). In contrast to viewing God as either maternal or paternal, support has also been established for the perception of God as an exalted attachment figure, one that is an "absolutely adequate attachment-figure" (Kaufman, 1981, p. 67).

One conclusion that can be drawn from investigations regarding perceptions of God is that individuals "make" God in the perception of their parents. So, an individual with cold, rejecting parents may also view God as cold and rejecting, whereas an individual with loving, caring parents may also perceive God as loving and caring.

Empirical investigations support this contention. For instance, research with children found that children with secure attachment tended to view God securely (such as a loving, nurturing figure whom they felt close to), while children with insecure attachments viewed God as inconsistent and distant—much as they viewed their parents (Heller, 1986; Kirkpatrick, 1999).

Therefore, utilizing Ainsworth's conception of attachment styles, a securely attached individual is likely to view God securely—that is full of love, caring, and accessibility. In contrast, an individual with an avoidant attachment style is likely to view God as remote and inaccessible, while an ambivalently attached individual may relate to God in a “deeply emotional, all-consuming, and ‘clingy’” way (Kirkpatrick, 1999). Though beyond the scope of the present investigation, the expression of the ambivalent attachment style reflects how individuals with borderline personality disorder interact socially, and may prove illuminating for further investigations of how these individuals relate to God and others.

Seeking proximity to God is another way in which individuals attempt to attach to and strengthen their relationship with God. This is most often done through prayer, observance of religious or spiritual rituals such as attending religious meetings, engaging in religious rituals, studying religious materials, and use of religious symbols, such as crosses, art, and music (Heiler, 1932; Kirkpatrick, 1999; Reed, 1978). However, for the individual with poor parental attachment, it seems likely that this person would not seek proximity to God, but would rather turn away from religious reminders of God. This phenomenon of turning away from God can be seen in the eating disordered woman, and

represents another way in which these women turn away from their psychological distress because the prospect of addressing such difficult emotions seems insurmountable.

Negative perceptions of God are often common among women with eating disorders whom also view their parents negatively. Women with negative perceptions of God view themselves as unworthy of God's love and help, and their relationship with God becomes one of anxiety and guilt (Richards et al., 1997). Thus, rather than addressing these emotions, women with eating disorders often avoid them through rejecting a relationship with God. This turning away, while seeming to preserve a sense of control, undoubtedly leads to more negative feelings (Kirkpatrick, 1999) and reinforces the individual's view that God is cold and rejecting.

Relationship with God, along with other spiritual issues, therefore, has important implications for understanding an eating disordered woman. Research supports the contention that relationship with God is associated with relationship with self. Specifically, a belief in a loving, caring God is positively related to self-esteem (Benson & Spilka, 1973; Spilka, Addison, & Rosensohn, 1975). Further investigations support that a positive, loving perception of God is tied to other psychological variables of well-being, such as increased confidence and security, positive coping with stress, and general life satisfaction (Kirkpatrick, 1999; Kirkpatrick & Shaver, 1992; Strahan, 1991). In contrast, a negative, rejecting perception of God is related to psychopathology, such as emotional isolation, anxiety, depression, and emotional distress (Kirkpatrick, 1999; Kirkpatrick & Shaver; Strahan, 1991).

Similarly, women with eating disorders often feel they are spiritually unworthy and believe they do not deserve God's or others' acceptance and love (Richards et al., 1997). Consequently, individuals often attempt to counteract these shameful feelings by striving for perfection (Richards et al., 1997). In addition to feeling unworthy of love, many women with eating disorders fear God's and other's disapproval. This may be the result of receiving mixed messages from caregivers and the consequent confusion created in attempting to satisfy contradictory demands. As discussed herein, these individuals have an intense need to gain other's approval, and often believe that they fail to achieve such reassurance.

An important caveat to inquiries of attachment and relationship to God is that it seems some individuals turn to God as a substitute attachment figure (Kirkpatrick, 1999). Thus, those individuals who experience negative attachments with their parents, may still have a positive, loving relationship with God or other religious figures (e.g., Jesus) if they have made God a substitute attachment figure. But how and in what circumstances does this type of substitution occur? Kirkpatrick (1999) identified three circumstances in which individuals may turn to God as a substitute for an attachment figure, including severe stress and crisis (Allport, 1950), unavailability or loss of a principal attachment figure (Kirkpatrick & Shaver, 1990), and insecure attachment history (Ainsworth, 1985).

In addition to specific circumstances that may lead to God as a substitute attachment figure, Kirkpatrick (1999) identified individuals who have a negative view of self but a positive view of others as more likely to use God as a substitute attachment figure. Therefore, an individual who seeks and values close relationships with others but

fails to develop such relationships due to fear of abandonment may turn to a relationship with God characterized by unconditional love in order to get needs met (Hazen & Shaver, 1987; Kirkpatrick, 1999). Thus, one hypothesis may be that those individuals with positive religious well-being may be more likely than those with poor religious well-being to have a positive, loving relationship with God and less severe eating disorder symptomology, regardless of view of parents. Therefore, the relationship with God for some individuals may serve to ameliorate the negative effects of poor attachment with parents.

In addition to negative perceptions of God, other spiritual issues have been identified as potentially important for women with eating disorders (Garfinkel & Garner, 1982; Joughin, Crisp, Halek, & Humphrey, 1992; Rowland, 1970; Sykes, Gross, & Subishin, 1986; Ziegler & Sours, 1968), including feelings of spiritual unworthiness and shame; fear of abandonment by God; guilt and shame about sexuality; reduced capacity to love and serve; difficulty surrendering and having faith; and dishonesty and deception (Richards et al., 1997).

Individuals with eating disorders often experience shame about their own sexuality, which is intensified by religious standards prohibiting certain sexual behavior (Richards, 1991; Richards et al., 1997). Very often, an individual's dysfunctional interpretations of her religion and negative family messages about sex combine to create intense shame about her own body and sexuality (Richards et al., 1997). For some women with eating disorders, their reduced ability to love and serve others results from an inability to maintain their independence in relationships (Richards et al., 1997).

Additionally, some women avoid love because they equate it with disavowing their own needs for the expectations of others (Richards et al., 1997).

Individuals with eating disorders commonly have difficulty surrendering and having faith. This difficulty is often the result of an intense need to gain control in one's life as a way of compensating for painful emotions, and this control is achieved through eating disordered behaviors (Richards et al., 1997). Individuals with eating disorders, especially bulimia, are often secretive and dishonest about their behavior. Religious and spiritual dictates against dishonesty often contribute to a woman's shame about her dishonesty regarding eating disorder behaviors (Richards et al., 1997).

As the preceding discussion describes, religious well-being may be potentially important to some women with eating disorders, it may be beneficial to investigate the role of relationship with God and ways that it might be employed therapeutically. Important to understanding eating disorders is examining whether there is a relationship between eating disorders and an individual's sense of religious well-being.

#### *Rationale for the Current Investigation*

As has been described herein, perceptions of parents, perceptions of self, and perceptions of God may have important implications for understanding symptom severity of women with eating disorders, and for planning comprehensive treatment of these individuals. Specifically, the attachment literature illuminates how individuals who perceive their relationships with parents a certain way may also perceive themselves and God in the same way. While previous investigations have examined perceptions of parents and perceptions of self, no study has also investigated perceptions of God, and



how all three of these variables may be related to symptom severity among women beginning inpatient treatment for eating disorders.

As has been discussed, individuals who perceive their parents as cold and rejecting often perceive themselves as rejected and unloved (Bowlby, 1969, 1982; Dozier et al., 1999). In order to cope with the emotional distress inherent in such negative relationships, individuals may utilize minimizing strategies that allow them to turn away from their emotions. This continual turning away from emotions often leads to externalizing disorders, of which eating disorders is but one (Cole-Detke & Kobak, 1996). It would be interesting to better understand whether such relationships with parents are indeed predictive of eating disorder symptom severity. Further, understanding whether perceptions of parents is predictive of symptom severity provides important implications for treating these individuals.

The research to this point presents conflicting reports about the nature of one's perception of mother versus one's perception of father as related to eating disorder symptom severity. Thus, it seems that a larger scale study which allows investigation of perception of mother and perception of father could potentially provide more clarity regarding the nature of these relationships.

It seems valuable to investigate perceptions of God, especially in light of Kirkpatrick's (1999) contention that one's relationship with God may serve as a substitute for negative relationships with parents. As noted by Bowlby (1973), attachment processes can be applied to many settings and relationships, including one's relationship with God. Thus, the present investigation sought to better understand one's perception of God, in

addition to one's perception of parents and one's perception of self, and how these variables may be predictive of eating disorder symptom severity. For instance, do women beginning inpatient treatment for eating disorders view God as they view themselves and their parents, and are these variables predictive of symptom severity?

Many Americans identify their relationship with God as very important to them (Gallup & Jones, 1989; Greeley, 1981; Kirkpatrick, 1999; Kirkpatrick & Shaver, 1992; Stark, 1965; Wenegrat, 1989); therefore a clearer understanding of this potentially important relationship seems valuable for effective treatment of eating disorders. Further, empirical investigations have supported the positive relationship between perception of God and perception of self (Benson & Spilka, 1973; Spilka et al., 1975), which lends support to the rationale that a positive perception of God could potentially assist individuals in establishing a more positive self-perception as part of comprehensive treatment for eating disorders.

#### *Problem to be Investigated*

There is still much unknown about the etiology of eating disorders, and how different variables are related to symptom severity among women diagnosed with eating disorders. However, as the foregoing discussion has highlighted, there are potentially important relationships between an individual's perceptions of parents, perceptions of self, and perceptions of God as related to symptom severity. Thus, it seemed valuable to investigate whether these variables were predictive of eating disorder symptom severity at the beginning of inpatient treatment in order to better guide comprehensive treatment.

The literature suggests that there may be potentially important differences between individuals with anorexia and individuals with bulimia; thus, an investigation of eating disorder symptom severity as predicted by perceptions of parents, perceptions of self, and perceptions of God according to eating disorder diagnosis may be beneficial for understanding etiology and planning treatment. Finally, there is disagreement in the literature regarding one's perception of mother versus one's perception of father, and how these may be related to eating disorder symptom severity. Thus, a larger scale investigation of these relationships may provide valuable information to guide comprehensive treatment.

The present investigation is unique in that it included a larger sample of clinical cases of eating disorders, whereas most other studies are of non-clinical populations, such as college students. Further, the present investigation comprised a larger sample of individuals receiving inpatient treatment for eating disorders, as opposed to investigations of individuals in outpatient care. There may be potentially important differences according to eating disorder severity, and an investigation including a larger number of severe eating disorder cases allowed more conclusive statements to be made about this population.

#### *Purpose of Present Study*

The present investigation sought to examine perceptions of parents, perceptions of self, and perceptions of God, and whether these variables were predictive of symptom severity of women beginning inpatient treatment for eating disorders. The purposes of the present investigation were two-fold. First, the investigator sought to understand whether

each of the three variables individually (perception of parents, perception of self, and perception of God) were related to eating disorder symptom severity at the beginning of inpatient treatment. Second, utilizing the three variables of interest, the investigator sought to determine the best predictive model of eating disorder symptom severity among women beginning inpatient treatment.

Specifically, it was hypothesized that perceptions of parents, perceptions of self, and perceptions of God are all related to eating disorder symptom severity, and that the three variables are predictive of eating disorder symptom severity at the beginning of inpatient treatment. Specifically, it was hypothesized that those women with more positive perceptions of parents, self, and God would have less symptom severity than those women with more negative perceptions of parents, self, and God. The present investigation examined the variables of interest while accounting for other predictors of less symptom severity and more favorable outcome (e.g., age of onset, comorbid diagnosis, and history of childhood sex abuse). While much research has documented the relationship between parents, self, and eating disorders, no single investigation has also examined perceptions of God, and whether this variable might be predictive of symptom severity among women beginning inpatient treatment for eating disorders.

There are several noteworthy contributions of the present study. The extant literature provides conflicting statements regarding whether perception of mother or father is more predictive of eating disorder symptom severity. The current investigation sought to provide more clarification on this matter, by investigating perceptions of father and mother separately, so as to delineate potentially important differences between one's

perception of father and one's perception of mother and how these perceptions are related to eating disorder symptom severity.

Also important to the present study is that it sought to examine differences among the variables of interest and symptom severity according to eating disorder diagnosis. The literature has established some potentially important differences according to eating disorder diagnosis, and it seemed that a larger scale study that included investigation of diagnostic differences may shed light on these disorders and assist appropriate treatment planning.

Another potentially significant contribution relates to God as a substitute for parental attachment figure. While much research supports the contention that one's relationship with God is much like one's relationship with parental figures, there is some support for the notion that some individuals develop a positive, loving relationship with God as a substitute for negative, rejecting relationships with parental figures. Thus, a positive perception of God may serve to buffer an individual against negative perceptions of parents, and may have some effect on eating disorder symptom severity.

It was hypothesized that the way in which the woman with an eating disorder views her parents is related to how she views self and how she views God. The young girl who views her parents as cold, rejecting, and distant, may view herself as unlovable and unworthy, and view God as unforgiving and rejecting. These views may contribute to the eating disordered individual turning away from parents, God, and self. Rather than turning to self and God for strength, these women may instead turn in on themselves, relying on self-punishment in the form of an eating disorder to make sense of the

rejection and coldness felt from parents, self and God. Or, in contrast, individuals with negative perceptions of parents may rely on a loving, positive relationship with God as a buffer against the negative perceptions of parents.

The proposed study sought to test the hypothesis that perceptions of parents, perceptions of self, and perceptions of God are predictive of eating disorder symptom severity. Specifically, it was hypothesized that eating disordered women with more positive perceptions of parents, with more positive perceptions of self, and with more positive perceptions of God would experience less eating disorder symptom severity at the beginning of inpatient treatment than those women with more negative parent-, self-, and God-perceptions.

#### *Research Hypotheses*

*Hypothesis #1.* It was hypothesized that perceptions of parents are predictive of symptom severity among women beginning inpatient treatment for eating disorders, and that these perceptions are predictive of eating disorder diagnosis subtype. Further, it was hypothesized that there are differences between perceptions of mothers and perceptions of fathers.

*Hypothesis #2.* It was hypothesized that perceptions of self are predictive of symptom severity among women beginning inpatient treatment for eating disorders, and that these perceptions are predictive of eating disorder diagnosis subtype.

*Hypothesis #3.* It was hypothesized that perceptions of God are predictive of symptom severity among women beginning inpatient treatment for eating disorders, and that these perceptions are predictive of eating disorder diagnosis subtype.

*Hypothesis #4.* It was hypothesized that there is a model or relationship among perceptions of parents, perceptions of self, and perceptions of God that is most predictive of symptom severity among women beginning inpatient treatment for eating disorders, and that these perceptions, in relation to one another, are predictive of eating disorder diagnosis subtype.

### *Comprehensive Review of the Literature*

#### *Diagnosis of Eating Disorders*

According to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) the essential features of anorexia nervosa are refusal to maintain a minimum normal body weight, intense fear of gaining weight, exhibition of a “significant disturbance in the perception of the shape or size of [one’s] body,” and amenorrhea in women (APA, 1994, p. 539). Because anorexia entails starvation, it often leads to significant medical conditions and is potentially life-threatening. Some of the physical manifestations of anorexia include emaciation, brittle nails, cyanosis in the extremities, and anemia. Potential psychological symptoms include depression, anxiety, indecisiveness, isolation and obsessive-compulsive thinking (Phelps & Bajorek, 1991).

The diagnostic criteria of bulimia nervosa include recurrent episodes of binge eating characterized by eating a large amount of food (which is considered to be significantly more food than most people would eat under similar circumstances) within a two hour time period and a lack of control over one’s eating during the binge (APA, 1994, p. 549). Individuals diagnosed with bulimia also engage in continuous inappropriate behavior in order to prevent weight gain, such as “self-induced vomiting;

misuse of laxatives, diuretics, enemas, or other medications; fasting; or excessive exercise” (APA, 1994, p. 549), which persists, on average, twice weekly for three months. Self-evaluation is constrained by body shape and weight, and the bulimic tendencies do not occur exclusively with anorexic episodes (APA, 1994, p. 549-550). Physical evidence of bulimia includes disruption or blockage of salivary ducts, gastrointestinal changes, gastric and esophageal dilations, and potassium deficiency which may lead to serious complications or even death (Phelps & Bajorek, 1991). Psychologically, individuals with bulimia experience severe mood swings, and feelings of being rejected, out of control, and ineffective (Phelps & Bajorek, 1991).

In addition to diagnostic criteria for anorexia and bulimia, the DSM-IV provides another category of diagnosis—eating disorder not otherwise specified (NOS). This category is applicable to individuals who have disordered eating but who do not meet all the criteria of anorexia or bulimia. The primary feature of the NOS diagnosis is disturbance in eating and weight management, with symptoms causing impairment in daily functioning (APA, 1994, p. 550). For example, a young woman who meets all the diagnostic criteria for anorexia except for the absence of regular menstrual cycles, would be considered to have an eating disorder NOS.

#### *Multidimensional Risk Factors*

Eating disorders can best be understood using a multidimensional risk factor model which includes examination of sociocultural, cultural, familial, and individual influences (Santonastaso et al., 1999; Steiger, Leung, Puentes-Neuman, & Gottheil, 1992; Steiger, Stotland, Ghadirian, & Whitehead, 1995).



*Sociocultural influences.* Sociocultural values have been identified as important influences on eating attitudes and behaviors (Akan & Grilo, 1995). Several researchers maintain that the influence of sociocultural factors has been under-investigated in the field of eating concerns; however, more researchers are looking to sociocultural influences as responsible for the pressure women feel to conform to socially prescribed values of beauty and thinness (Hesse-Biber et al., 1999; Levine, Smolak, & Hayden, 1994; Mintz & Betz, 1988; Moulton, Moulton, & Roach, 1998; Phelps, Johnston, & Augustyniak, 1999; Pliner & Haddock, 1996; Romney & Goli, 1991).

Research has shown that disturbed eating patterns are intimately tied to women's socialization (Beren & Chrisler, 1990; Hesse-Biber & Marino, 1991) and some contend that eating disorders can largely be attributed to sociocultural factors (Levine et al., 1994). Levine et al. (1994) assert that exposure to a subculture that emphasizes body shape and perfectionistic strivings puts individuals at heightened risk for developing eating and body perception disturbances. The dramatic increase in the incidence of eating disorders has been attributed to, in part, the increasing sociocultural goal for women to be thin at any price (Garner et al., 1984; Garner et al., 1987). Garner, Garfinkel, Schwartz and Thompson (1980) note that particularly during the 1970s there was a cultural shift to idealizing an angular, lean shape, which has resulted in increased dieting and exercising among women.

Women who develop eating disorders very often internalize specific sociocultural values of thinness and beauty as central determinants of one's worth (Abrams, Allen, & Gray, 1993). Some contend that there may be an "overresponsiveness" to the external

environment which contributes to some women's adoption of disordered eating attitudes and behaviors (McCanne, 1985). Steiner-Adair (1989) points out that sociocultural influences may be disabling young college women and, together with family and individual variables, are responsible for the high incidence rates of bulimia on college campuses. Additionally, eating disorders do not occur in a vacuum but, rather, are culture bound and must be examined in context (Abrams et al., 1993). For instance, Moulton et al. (1998) found that as eating disordered behavior increases so does an individual's reliance on social expectations, especially of family members and peers.

One model of sociocultural influence purports that body dissatisfaction develops as women compare themselves to the unrealistic cultural ideals for women and realize that they do not measure up (Katzman & Wolchik, 1984; Phelps et al., 1999). Another research team found results strongly indicating internalization of a socially accepted female ideal (Levine et al., 1994).

*Cultural influences.* Research has shown lower incidences of eating disorders among ethnic minorities than among their white counterparts (Abrams et al., 1993; Hesse-Biber et al., 1999). Akan and Grilo (1995) found that among white, black, and Asian-American women, white women reported the greatest levels of disturbed eating attitudes and behaviors. Interestingly, although black women have a greater frequency of obesity, they have substantially less concerns than white females (Abrams et al., 1993). Some researchers have suggested that as black women (and other minority groups) assimilate into mainstream (white) society, they are at greater risk of developing eating disorders (Abrams et al., 1993; Akan & Grilo, 1995). In support of that contention,

Abrams et al. (1993) found that as black women accept the beliefs of mainstream culture, they are at greater risk for eating disorders. The differences between black women and white women can best be understood in the context of culture. Within black culture there is much less emphasis on achieving thinness, and weight loss efforts are much more realistic than they are for white women (Abrams et al., 1993).

*Familial influences.* Familial factors associated with eating concerns and disorders include a family history of eating disorders or affective disorders, magnification of cultural attitudes, poor role differentiation, “well-meaning enmeshment,” rigidity, “hostile-interdependency,” and heightened sensitivity to social approval (Calam & Waller, 1998; Garner et al., 1987; Meyer & Russell, 1998; Steiger et al., 1995). Also, the perception that one’s mother is rigid, demanding, and manipulative and that one’s father is dominant and powerful but removed have been connected to eating concerns (McCanne, 1985). Some results indicate that these families are more achievement oriented, conflicted, and disengaged than other families (Levy & Hadley, 1998). Not surprisingly, teasing and criticism by family members have been found to be significantly related to body dissatisfaction (Levine et al., 1994).

*Individual influences.* The most apparent deficit in women with eating concerns is low self-esteem. Other individual factors include disturbances in self-perception, autonomous functioning, and cognitive styles; chronic medical illness; obesity; high public self-consciousness; depression; anxiety; negative body perception; social inhibition; inner tension; poor self-control and emotional stability; suspiciousness; guilt-proneness; and a greater need for validation from others (Beren & Chrisler, 1990; Calam

& Waller, 1998; Dunn & Ondercin, 1981; Garner et al., 1987; Katzman & Wolchik, 1984; Shisslak et al., 1995).

In addition to individual risk factors, there are specific risk factors that may perpetuate eating disorders. Effects of starvation on cognition, emotions, and behavior; use of bingeing and purging to modulate affect; reinforcement of weight loss; loss of social skills, friendships, and vocational skills; stress in the family; depression; lack of resolution; and predisposing factors may all work in concert to maintain an eating disorder cycle (Garner et al., 1987).

*Demographic variables as predictors.* The literature has documented some demographic variables that are predictive of favorable treatment outcomes among individuals with eating disorders, and may be also be associated with less symptom severity. Predictor variables of favorable prognosis pertinent to the present investigation include age of onset (Steinhausen, Rauss-Mason, Seidel, 1991); Yager, 1989); lack of comorbid diagnosis or lack of mixed diagnosis (Kennedy & Garfinkel, 1992; Sykes et al., 1986; Wilfley & Cohen, 1997); and lack of history of childhood sex abuse or other trauma (Palmer, 1995).

Specific to the present investigation are perceptions of parents, perceptions of self, and perceptions of God and whether these variables are predictive of eating disorder symptom severity at the outset of inpatient treatment. Thus, a comprehensive review of the extant literature in these three areas is necessary.

#### *Eating Disorders and Perceptions of Parents*

Family relationships have long been considered important to understanding eating

disorders. While general family relationships have been identified as influential to the development of eating concerns in adolescent females, more specifically, relationships with parents have also been found to be central to the development of eating concerns (Attie & Brooks-Gunn, 1989; Dominy, Johnson, & Koch, 2000).

de Groot and Rodin (1994) contend that the earliest parent-child interactions form the foundation of one's sense of self, regulation of self-esteem, ability for self-soothing, and introspection, and that these result from empathic, responsive interactions. However, when interactions fail to be empathic and responsive, children may experience emotional experiences as threatening, thus contributing to the possibility of psychological disorganization (de Groot & Rodin, 1994). Thus, women who fail to have empathic, responsive interactions with parents may also have difficulty regulating emotional experiences, gaining a sense of self, and feeling capable—all characteristic of women with eating disorders.

One theoretical argument has been that women with eating disorders fail to identify and rely on their own subjective experience, often the result of difficulties in early developmental interactions (de Groot & Rodin, 1994; Bruch, 1973, 1982). According to this argument, mothers and fathers of individuals with eating disorders fail to validate their children's emotional experiences, often using their children to meet their own needs (de Groot & Rodin, 1994).

Families characterized as rigid, perfectionistic, with little room for autonomy and interpersonal boundaries may contribute to the development of eating concerns,

particularly as adolescent girls fail to develop a sense of autonomy, capability, and self-esteem (Attie & Brooks-Gunn, 1989; Goldstein, 1981).

Dependency has been acknowledged as an issue among many women with eating disorders (Rogers & Petrie, 2001; Smolak & Levine, 1993). Often this equates to more problems with separation-individuation (Friedlander & Siegel, 1990), greater fears of abandonment, less autonomy in relationships (Becker, Bell, & Billington, 1987), and greater dependency conflicts (Jeammet & Chabert, 1998; Smolak & Levine, 1993). Specifically, Garner and Garfinkel (1982) found that women with anorexia ignore their own needs and seek others' approval by conforming and pleasing others, while women with bulimia may construct a self-perception based on the expectations of others, thus possessing a great fear of rejection (Boskind-Lodahl, 1976; Rogers & Petrie, 2001). Thus, dependency issues may present differently for women with anorexia and those women with bulimia (Rogers & Petrie, 2001).

*Parental Acceptance-Rejection Theory (PAR)*. Parental acceptance-rejection is a family issue that has been found to underlie the development of eating disorders. Studies conclude that families of individuals with eating disorders are more conflictual, dependent, chaotic, controlling and less affectionate than are other families (Dominy et al, 2000; Wonderlich & Swift, 1990).

Parental acceptance-rejection theory (PAR theory; Rohner, 1975, 1980, 1986; Rohner & Rohner, 1980) is illuminating to investigations of psychopathology development in general, and of eating disorder etiology in particular. The theory discusses the consequences of parental acceptance and rejection, including not only children's

emotional, cognitive, and behavioral development, but also their adaptability as adults (Campo & Rohner, 1992; Dominy et al., 2000, Rohner, 1975, 1980, 1986).

According to PAR theory, while accepting parents show affection, warmth, and love towards their children, rejecting parents are often cold, disapproving, or indifferent to their children (Dominy et al., 2000, Rohner, 1975, 1980, 1986). Even in the absence of behavioral indicators of aggression and neglect, the theorists contend that children can still “experience themselves as rejected” (Campo & Rohner, 1992, p. 431). Not only does parental acceptance-rejection affect children, but according to PAR theory, perceptions of such experiences influence adult personality adaptability (Rohner, 1975). Specifically, adults who perceive themselves as rejected by parents tend to be more hostile, dependent, have lower self-esteem, less belief in self, more emotional instability, and more pessimistic (Campo & Rohner, 1992).

One study found that children’s locus of control orientation (internal or external) is related to the parent-child relationship, and that an internally orientated child will increase in internalization with age, which also results in an increase of perceived parental acceptance (Rohner, Chaille, & Rohner, 1980). Often, individuals with eating disorders are regarded as having an external locus of control, meaning a belief that one has no control over events and actions in one’s life. The Rohner, Chaille, and Rohner (1980) finding lends support to the contention that perceptions of parents have an influence on self-esteem and other psychological correlates, including locus of control orientation. A recent study found a correlation between eating disorder symptoms and an external locus of control, which is supportive of previous research (Rogers & Petrie,

2001). These studies lend support for the contention that negative perceptions of parents and of self may be predictive of eating disorder symptom severity.

*Mother-daughter relationship.* The mother-daughter relationship has been the focus of empirical investigation and has been identified as central to understanding eating disorders. Specifically, investigators have identified that the body perception of mothers is critical to the body perception and eating attitudes development of adolescent females (Attie & Brooks-Gunn, 1989; Orbach, 1986; Wooley & Wooley, 1985). One researcher hypothesized that binging “is” the mother, and purging is the act of rejecting the mother (Shulman, 1991). However, while assertions have been made with regard to how mothers influence the etiology of eating disorders, there remains much to be learned about the nature of this relationship.

Early relationships between infants and primary caregivers, most often mothers, have been purported to play a role in the development of eating disorders. In one investigation of eating disorders among women, the authors explored how women’s identity is closely associated with relationships, and that early infant-caregiver relationships are essential to the psychological development of children (de Groot & Rodin, 1994). Further, these researchers reported that women’s identity is most often based on a continuing identification with and relatedness to the mother, and that since mothers often perceive their daughters as similar, they may sometimes tend to overlook their daughter’s uniqueness and autonomy (de Groot & Rodin, 1994; Chodorow, 1980). Such intolerance for individuality on the part of mothers may indeed contribute to the eating disordered daughter’s reliance on the eating disorder as an identity and coping



behavior. These assertions lend support to the need to empirically investigate whether mother-daughter relationships are associated with eating disorder symptom severity.

Regarding early maternal interactions, coherent and organized affectivity, or the inner experiencing of feelings, has been asserted to develop only in the context of the caregiving relationship, and that an affective fit between mother and infant temperaments is necessary in order to allow the emotional regulation of interactions (de Groot & Rodin, 1994). This process allows for the child to gain a sense of self as unique and independent of others. Much research has established that women are more emotionally aware than men, and that girls' emotional relatedness may often be based on perceptions of parents' feelings, particularly the mother, rather than on the girl's own feelings (de Groot & Rodin, 1994; Jordan & Surrey, 1986). Therefore, girls whom attempt to gain the acceptance of rejecting parents may be placed in a situation in which they disregard their own emotional states in deference to the perceived feelings and needs of parents. As women continue to avoid their own emotional states, they may rely on coping behaviors, of which the eating disorder is among the most insidious.

Similarly, as parents, particularly mothers, fail to recognize and respond to the emotional needs of their daughters, daughters may experience greater difficulty recognizing their own emotional needs and states. Thus a pattern that is seen repeatedly among women with eating disorders emerges. That is, women with eating disorders are often acutely aware of others' feelings, usually to the exclusion of understanding their own feelings, and they rely on eating disordered strategies to cope with the negative

perceptions of self and others. Steinem (1992) refers to this as a “feminine” disease of being “empathy sick.”

A sense of agency as related to self-efficacy is argued to be influenced by early developmental interactions with one’s mother (de Groot & Rodin, 1994). Empirical investigation has confirmed that mothers tend to encourage more autonomous activity of their sons than their daughters, which creates broader opportunities for reinforcement from the world at large. Theorists contend that these differences in early interactions contribute to children’s sense of agency and self-efficacy, and that daughters who do not receive encouragement and reinforcement apart from their mothers may experience less self-efficacy and confidence (de Groot & Rodin, 1994). These patterns are characteristic of individuals with eating disorders, whom often describe themselves as feeling ineffective (de Groot & Rodin, 1994).

One investigation confirmed the reliability of adult perceptions of maternal acceptance-rejection in childhood (Cournoyer & Rohner, 1996). These investigators concluded that adult recollections of maternal acceptance-rejection were in agreement with reports made during childhood, and that there can be reasonable confidence in parental perception responses over time (Cournoyer & Rohner, 1996).

Aside from the earliest developmental interactions, mothers are important to understanding eating disorders in other ways as well. For instance, one research team found that eight-year-old girls’ awareness of dieting could be predicted by their mother’s dieting frequency, in addition to the girls’ global self-worth and body mass index (Hill & Pallin, 1998). Similar findings have also been found among pre-adolescent girls (Hill,

Weaver, & Blundell, 1990), adolescent girls with abnormal eating attitudes (Pike & Rodin, 1991), and children receiving treatment for feeding disorders (Stein, Stein, Walters, & Fairburn, 1995). One concern of maternal dieting is the question of how dieting awareness is passed on to daughters—through observation or direct learning. While it is difficult to separate how dieting awareness may be acquired, the point remains that mother's beliefs and practices regarding dieting are indeed tied to daughters' perceptions. At present, investigations are lacking with regard to the role of fathers or other family members on dieting awareness (Hill & Pallin, 1998).

Evidence supports the belief that women with eating disorders come from families with rigid sex role stereotypes (Steiner-Adair, 1989), and that there is a difference between how individuals at risk for eating disorders perceive their mothers (Hesse-Biber et al., 1999). One study found that these individuals tend to view their mothers very rigidly within a traditional role, whereas the recovered group of individuals were able to view their mothers as possessing multiple roles for women (Hesse-Biber et al., 1999).

Thus, theory-based research, as has been described above, describes some potentially important ways that mothers and daughters relate with one another, and more pertinent to the present investigation, how daughters perceive their mothers, and how these perceptions may be associated with eating disorder symptom severity.

*Father-daughter relationship.* While not much is known regarding how fathers influence the development of a daughter's eating disorder, recent efforts have sought to illuminate this relationship. One initial finding concluded that daughters' perceptions of

their fathers influenced the development of eating concerns (Wonderlich, Ukestad, & Perzacki, 1994).

While there is a paucity of empirical research on the father-daughter relationship with regard to eating disorders, reference to other mental health concerns proves illuminating to the subject at hand. One investigation found that the relationship with father was more predictive of substance abuse than were other relationships (Campo & Rohner, 1992). Just as substance abuse is an addiction, eating disorders can best be conceptualized as an addictive disorder, in which the eating disorder behavior acts as a coping mechanism for difficult feelings and experiences. For instance, there seems to be certain parallels between the families of individuals who substance abuse and the families of individuals with eating disorders, particularly that these families are characterized as dysfunctional, chaotic, lacking in affection, and with blurred boundaries (Campo & Rohner, 1992).

While Campo and Rohner (1992) postulated that substance abuse may be one consequence of parental rejection, likewise Dominy et al. (2000) contended that an eating disorder may also be a logical consequence of parental rejection. Individuals may utilize substances as a way of coping with difficult experiences and feelings associated with parental, particularly paternal, rejection. The process of coping may be the same for both substance abusers and eating disordered individuals, with the difference lying in the substance of choice (Dominy et al., 2000).

Thus, Dominy et al. (2000) sought to examine whether perceptions of parental-acceptance rejection differed between women with binge eating disorder and women with

no eating disorder. These researchers concluded that women with binge eating disorder perceive their fathers as more rejecting than do other women, however this finding was not confirmed with regard to mothers (Dominy et al., 2000). While these findings are preliminary, they constitute a call for more research with regard to eating disorders and the father-daughter relationship. Specifically, the authors call for more investigation of the paternal relationship with regard to the other eating disorders, anorexia and bulimia. It does indeed seem that daughters' perceptions of fathers and mothers may differ when associated with eating disorder symptom severity. A clearer understanding of these differences is useful to better understanding the etiology, treatment, and prevention of eating disorders.

While bingeing and purging have been related to the mother-daughter relationship, ideas in this regard have also been postulated about the father-daughter relationship. Carmicle (1995) asserted that purging may represent rejection of the father, the perceived actions of the father, or a combination of the two (see also, Dominy et al., 2000). Thus, a father perceived as cruel, domineering, rigid, or abusive may be rejected symbolically through the daughter's purging (Dominy et al., 2000).

One theory related to the early father-daughter relationship is that as father is "physically or emotionally absent, or offers seduction rather than affection, differentiation from the mother may be more difficult" (de Groot & Rodin, 1994, p. 303). Leibowitz (1991) argued that individuals with bulimia more often have absent fathers due to work or divorce, and Bemporad and Ratey (1985) contended that individuals who are anorexic have fathers who use their daughters in order to build their own self-perception.

Similarly, one study found that among women in long-term treatment for eating disorders, over half of them reported feeling as though they had been used in order to fulfill their father's own needs (Bemporad et al., 1992). Attempting to meet others' needs not only leads to failure in relationships, but seems likely tied to failure to meet individual needs, thus contributing to poor self-perception, an intervening variable of self-esteem.

### *Eating Disorders and Self-Perception*

The present investigation seeks to better understand the relationship between one's perception of self and eating disorder symptom severity. Self-perception is conceptualized as one's perception and relationship to self, and comprises important aspects of self, including such factors as one's perception of body appearance, body functioning, competence, lovability, likability, self-control, personal power, identity integration, etc. For purposes of the present investigation, self-perception is conceptualized as a broad construct of one's perception of self, is considered synonymous with self-esteem, and is best assessed by utilizing a measure of global self-esteem that includes the factors discussed above.

While eating disorders and self-esteem have long been recognized as inextricably connected, just how the two are related is not entirely well-understood. Inevitably, any discussion of eating disorders and self-esteem leads to the question of the chicken and the egg—which came first: poor self-esteem which made an individual more susceptible to an eating disorder, or an eating disorder which wreaked havoc on an individual's self-esteem? While there is no simple answer to this question, there is substantial research that

has investigated the relationship between self-esteem and eating disorders, providing interesting insights.

In a review of the literature, Ghaderi (2001) concluded that low self-esteem, along with other factors, not only puts women at greater risk for the development of an eating disorder but also serves to maintain an eating disorder. Numerous reports support the contention that low self-esteem is often present before the development of an eating disorder, and that low self-esteem is a significant risk factor for both bulimia and anorexia even in young, school-age girls (Ghaderi, 2001).

Self-esteem appears to be a primary risk factor that may contribute to the development of other risk factors for eating disorders. For example, three separate research studies found that development of bulimia is predicted by perfectionistic tendencies and body dissatisfaction only among low self-esteem women, whereas women with higher self-esteem did not have these risk factors and accordingly did not develop bulimia (Vohs et al., 2001; Vohs, Bardone, Joiner, Abramson, & Heatherton, 1999; Joiner, Heatherton, Rudd, & Schmidt, 1997).

While it is widely recognized that low self-esteem is related to eating disorders (de Groot & Rodin, 1994), there continues to be questions regarding whether low self-esteem is a predictor or a result of eating disorders. de Groot and Rodin (1994) hypothesized that the array of psychological disturbances found among women with eating disorders may be associated with or the result of underlying deficits in one's experience of the self. Reports describe women with disturbances in their self-perception and as of possessing a false self (de Groot & Rodin, 1994). de Groot and Rodin (1994)

explore the possibility that young girls whose subjective experiences are invalidated learn to rely on external validation in order to maintain a sense of self, thus contributing to disturbances of the self because of this reliance on external cues.

Investigations of self-esteem and eating disorders have focused on several pertinent issues. These issues include identity formation; body perception; and control and coping behavior, including avoidance.

*Identity formation.* Identity formation is important to discussions of eating disorders and self-esteem. Attention has been given to the parent-child relationship and how parents' perfectionistic expectations work to limit the child's development of autonomy, consequently creating an environment wherein the child is reliant on parental expectations rather than on individual needs and desires (Stein, 1996). Bruch (1982) posited that as children attempt to meet unrealistic parental demands, they often develop a sense of being "nothing." As these children grow into adolescence they may turn to an eating disorder as a way of defining self and establishing a sense of self-control (Stein, 1996).

One investigation of dieting awareness in eight-year-old girls concluded that self-endorsed dieting was strongly tied to negative self-perception, and that predictors of dieting awareness in young girls included negative self-worth, body mass index, and frequency of mother dieting (Hill & Pallin, 1998). Thus, perception of self and perception of dieting mothers seem to contribute to dieting awareness even in very young girls, which may have important implications for eating disorder severity.



One study found that women who purge have lower self-esteem, especially in self-identity or how they view themselves, and in family self or feelings of value, worth, and adequacy as a family member (Nagelberg, Hall, & Ware, 1984). This study in particular, illustrates the relationship between family perceptions and self-esteem among women with eating disorders. One aspect of identity formation is one's view of self in the family. In an investigation of identity and family self-concept, Nagelberg, Hale, and Ware (1984) found that female college students who purged had lower self-esteem, especially in the areas of identity and family self-concept. Thus, the investigation provides additional evidence that a young woman's view of self (self-esteem) is inextricably tied to her view of family and her resulting identity development.

Identity development necessarily includes the development of self-beliefs and expectations. An examination of a non-clinical population reported that increased eating pathology was correlated with low self-esteem, increased irrational beliefs, and less frequent use of cognitive and behavioral coping strategies (Mayhew & Edelman, 1989). These researchers hypothesized that high self-expectations and perceived ineffectiveness, both as typical of irrational beliefs, may well be central to the development of eating disorders in women (Mayhew & Edelman, 1989).

In an examination of eating disorders and ability to self-soothe, Steinberg and Shaw (1997) found that women with bulimia had low self-esteem, poor self-care, and difficulties with impulse and affect regulation. The authors posit that self-esteem and the ability to self-soothe are related to difficulties in the relationship with the primary parent, and represent a disturbance in the development of the self (Steinberg & Shaw, 1997).

*Body image.* *Body image*, an individual's sense or feeling towards one's body, is conceptualized as a contributing variable to self-esteem. Thus, as might be expected, individuals who have poor body image are likely to also have poor self-esteem. For instance, one study found that assisting adolescents in recognizing what is positive about their bodies and physical appearances while at the same time increasing their sense of personal competence leads to less internalization of sociocultural norms idealizing thinness (Phelps, Dempsey, Sapia, & Nelson, 1999). This resulted in significantly less body dissatisfaction, which in turn meant less eating disorder behavior among the adolescents (Phelps et al., 1999). However, improving self-esteem is a challenging task for women with eating disorders. Often, their negative thoughts and beliefs are deeply entrenched and consequently difficult to give up. Once negative thoughts are established they serve to maintain low self-esteem and an eating disorder.

Another aspect of body image that has been established by empirical investigation is that women with low self-esteem have greater body size distortion and overestimation (Taylor & Cooper, 1986; Thompson & Thompson, 1986). Simply put, body perception plays a critical role in how many women feel about themselves (Eldredge, Wilson, & Whaley, 1990). Fairburn and Cooper (1984) even contended that the core disturbance in bulimia is an excessive concern with body shape and weight. An examination of undergraduate women found that experiences of either success or failure made no difference in body image among women who restrained their eating. Even after experiencing successes, these women still felt negatively about their bodies (Eldredge et al., 1990). Not surprisingly, these researchers found that the more depressed an

individual, along with the lower her self-esteem, the more severe her level of body dissatisfaction. This finding supports other findings of self-esteem, depression, and eating disorders (Rosen, Gross, & Vara, 1987).

In one study of the relationship between body concept and self-esteem among models and college students, Brenner and Cunningham (1992) found that female models had higher self-esteem than did female college students, and self-esteem was positively correlated with body satisfaction and negatively correlated with deviation from average weight. Thus, underweight models had higher self-esteem than did models of higher weights. The researchers concluded that while self-esteem is not related with body image for males, for females a strong relationship exists between self-esteem and body image. This relationship is found to exist for female cultural ideals of beauty (models), whereas there seems to be no such relationship among male models.

In an attempt to investigate the influence of shape and weight on self-esteem among women with eating disorders, Geller, Johnston, Madsen, Goldner, Remick and Birmingham (1998) speculated whether shape and weight concerns are a by-product of low global self-esteem, or whether these concerns are a more central component of eating disorder symptomology. Therefore, these researchers attempted to examine shape and weight concerns of women with eating disorders in comparison to women with mental health concerns other than eating disorders. They found that, as hypothesized, shape and weight scores were significantly higher among women with eating disorders than among women with other psychiatric concerns. Further, they found shape and weight influence on self-esteem among women with eating disorders to be stable over time, consistent with

the contention that shape and weight influences on self-esteem are central components of eating disorder symptomology (Geller et al., 1998).

Supportive of other findings about adolescents, Rosen, Gross, and Vara (1987) found that weight-losing attempts by adolescent girls is related to negative physical self-esteem, negative global self-esteem, and depressive symptoms. They also found that adolescent girls attempting to gain weight also had negative psychological adjustment, evidenced through scores on global self-esteem and depression scales. Thus, Rosen et al (1987) conclude that girls, more than boys, base much of their worth on physical appearance, and that when their weight deviates from societal expectations, social ramifications are more intense for girls. These adolescent experiences may well contribute to later development of eating disorders among some women.

One researcher contended that cultural expectations to be thin cannot alone account for the prevalence of eating disorders among adolescent and young adult females, considering that mild concerns about fatness are common among these populations and yet eating disorders only affect a small percentage of these populations (Button, 1990). Button (1990) argued that low self-esteem may contribute to vulnerability to eating disorders. In a preliminary report of a prospective study of self-esteem and risk for eating disorders among adolescent girls (aged 11-12), this researcher found that while over half the girls expressed fat concern, those with low self-esteem had much more fat concern along with other problems in general (Button, 1990).

Findings suggest that young women with eating disturbances may turn to other health-risk behaviors, perhaps due to low self-esteem and increased anxiety, or perhaps to

cope with such difficulties. Fisher et al. (1991) found that those individuals with the healthiest eating attitudes also had good self-esteem and low levels of anxiety. Further, these researchers found that self-esteem scores accounted for fully 17% of the total variance in eating attitude scores (Fisher et al., 1991). Certainly, the relationship between eating disturbances and self-esteem is well established. However, what remains less clear is *how* these factors are related to one another and to other important domains of interest, particularly perceptions of parents and perceptions of God.

*Control and coping behavior.* Control has long been recognized as a core issue of individuals with eating disorders. As hypothesized, individuals seek a sense of control when their lives seem chaotic or controlled by others. For many women seeking control in their lives, this is gained in the form of control over the body. While perhaps initially women do feel more control in their lives, this is fleeting and inevitably leads to feeling out of control. Often women with eating disorders use control as a substitute for self-esteem, holding the belief that “If I control myself and my circumstances then I’ll be acceptable.” Of course, this security is false and fails to offer genuine feelings of value.

As women with eating disorders seek control, they necessarily employ avoidance as a way of hiding from their pain. Avoidance of truth undermines their ability to live congruently, resulting in a cycle that serves to maintain low self-esteem and an eating disorder. By avoiding what they know is best for them, these women perpetuate feelings of inadequacy and self-loathing. One examination found that women at risk for eating disorders failed to utilize cognitive and behavioral coping strategies, and rather increased their use of avoidance coping (Mayhew & Edelman, 1989).

In a comparison of inpatient women with anorexia nervosa and non-patient frequent and infrequent weighers (control group) at risk for eating disorders due to their age (ages 16-19), Huon and Brown (1984) found that the inpatient women with anorexia clearly had greater concern with self-presentation, greater emphasis on control, more negative self-esteem, and higher reported criticism of eating than did the control group. These authors hypothesized that perhaps control among eating disorder patients is important only in combination with measures of self-presentation, self-esteem and criticism about eating, and that perhaps control is achieved through focus on these three areas (Huon & Brown, 1984).

While eating disorders and low self-esteem are difficult to separate, research, along with clinical knowledge, have established the need to address self-esteem concerns in treatment. Further, interventions targeting self-esteem, particularly how it affects body perception, have been shown to be beneficial and should be part of comprehensive treatment of women with eating disorders.

#### *Eating Disorders and Religious Well-Being*

Religious well-being represents one's relationship with and perception of God, and encompasses aspects of both spirituality and religion. Historically, spirituality and eating disorders have been connected, most notably through descriptions of fasting saints (Joughin, Crisp, Halek, & Humphrey, 1992; Vandereycken & Van Deth, 1990). Romney and Goli (1992) point out that fasting saints expressed their spirituality through control of their bodies and abstinence from food, and that today individuals with eating disorders attain "personal salvation" as they attempt physical perfection.

History is replete with examples of fasting, from the ancient Greek Priamos fasting after his son's death, to Pharaohs making important decisions, to John the Baptist, in Christ's time, subsisting on locusts and wild honey (Vandereycken & van Deth, 1994, p. 15-17). It was within Christianity, however, that fasting evolved most, usually in the form of asceticism. Asceticism was first used to refer to the training of Greek athletes, however with time it came to mean the spiritual pursuit of purity, of virtue, often to the detriment of the body (Vandereycken & van Deth, 1994, p. 18). Christianity's view of asceticism is grounded in Plato's view of the soul being trapped in the body, and that it is only through separating from the bodily appetites of the world, that the soul can reach its divine potential (Vandereycken & van Deth, 1994, p. 18).

This belief was carried on by the Neoplatonians of the third century, who posited that in order to be like the Gods, humans had to become completely free of all physical needs (Vandereycken & van Deth, 1994, p. 18). Fasting was seen as the obvious way to overcome the ultimate physical need of nourishment. While spirituality and self-starvation have been related historically mainly through fasting, current beliefs on the relationship between spirituality and eating disorders has been proposed in several ways, some of which contradict one another (Joughin et al., 1992).

One line of thought is that a distinct religious culture may serve to shield women with eating concerns from seeking treatment early, thus prolonging pathology (Joughin et al., 1992). Another proposal relates to asceticism, the practice of strict self-denial as a measure of personal and especially spiritual discipline (Merriam-Webster, 1995). Some claim that asceticism may be used as a justification for the continuation of an eating disorder (Joughin et al., 1992).

Sykes et al. (1986) found a significant relationship between eating disorders and religion, with eating disorders being most prevalent among Catholics and Jews. These researchers also noted that there were a higher number of Catholics and Jews with eating disorders than would be expected for the given populations (Sykes et al., 1986; see also Sykes, Leuser, Melia, & Gross, 1988). One aspect of religion that can be anxiety-provoking for individuals with eating disorders are religious activities involving food. Graham et al. (1991) found that individuals with eating disorders had altered religious practices, including the avoidance of Holy Communion and other religious activities in which food was a part, resulting in many women feeling extreme guilt as a result of altered religious practices.

In a study investigating the connection between religion and eating disorders, Joughin et al. (1992) found that women claiming religion also had the lowest body mass index (BMI), and that the perceived conflict between religious guidelines and eating disturbances decreased as BMI decreased. Results showed that the degree of weight loss in anorexia nervosa was associated with the relative importance of religion (Joughin et al., 1992). Notably, Joughin et al. (1992) point out that asceticism may be used as justification, supplementation, and replacement for anorexic weight loss.

In contrast to the findings on anorexia, results of individuals with bulimia show that as pathology increases, importance of religion decreases, indicating that as bulimics “give in” to the binge-purge cycle, there is a decrease in religious belief (Joughin et al., 1992). The individual may believe that she has sinned by bingeing and purging and therefore discards religion and the guilt associated with it. Conversely, individuals with



anorexia seem to increase in spirituality as they continually deny themselves, possibly using asceticism as a defense (Joughin et al., 1992).

Although religion and spirituality have been implicated in the development and perpetuation of eating concerns, they have also been recognized as integral to eating disorder treatment. While investigations of religious well-being and eating disorders have not received much attention, increasingly, spiritual issues are being examined in the mental health field (Richards, 1991). Richards et al. (1997) note that the small body of research in this field does support religion and spirituality as important aspects of eating disorders.

For instance, one study found that respondents to a survey assessing eating disorders and religion reported that religion had been most helpful to them in their recovery from bulimia (Mitchel, Erlander, Pyle, & Fletcher, 1990). Richards et al. (1997) contend that more research is needed to identify if eating disorders are more common in some religions and to examine the impact of devout religious practices. Whether religion and spirituality are seen as a positive or negative influences by the mental health field is controversial, and there may be both positive and negative ways to be religious (Bergin, Masters, & Richards, 1987).

Aspects of religion that are also characteristic of individuals with eating disorders include perfectionism, feelings of unworthiness, self-control issues, dependency, and approval-seeking tendencies. These influences may potentially combine with other factors, resulting in both benefits and deficits to religiously-minded women with eating disorders.

*Perfectionism.* Striving for perfection is characteristic of both eating disorders and many religions (Hewitt et al., 1995; Katzman & Wolchik, 1984; McCanne, 1985; Pliner & Haddock, 1996). In discussing a case study, Bergin et al. (1988) pointed out that the individual's religion acted to reinforce her perfectionistic tendencies and limit emotional experiences, and that the religious subculture valued the portrayal of being an honest person, which was reinforced by the group (Bergin et al., 1988). For vulnerable individuals, this value translates into a need to be perfect in order to be accepted. This outward perfectionism reinforces rigidity and hinders adaptability (Bergin et al., 1988). Another researcher asserts that

The perfect body symbolizes control. In a culture that values self-control, hard work, and the delay of gratification, having a desirable body signals the outside world that the individual is in control. It shows control over impulses to eat and to be inactive, and reflects hard work, ambition, and desire. (Brownell, 1991, p. 4)

These ideals parallel the values of many religious and spiritual doctrines.

Perfectionistic people often rely on others' approval and believe that if they do not do things perfectly than they are failures (all-or-nothing perception; Hewitt et al., 1995). Social components of perfectionism parallel several social variables of eating disorders, including the reliance on cultural ideals of beauty, "extreme sensitivity to the perceived expectations of others," and rigid parental expectations (Hewitt et al., 1995, p. 319). Perfectionistic individuals gain approval by complying to others' desires and attempting to escape negative evaluations by others (Hewitt et al., 1995).

Findings indicate that perfectionism is positively related to eating disorders (Hewitt et al., 1995). Individuals with eating disorders may feel constrained to present themselves in the best light in order to avoid the perceived censure of others. Further, perfectionistic individuals view mistakes as evidence of an inability to live up to their own or perceived expectations of what is perfect, and failure only provides more evidence that they are unworthy of others' acceptance, including God's acceptance (Hewitt et al., 1995).

*Unworthiness.* A sense of ineffectiveness or unworthiness is a major characteristic of eating disorders and is a component of spirituality and religion (i.e. that one is unworthy before God). One researcher noted that a sense of ineffectiveness creates a climate in which other perceptual disturbances thrive (Garner et al., 1984). For instance, feelings of helplessness and shame contribute to distorted body perception, thus creating a self-perpetuating cycle (McCanne, 1985). This overwhelming feeling of ineffectiveness or inadequacy has been linked to dietary restriction in anorexia in the sense that intake is limited in order to establish "psychological organization" or control (Garner et al., 1984, p.264). Likewise, spiritually-minded women at risk for eating disorders may perceive that they do not "measure up" to the spiritual or religious expectations set forth for them or that they set for themselves.

The violation of religious standards may also contribute to feelings of unworthiness. Bergin et al. (1988) found that when individuals violated their religious standards, they felt unclean and unworthy. Individuals vulnerable to eating disorders who have made such violations may not only experience a personal sense of unworthiness but

may also think that others (i.e. religious leaders, church members, and God) believe they are unworthy, thus contributing to the development and perpetuation of eating disorders.

*Self-control.* Gaining a sense of control is a key component of eating disorders and is a common decree of the spiritual and religious. It is well accepted that eating disorders are rooted in a search for control. For example, one study found distorted body perception was related to gaining a false sense of control or power through self-restraint and denial (McCanne, 1985). Regarding religion, one research team found that when religiosity is negatively correlated to mental health, the disorders are usually tied to over-control (Tloczynski et al., 1997). Thus, one possible liability of religiosity or spirituality is that they may contribute to vulnerable individuals' control issues. Finally, researchers claim that some women perceive being in control as evidence of moral purity and discipline, which in turn increases their perceived likelihood of being accepted by others and by God (Brownell, 1991).

*Dependency.* Dependency issues have been shown to be major aspects of the eating disorder picture. Likewise, many spiritual and religious cultures emphasize the importance of the group rather than the individual. Some women may interpret this focus as a rejection of independence and may struggle with their desires for independence on the one hand and their need to be an accepted member of the group on the other.

For example, the LDS culture is a "disciplined and emotionally interdependent lifestyle" (Bergin et al., 1988, p. 96), which focuses on interdependence and dependence of the group rather than on independence. Further, the "processes of Mormon socialization appear to stimulate the development of a sense of personal identity that is

strongly linked to group identity” (Bergin et al., 1988, p. 96). Individuals vulnerable to eating disorders may be at particular risk when they are part of religious circles in which group identity is fostered and assimilation to the group is reinforced, while strivings towards autonomy and independence are discouraged.

“A person’s self-concept is greatly influenced by how well he or she is able to negotiate the inherent tension between a sense of relationship with other people and a sense of autonomy from them” (Hesse-Biber et al., 1999, p. 387). Individuals with a negative self-concept may be unable to negotiate this conflict that is apparent in strong spiritual or religious lifestyles. Hesse-Biber et al. (1999) note a study in which college women who had difficulty establishing autonomy were found to have lower self-esteem and increased eating disturbances. So, a cycle may be created in which women with low self-concepts have greater difficulty negotiating the conflict between autonomy and connectedness, and, as a result of this difficulty, have decreased self-esteem and more eating concerns.

Some theorists state that this conflict is resolved as the individual establishes autonomy rather than relatedness (see Hesse-Biber et al., 1999). Thus, as the spiritual individual attempts to resolve this conflict, she is left with the perceived conflict of going against what her religious or spiritual lifestyle teaches. In essence, she is damned either way, for if she establishes autonomy, in her perception she is forsaking her religious and spiritual ideals which may be founded on the importance of the group rather than the individual, but if she relates with the group she may believe she is giving up independence.

Then, is the religious dictate to be thy brother's keeper a notion that stifles independence? Hesse-Biber et al. (1999) report that the development of strong, stable relationships actually fosters independence. Here we see that the values of the religion are not necessarily negative or unhealthy, rather that women who may be at greater psychological risk for eating disorders may have more difficulty navigating the developmental struggle between autonomy and connectedness and may perceive religious or spiritual issues as contributing to this struggle. Additionally, religion must be separated from religious culture. There may indeed be aspects of spiritual or religious cultures that hinder the resolution of this developmental struggle in some women. Often women with eating disorders engage in all-or-none thinking, believing that in order to be interdependent they cannot be autonomous and that in order to be autonomous they must reject the group identity. They fail to realize that within most religious and spiritual cultures, the desire is for the individual to balance both ideals.

*Approval-seeking.* The group-as-a-whole perspective maintains that every group, whether it be a religious or spiritual group, a society, or a nation creates a life of its own, with unique characteristics and pressures (Romney & Goli, 1992). Individuals who are part of a strong religious or spiritual group likely have heightened pressure to conform and to negotiate the conflict between their religious or spiritual culture and society at large.

It is widely accepted that individuals with eating disorders have a greater need for others' approval and that eating disturbances are manifestations of approval-seeking (Beren & Chrisler, 1990; Katzman & Wolchik, 1984; Moulton et al., 1998). Some research indicates that even after recovery from an eating disorder, individuals continue

to display approval-seeking behaviors, suggesting that this characteristic in individuals may contribute to the development of eating concerns. For instance, Srinivasagam et al. (1995) found that even after eight years of recovery from anorexia, individuals displayed greater conformity to authority and more self-control than women with no history of eating disorders.

Feelings of not fitting in with others may be intensified when there is a strong spiritual or religious group identity. Many individuals at risk for eating disorders lack social competence and therefore experience anxiety in both spiritual settings and within the society at large. A religious subculture may represent another group in which the eating disordered individual believes she does not fit in, and may be associated with eating disorders as a form of coping with feelings of isolation. Further, eating disordered women may believe that they must accept all the beliefs of the group in order to be accepted and found “worthy” by spiritual or religious group members, leaders, and God.

As the present review illustrates, perceptions of parents, perceptions of self, perceptions of God, and their relationships to eating disorder symptom severity can prove enlightening for a clearer understanding of the etiology, maintenance, and treatment of eating disorders. While certainly the research base addresses valuable questions of interest, the nature of the relationship between the three variables and eating disorder symptom severity remains unclear. Thus, an investigation of whether perceptions of parents, perceptions of self, and perceptions of God are predictive of symptom severity at the beginning of inpatient treatment for eating disorders may contribute important understanding of eating disorder etiology and maintenance, and may provide further direction for comprehensive treatment.

## METHOD

### *Population*

The present study sought to examine perception of parents, perception of self, and perception of God as related to symptom severity among women beginning inpatient treatment for eating disorders. Therefore, the population of interest was eating disordered women at the outset of inpatient treatment for eating disorders. The present investigation sought to better understand the etiology of eating disorders, and thus provided the rationale for examination of symptom severity at the beginning of inpatient treatment.

### *Sample*

The present study included a sample of 464 women beginning inpatient treatment for eating disorders at a private treatment facility specializing in the treatment of eating disorders (Center for Change, Orem, Utah). All women participated in inpatient treatment at Center for Change (CFC) during 1996-2004. Participants ranged in age from 12 to 56 years ( $M = 21.88$ ,  $SD = 7.46$ ). The majority of participants were in the 15 to 24 year-old age category ( $N = 325$ , 70%). The majority of participants were Caucasian ( $N = 428$ , 92.2%), with other racial and ethnic groups, such as African American ( $N = 3$ , .6%), Asian ( $N = 1$ , .2%), and Hispanic ( $N = 3$ , .6%), making up the minority of participants. Seven participants were from a racial heritage other than those listed above.

With regard to religious affiliation, the majority of participants were affiliated with the Church of Jesus Christ of Latter-day Saints ( $N = 296$ , 63.8%). Other religious affiliations represented in smaller numbers included Protestant ( $N = 32$ , 6.9%), Catholic ( $N = 22$ , 4.7%), Jewish ( $N = 5$ , 1.1%), and “other” ( $N = 31$ , 6.7%). Of the participants, 31



(6.7%) reported no religious affiliation while 6 (1.3%) participants identified themselves as “Christian.”

Participants in the study represented 33 states. While the largest percentage of participants were from Utah (N = 231, 49.8%), a smaller proportion of participants were from California (N = 48, 10.3%), Idaho (N = 29, 6.3%), and Colorado (N = 14, 3.0%). The majority of participants were single (N = 360, 77.6%), while a smaller proportion of participants were married (N = 70, 15.1%), and a small number were divorced (N = 11, 2.4%). Educational level of participants included participants in junior high through graduate training. The largest percentage of participants were in college (N = 187, 40.3%), while a smaller proportion were in high school (N = 108, N = 23.3%).

Participant age of onset for eating disorder symptomology ranged from age 5 to 50 years of age (M = 15.30; SD = 4.34). However, the majority of participants reported onset of symptoms between the ages of 12 and 19 years (N = 360, 77.5%). Participants with a psychiatric comorbid diagnosis (both Axis I and Axis II diagnoses) made up a small percentage (13.1%, N = 61), while 73 participants had no Axis II diagnosis (15.7%). However, for the majority of participants, Axis II diagnosis was deferred (N = 299, 64.4%). Of the participants, 149 (32.1%) reported a history of childhood sexual abuse, while 294 (63.4%) reported no such history. The above data are presented in Table 1.

Table 1

<i>Participant Description</i>		
Variable	N	%
Age		
12-14	21	4.5
15-24	325	70.0
25-33	57	12.4
34-45	33	7.0
46-56	7	1.4
Missing	21	4.5
Ethnicity		
Caucasian	428	92.2
African American	3	.6
Asian	1	.2
Hispanic	3	.6
Other	7	1.5
Missing	22	4.7
Religious Affiliation		
Latter-day Saint	296	63.8
Non-LDS	127	27.4
Missing	41	8.8
State		
Utah	231	49.8
California	48	10.3
Idaho	29	6.3
Colorado	14	3.0
Other	141	30.4
Missing	1	.2
Marital Status		
Single	360	77.6
Married	70	15.1
Divorced	11	2.4
Missing	22	4.7
Educational Level		
In High School	108	23.3
In College	187	40.3
Other	139	29.9
Missing	30	6.5

Table 1 (continued)

<i>Participant Description</i>		
Variable	N	%
<b>Age of Onset</b>		
5-11	43	9.3
12-19	360	77.5
20-26	28	5.9
28-38	7	1.4
39-50	2	.4
Missing	24	5.2
<b>Comorbid Diagnosis</b>		
Axis II diagnosis	61	13.1
No Axis II diagnosis	73	15.7
Axis II diagnosis deferred	299	64.4
Missing	31	6.7
<b>Sexual Abuse</b>		
Yes	149	32.1
No	294	63.4
Uncertain	3	.6
Missing	18	3.9

### *Procedures*

Participants completed study measures as part of their initial battery of assessment measures, which were administered within the first week of being admitted to the inpatient unit of CFC. Before beginning inpatient treatment, each participant was assessed by a CFC therapist in order to assess motivation for treatment. Individuals were not admitted for inpatient treatment if the assessing therapist deemed that the individual lacked sufficient motivation for treatment.

Prior to completion of the measures, participants were informed that the data would be used for research and evaluation purposes, were informed of their rights as research participants, and signed an informed consent form. Participants completed the measures under the supervision of either a unit nurse or one of two psychology technicians. Completion of measures took approximately three hours, and after the measures were completed, summary assessments were generated and sorted into individual participant charts for clinical use and data analysis. The measures were then input into the existing CFC electronic data set.

Data for the present investigation are part of an existing CFC data set (see Measures below), thus there was no need for additional data collection. The study received approval from CFC's human subjects review committee, which includes both CFC partners and the CFC director of research, and the investigator was then permitted to access the data set.

### *Instruments*

The present study included investigation of three variables—parent-, self-, and

God-perceptions. In addition to the three variables, eating disorder symptom severity was also assessed. Following are the instruments utilized for each of the three predictor variables as well as for the criterion variable, eating disorder symptomology. Means, standard deviations, and correlations for each variable are presented in Table 2.

#### *Parent Perception Predictor Variables*

*Parental Acceptance-Rejection Questionnaire (MARQ & FARQ).* The Mother (MARQ) and Father (FARQ) Acceptance-Rejection scales were developed to assess how individuals, as children, perceived their parents (Rohner, R., Saavedra, J., & Granum, E., 1978). Scores above 150 indicate that individuals perceived the parent to be rejecting, hostile, and indifferent, while scores below 120 indicate that the individual perceived the parent as warm, affectionate, and accepting. Validity and reliability of the instrument was assessed on a sample of 147 college students and were found to be adequate. Authors reported that internal consistency ranged from .86 to .95. Further, construct validity, concurrent, convergent, and discriminant validities of the scales were found to be adequate (Rohner et al., 1978).

*Attitudes Toward Parents Scale (AMS & AFS).* The Attitudes Toward Mother Scale (AMS) and Attitudes toward Father Scale (AFS) were developed to assess the attitude individuals have toward their parents, from the individual's adult perception. Specifically, the measures are utilized to assess the degree of contentment or contention perceived by the individual toward his or her parent. The scales are identical except that one refers to attitudes toward mother (AMS) while the other refers to attitudes toward

Table 2  
*Correlations, Means, and Standard Deviations of Variables*

	EAT	BSQ	MARQ	FARQ	AMS	AFS	RWB	GSE	Ageonset	Childsa	Comorbid
EAT 61.77(22.14)		.624**	.262**	.195**	.229**	.163**	-.032	-.441**	-.049	-.105*	-.045
BSQ 151.74(38.71)	.624**		.256**	.233**	.205**	.218**	-.061	-.492**	-.145**	-.167**	.017
MARQ 90.74(39.91)	.262**	.256**		.511**	.808**	.371**	-.211**	-.236**	-.017	-.259**	-.016
FARQ 98.97(42.96)	.195**	.233**	.511**		.384**	.804**	-.197**	-.221**	.026	-.244**	-.004
AMS 25.36(24.06)	.229**	.205**	.808**	.384**		.390**	-.224**	-.225**	-.051	-.197**	-.017
AFS 27.99(25.38)	.163**	.218**	.371**	.804**	.390**		-.180**	-.198**	-.016	-.181**	-.004
RWB 44.07(13.22)	-.032	-.061	-.211**	-.197**	-.224**	-.180**		.204**	.031	.043	-.038
GSE 28.43(11.44)	-.441**	-.492**	-.236**	-.221**	-.225**	-.198**	.204**		-.012	.242**	.002
Ageonset 15.30(4.34)	-.049	-.145**	-.017	.026	-.051	-.016	.031	-.012		.069	.012
Childsa NA	-.105*	-.167**	-.259**	-.244**	-.197**	-.181**	.043	.242**	.069		-.088
Comorbid NA	-.045	.017	-.016	-.004	-.017	-.004	-.038	.002	.012	-.088	

*Note.* \*\* Correlation is Significant at the 0.01 level (2-tailed). \* Correlation is significant at the 0.05 level (2-tailed).

father (AFS). These measurements have been found to be reliable, with a mean alpha of .95, indicating outstanding internal consistency. Test-retest correlations are excellent, at approximately .95. Further, the AMS and AFS scales purportedly distinguish between individuals whom report having relationship problems with their parents and those whom report no relationship problems with their parents (Hudson, 1982).

Inclusion of both the Parental Acceptance-Rejection Questionnaire and the Attitudes Toward Parents Scale was deemed appropriate, as there may be potentially important differences in the way participants perceived their parents as children, versus how they perceive their parents as adults.

#### *Self-Esteem Predictor Variable*

*Multidimensional Self-Esteem Inventory (MSEI)*. The MSEI is a 116 item measure that assesses several areas of self-esteem functioning, including competence (CMP), lovability (LVE), likability (LKE), self-control (SFC), personal power (PWR), moral self-appearance (MOR), body appearance (BAP), body functioning (BFN), identity integration (IDN), defensive self-enhancement (DEF), as well as global self-esteem (GSE) (O'Brien & Epstein, 1988; Epstein, 1980, 1986; O'Brien, 1980). The MSEI was developed over a seven-year period, and utilized college students at four different colleges and universities. All but the defensive self-enhancement scale has internal consistency reliability coefficients of at least .80, and all scales have test-retest reliabilities of .85 or higher. Further, the global self-esteem (GSE) scale has been shown to have high positive relationships between other measures of self-esteem ( $r = .87$ ) (Steinberg & Shaw, 1997). The MSEI utilizes standard scores, and a t-score below 30 is indicative of very low self-

esteem, t-scores in the range of 30-39 moderately low self-esteem, and t-scores in the range of 40-59 are considered the normal range and are indicative of individuals with a mixture of positive and negative self-perceptions.

*Religious Well-Being Predictor Variable*

*Spiritual Well-Being Scale (SWBS)*. The SWBS is composed of twenty items evenly divided into two subscales of religious well-being (RWB) and existential well-being (EWB) (Paloutzian & Ellison, 1982). For purposes of the present investigation, only the religious well-being scale was utilized. The RWB subscale assesses a religious or vertical dimension based on the individual's relationship to God.

SWBS scores range from 1 to 6, with higher numbers representing greater well-being. Factor analysis revealed that while all the religious items loaded on the RWB factor, the existential items loaded on two sub-factors, one regarding life direction and the other regarding life satisfaction (Paloutzian & Ellison, 1979). High correlations between the total SWB and RWB subscale have been reported ( $r = .90$ ). Test-retest reliability coefficients of the SWBS indicate coefficients of .96 for RWB. Internal consistency coefficients have been reported to be .87 (RWB), indicating that the religious well-being subscale has high reliability and internal consistency. Another investigation by Upshaw (1988) reported high reliabilities— .99 for RWB— and other studies have reported coefficient alphas in similar ranges (Brinkman, 1988; Kirsching & Pittman, 1989). The SWBS has been conceptualized as a comprehensive measure of health and well-being, and validity studies have shown positive relationships with several psychological variables (Ellison, 1983; Miller, 1990; Paloutzian & Ellison, 1982).



### *Eating Disorder Symptom Severity Criterion Variables*

*Eating Attitudes Test (EAT-40).* The EAT is a 40 item test designed to assess those attitudes and behaviors similar to those with clinically diagnosed eating disorders. Participants rate the frequency of 40 statements using a 6 point scale, and subscales include dieting, bulimic behaviors, and self-control of eating behavior (Hewitt et al., 1995). Garner and Garfinkel (1980) reported that the EAT is effective for assessing a wide range of attitudes and behaviors characteristic of eating disorders and is able to identify individuals with eating disturbances. While high scores on the EAT do not necessarily equate with clinical eating disorders, many of the characteristics are the same as those found in anorexia, and it is considered to be an appropriate screening device for eating disorders. Cronbach's alpha is .85, and a cutoff of 20 is believed to reliably identify disturbed eating.

The EAT has been widely tested for reliability and validity and has been found to be a reliable and valid measure of eating problems (Fisher et al., 1994; Hesse-Biber & Marino, 1991). For instance, reports indicate an alpha reliability coefficient of .79 for anorexia and .94 for pooled anorexic and normal controls, and a test-retest reliability coefficient of .84 (Hesse-Biber & Marino, 1991). Further, Garner, Olmsted, Bohr, and Garfinkel (1982) found that 83.6% of cases based on the EAT were correctly classified.

*Body Shape Questionnaire (BSQ).* The Body Shape Questionnaire (BSQ) (Cooper, Taylor, Cooper, & Fairburn, 1987) is a 34-item self-report measure that assesses concerns about body shape in individuals with eating disorders. With a score range of 34-204, higher scores indicate more body perception concerns surrounding issues related to

an individual's body shape, such as feeling too fat, wanting to be thinner, or feeling ashamed and self-conscious about one's body. The BSQ demonstrated good internal consistency, with item correlation at .60 or above in a sample of patients and non-patients (Cooper et al., 1987). Validity studies on the BSQ have been associated with higher scores on several other measures of eating disorders. Further, individuals with bulimia scored higher on the questionnaire than those who did not have bulimia (Cooper et al., 1987), and higher scores were also related to certain psychopathologies including depression and low self-esteem (Cooper & Fairburn, 1993).

Inclusion of both the EAT and BSQ was deemed appropriate, as each instrument provides valuable information that one measure alone does not address comprehensively. For instance, while the BSQ addresses mainly body shape, an important component of eating disorders, it does not adequately address other eating disorder behaviors thoroughly, such as dieting, bulimic behavior, etc., which is addressed in the EAT.

#### *Demographic Predictor Variables*

As was discussed previously, there are some demographic predictors of more favorable outcome and less symptom severity. These variables include age of onset (Steinhausen et al., 1991; Yager, 1989); lack of comorbid diagnosis or lack of mixed diagnosis (Kennedy & Garfinkel, 1992; Sykes et al., 1986; Wilfley & Cohen, 1997); and lack of history of childhood sex abuse or other trauma (Palmer, 1995). Thus, examination of perceptions of parents, perceptions of self, and perceptions of God included these demographic variables in order to account for their effects on symptom severity.

Demographic variables were measured by the following:

*Age of onset.* Participant's self-report of when onset of symptoms occurred was obtained from psychological evaluations in the participant's clinical chart.

*Comorbid diagnosis (of Axis II diagnoses).* Determination of whether participants had Axis I or Axis II disorders was made based on the report of psychologists as recorded in participant charts.

*History of childhood sex abuse.* Participant's self-report of whether they had a history of sexual abuse was obtained from psychological evaluations in the participant's chart.

#### *Methods of Analysis and Variables*

In addition to descriptive statistics of participants, the present investigation utilized multiple regression analysis to assess the relationships between parent-, self-, and God-perceptions and whether these variables were predictive of symptom severity at the beginning of inpatient treatment for eating disorders. Multiple regression analysis was utilized to assess the relationship between criterion variables (symptom severity at outset of inpatient treatment) and predictor variables (parental/acceptance, attitude toward mother/father, multidimensional self-esteem, and religious well-being) while accounting for demographic predictor variables. Logistic regression was utilized for assessment of associations between eating disorder diagnosis and symptom severity, as eating disorder diagnosis is a categorical variable and is best analyzed with logistic regression rather than multiple regression.

The criterion variables ( $Y_i$ ), or that which was predicted by the predictor variables, for each of the questions of interest were as follows:

$Y_1$  = Score on the Eating Attitudes Test (EAT)

$Y_2$  = Score on the Body Shape Questionnaire (BSQ)

The predictor variables ( $X_j$ )—including those demographic variables which were accounted for—used to predict variance in the criterion variables were as follows:

$X_1$  = Mother Acceptance/Rejection Questionnaire Total Score (MARQ)

$X_2$  = Father Acceptance/Rejection Questionnaire Total Score (FARQ)

$X_3$  = Attitude Toward Mother Scale Total Score (AMS)

$X_4$  = Attitude Toward Father Scale Total Score (AFS)

$X_5$  = Multidimensional Self-Esteem Inventory Global Self-Esteem Score (GSE)

$X_6$  = Religious Well-Being Subscale Total Score (RWB)

$X_7$  = Age of Onset

$X_8$  = Comorbid Diagnosis

$X_9$  = History of Childhood Sex Abuse

Stepwise multiple regression analysis is a procedure that utilizes forward selection and backward elimination of variables. This procedure illuminates associations between single variables and combinations of variables. Data from the possible variable distributions are then fit simultaneously and portrayed in a line, plane, or sphere of best fit. This procedure allows examination of the association between a criterion variable and a predictor variable, but also provides information about the relationship of the criterion and predictor variables in relation to other predictor variables.

Logistic regression is much like multiple regression, except that it assesses categorical variables rather than continuous variables. Logistic regression allows assessment of criterion variables as a function of categorical predictor variables. Since eating disorder diagnosis is considered a categorical variable (AN, BN, or NOS) rather than a continuous variable, logistic regression was the most appropriate analysis for the eating disorder diagnosis portion of the questions of interest.

The first hypothesis, whether perceptions of parents were predictive of eating disorder symptom severity, was examined with analyses that assessed the relationship between the criterion variables (symptom severity) and the predictor variables (perceptions of parents) while accounting for the demographic predictor variables (age of onset, comorbid diagnosis, and history of sex abuse). Examination of differences between perceptions of mothers and perceptions of fathers was assessed with a paired t-test analysis. Finally, determination of whether these perceptions were predictive of eating disorder diagnosis subtype was assessed using backward logistic regression analyses.

The second hypothesis, whether perceptions of self were predictive of eating disorder symptom severity, was examined with analyses that assessed the relationship between the criterion variables (symptom severity) and the predictor variable (perceptions of self) while accounting for the demographic predictor variables (age of onset, comorbid diagnosis, and history of sex abuse). Determination of whether these perceptions were predictive of eating disorder diagnosis subtype was assessed using backward logistic regression analyses.

The third hypothesis, whether perceptions of God were predictive of eating disorder symptom severity, was examined with analyses that assessed the relationship between the criterion variables (symptom severity) and the predictor variable (perceptions of God) while accounting for the demographic predictor variables (age of onset, comorbid diagnosis, and history of sex abuse). Determination of whether these perceptions were predictive of eating disorder diagnosis subtype was assessed using backward logistic regression analyses.

The fourth hypothesis, determination of the model or relationship among perceptions of parents, perceptions of self, and perceptions of God that was most predictive of symptom severity among women beginning inpatient treatment for eating disorders, was examined with analyses that assessed the relationship between the criterion variables (symptom severity) and the predictor variables (perceptions of parents, perceptions of self, and perceptions of God) while accounting for the demographic predictor variables (age of onset, comorbid diagnosis, and history of sex abuse). This procedure helped to determine the best model of fit between the criterion variables and predictor variables in relation to one another. Determination of whether these perceptions, in relation to one another, were predictive of eating disorder diagnosis subtype was assessed using backward logistic regression analyses.

## RESULTS

### *Hypothesis #1*

The first hypothesis sought to determine if perceptions of parents were predictive of symptom severity among women beginning inpatient treatment for eating disorders, and if these parental perceptions were predictive of eating disorder diagnosis subtype (AN, BN, NOS). Further, hypothesis one also sought to examine differences between perceptions of mothers and perceptions of fathers. To determine if perceptions of parents were predictive of symptom severity among women beginning inpatient treatment, stepwise multiple regression analysis was utilized. To answer whether parental perceptions were predictive of eating disorder diagnosis subtype, backward logistic regression was utilized, and to determine differences between perceptions of mothers and fathers, a paired t-test analysis was employed. The results of the analyses are shown in Tables 3 through 6.

Table 3 presents the results of the stepwise multiple regression analysis of the perceptions of parents variables and the Eating Attitudes Test (EAT), one measure of eating disorder symptom severity, while Table 4 presents the results of stepwise multiple regression analysis of perceptions of parents and the Body Shape Questionnaire (BSQ), the second measure of eating disorder symptom severity used in the present investigation. For each of the two tables, the t value of the beta weight of the predictor and the two-tailed test of probability of type-I error (P) of that t score are presented. Additionally, each of the tables display the combined coefficient of determination ( $R^2$ ), the F ratio of explained to error variance (F), and the two-tailed probability of type-I error (P).

As can be seen in Table 3, two of the predictor variables, mother acceptance/rejection (MARQ) and attitudes towards father (AFS), were significant predictors of the eating attitudes (EAT) criterion variable. Similarly, Table 4 shows that the same two predictor variables, mother acceptance/rejection (MARQ) and attitudes towards father (AFS), were significant predictors of the body shape (BSQ) criterion variable.

Table 3

*Stepwise Multiple Regression Analysis for Perceptions of Parents Variables Predicting Eating Attitudes Test (EAT)*

Predictors	t	P	R <sup>2</sup>	F	Total P
MARQ	4.021	.000			
AFS	1.990	.047			
			.076	15.445	.000

Variables Not in Equation: FARQ, AMS, Ageonset, Childsa, Comorbid

*Note.* Attitudes Towards Mother (AMS), Attitudes Towards Father (AFS), age of onset (Ageonset), childhood sex abuse (Childsa), comorbid diagnosis (Comorbid), Father Acceptance/Rejection Questionnaire (FARQ), Mother Acceptance/Rejection Questionnaire (MARQ)

Table 4

*Stepwise Multiple Regression Analysis for Perceptions of Parents Variables Predicting Body Shape Questionnaire (BSQ)*

Predictors	t	P	R <sup>2</sup>	F	Total P
MARQ	3.539	.000			
AFS	2.824	.005			
			.080	16.528	.000

Variables Not in Equation: FARQ, AMS, Ageonset, Childsa, Comorbid

*Note.* Attitudes Towards Mother (AMS), Attitudes Towards Father (AFS), age of onset (Ageonset), childhood sex abuse (Childsa), comorbid diagnosis (Comorbid), Father Acceptance/Rejection Questionnaire (FARQ), Mother Acceptance/Rejection Questionnaire (MARQ)



To answer whether parental perceptions were predictive of eating disorder diagnosis subtype, backward logistic regression was utilized, with results showing that the parental perceptions variables were not significant predictors of eating disorder diagnosis subtype (Overall model Chi-square = 10.799, 8 df,  $p = .213$ , two-tailed).

Finally, Hypothesis One sought to determine if there were differences between perceptions of mothers and fathers, utilizing paired t-test analyses. Table 5 displays results of paired t-test analysis for differences between the mother acceptance/rejection (MARQ) variable and the father acceptance/rejection (FARQ) variable, while Table 6 displays results of paired t-test analysis for differences between the attitudes towards mother (AMS) variable and the attitudes towards father (AFS) variable. For each of the tables the mean and standard deviation of each variable is displayed, along with the t value (t), degrees of freedom and the two-tailed probability of type-I error (P) of the analysis.

Table 5

*Paired T-test on Differences between MARQ and FARQ Variables*

Predictors	M	SD	t	df	P
MARQ	90.15	39.898			
FARQ	99.05	43.040			
			-4.467	425	.000*

*Note.* Father Acceptance/Rejection Questionnaire (FARQ), Mother Acceptance/Rejection Questionnaire (MARQ). \* two-tailed test

As displayed in Table 5, there was a significant difference between acceptance/rejection of mothers (MARQ) and acceptance/rejection of fathers (FARQ), with fathers being viewed as more rejecting, hostile, and indifferent than mothers.

Similarly, Table 6 shows a significant difference between attitudes towards fathers (AFS) and attitudes towards mothers (AMS), with participants expressing more negative attitudes towards fathers.

Table 6

*Paired T-test on Differences between AFS and AMS Variables*

Predictors	M	SD	t	df	P
AFS	27.99	25.376			
AMS	25.31	23.989			
			2.045	431	.042*

*Note.* Attitudes Towards Mother (AMS), Attitudes Towards Father (AFS); \*two-tailed test

*Hypothesis #2*

Hypothesis Two sought to determine if perceptions of self were predictive of symptom severity among women beginning inpatient treatment for eating disorders, and if these self perceptions were predictive of eating disorder diagnosis subtype. To determine if perceptions of self were predictive of symptom severity among women beginning inpatient treatment, stepwise multiple regression analysis was utilized, and to answer whether self perceptions were predictive of eating disorder diagnosis subtype, backward logistic regression was utilized. The results of the analyses are shown in Tables 7 and 8.

Table 7 presents the results of the stepwise multiple regression analysis of the perceptions of self variables and the Eating Attitudes Test (EAT), one measure of eating disorder symptom severity, while Table 8 presents the results of stepwise multiple regression analysis of perceptions of self and the Body Shape Questionnaire (BSQ), the

second measure of eating disorder symptom severity used in the present investigation. For each of the two tables, the t value of the beta weight of the predictor and the two-tailed test of probability of type-I error (P) of that t score are presented. Additionally, each of the tables display the combined coefficient of determination ( $R^2$ ), the F ratio of explained to error variance (F), and the two-tailed probability of type-I error (P).

As can be seen in Table 7, the perceptions of self predictor variable (GSE) was a significant predictor of the eating attitudes (EAT) criterion variable. Similarly, Table 8 shows that the perceptions of self predictor variable was a significant predictor of the body shape (BSQ) criterion variable.

Table 7

*Stepwise Multiple Regression Analysis for Perceptions of Self Variable Predicting Eating Attitudes Test (EAT)*

Predictors	t	P	$R^2$	F	Total P
GSE	-9.356	.000			
			.181	87.534	.000

Variables Not in Equation: Ageonset, Childsa, Comorbid

Note. Global Self-Esteem (GSE), Age of onset (Ageonset), childhood sex abuse (Childsa), comorbid diagnosis (Comorbid)

Table 8

*Stepwise Multiple Regression Analysis for Perceptions of Self Variable Predicting Body Shape Questionnaire (BSQ)*

Predictors	t	P	$R^2$	F	Total P
GSE	-11.167	.000			
			.239	124.710	.000

Variables Not in Equation: Ageonset, Childsa, Comorbid

Note. Global Self-Esteem (GSE), Age of onset (Ageonset), childhood sex abuse (Childsa), comorbid diagnosis (Comorbid)

To answer whether perceptions of self were predictive of eating disorder diagnosis subtype, backward logistic regression was utilized, with results showing that the self perceptions variable was a significant predictor of eating disorder diagnosis subtype, with a significant association between self-esteem (GSE) and a diagnosis of Anorexia Nervosa (AN) (Overall model Chi-square = 6.727, 2 df,  $p = .035$ ; Wald = 6.487, 1 df,  $p = .011$ ).

### *Hypothesis #3*

The third hypothesis sought to determine if perceptions of God were predictive of symptom severity among women beginning inpatient treatment for eating disorders, and if these God perceptions were predictive of eating disorder diagnosis subtype. To determine if perceptions of God were predictive of symptom severity among women beginning inpatient treatment, stepwise multiple regression analysis was utilized, and to answer whether God perceptions were predictive of eating disorder diagnosis subtype, backward logistic regression was utilized. The results of the analyses are shown in Tables 9 and 10.

Table 9 presents the results of the stepwise multiple regression analysis of the perceptions of God variable and the Eating Attitudes Test (EAT), one measure of eating disorder symptom severity, while Table 10 presents the results of stepwise multiple regression analysis of perceptions of God and the Body Shape Questionnaire (BSQ), the second measure of eating disorder symptom severity used in the present investigation. For each of the two tables, the  $t$  value of the beta weight of the predictor and the two-tailed test of probability of type-I error ( $P$ ) of that  $t$  score are presented. Additionally, each of

the tables display the combined coefficient of determination ( $R^2$ ), the F ratio of explained to error variance (F), and the two-tailed probability of type-I error (P).

Table 9

*Stepwise Multiple Regression Analysis for Perceptions of God Variable Predicting Eating Attitudes Test (EAT)*

Predictors	t	P	$R^2$	F	Total P
RWB	-.049	.961			
			.000	.002	.961

Variables Not in Equation: Ageonset, Childsa, Comorbid

Note. age of onset (Ageonset), childhood sex abuse (Childsa), comorbid diagnosis (Comorbid), Religious well-being (RWB)

Table 10

*Stepwise Multiple Regression Analysis for Perceptions of God Variable Predicting Body Shape Questionnaire (BSQ)*

Predictors	t	P	$R^2$	F	Total P
RWB	-.849	.396			
			.002	.722	.396

Variables Not in Equation: Ageonset, Childsa, Comorbid

Note. age of onset (Ageonset), childhood sex abuse (Childsa), comorbid diagnosis (Comorbid), Religious well-being (RWB)

As can be seen in Table 9 the perceptions of God predictor variable was not a significant predictor of the eating attitudes (EAT) criterion variable. Similarly, Table 10 shows that the perceptions of God predictor variable was not a significant predictor of the body shape (BSQ) criterion variable.

To answer whether perceptions of God were predictive of eating disorder diagnosis subtype, backward logistic regression was utilized, with results showing that

the God perceptions variable was not a significant predictor of eating disorder diagnosis subtype (Overall model Chi-square = .058, 2 df,  $p = .971$ , two-tailed).

#### *Hypothesis #4*

The fourth hypothesis sought to determine what model or relationship among perceptions of parents, perceptions of self, and perceptions of God was most predictive of symptom severity among women beginning inpatient treatment for eating disorders, and if these perceptions, in relation to one another, were predictive of eating disorder diagnosis subtype. To determine the best model or fit among the variables, stepwise multiple regression analysis was utilized, and to answer whether these perceptions were predictive of eating disorder diagnosis subtype, backward logistic regression was utilized. The results of the analyses are shown in Tables 11 and 12.

Table 11 presents the results of the stepwise multiple regression analysis of the model of best fit among perceptions of parents, perceptions of self, and perceptions of God and the Eating Attitudes Test (EAT), one measure of eating disorder symptom severity, while Table 12 presents the results of stepwise multiple regression analysis of perceptions of parents, self, and God, and the Body Shape Questionnaire (BSQ), the second measure of eating disorder symptom severity used in the present investigation. For each of the two tables, the  $t$  value of the beta weight of the predictor and the two-tailed test of probability of type-I error ( $P$ ) of that  $t$  score are presented. Additionally, each of the tables display the combined coefficient of determination ( $R^2$ ), the  $F$  ratio of explained to error variance ( $F$ ), and the two-tailed probability of type-I error ( $P$ ).

As can be seen in Table 11, the model of best fit among the predictor variables on eating attitudes included mother acceptance/rejection (MARQ) and self-esteem (GSE). However, the model of best fit among the predictor variables on body shape included father acceptance/rejection (FARQ) and self-esteem (GSE), as is shown in Table 12.

Table 11

*Stepwise Multiple Regression Analysis for Model of Best Fit among Perceptions of Parents, Self, and God Variables Predicting Eating Attitudes Test (EAT)*

Predictors	t	P	R <sup>2</sup>	F	Total P
MARQ	3.024	.003			
GSE	-7.944	.000			
			.197	44.396	.000

Variables Not in Equation: FARQ, AMS, AFS, RWB, Ageonset, Childsa, Comorbid  
*Note.* Attitudes Towards Mother (AMS), Attitudes Towards Father (AFS), age of onset (Ageonset), childhood sex abuse (Childsa), comorbid diagnosis (Comorbid), Father Acceptance/Rejection Questionnaire (FARQ), Mother Acceptance/Rejection Questionnaire (MARQ); Global Self-esteem (GSE); Religious well-being (RWB)

Table 12

*Stepwise Multiple Regression Analysis for Model of Best Fit among Perceptions of Parents, Self and God Variables Predicting Body Shape Questionnaire (BSQ)*

Predictors	t	P	R <sup>2</sup>	F	Total P
GSE	-9.859	.000			
FARQ	2.639	.009			
			.255	62.036	.000

Variables Not in Equation: MARQ, AFS, AMS, RWB, Ageonset, Childsa, Comorbid  
*Note.* Attitudes Towards Mother (AMS), Attitudes Towards Father (AFS), age of onset (Ageonset), childhood sex abuse (Childsa), comorbid diagnosis (Comorbid), Father Acceptance/Rejection Questionnaire (FARQ), Mother Acceptance/Rejection Questionnaire (MARQ); Global Self-esteem (GSE); Religious well-being (RWB)

To determine the model of best fit among perceptions of parents, self, and God as predictive of eating disorder diagnosis subtype, backward logistic regression was utilized,

with results showing that none of the predictor variables, as a whole, were significant predictors of eating disorder diagnosis subtype (Overall model Chi-square = 15.153, 12 df,  $p = .233$ , two-tailed).

### *Summary of Results*

The present study sought to better understand perceptions of parents, perceptions of self, and perceptions of God as related to eating disorder symptom severity among women beginning inpatient treatment for eating disorders. One purpose of the study was to understand the association between eating disorder symptom severity and each of the three perceptions (parents, self, and God) separately, while accounting for certain demographic variables. Statistical analyses showed that perceptions of parents were significant predictors of eating disorder symptom severity at the outset of treatment, and that there were significant differences between perceptions of mothers and perceptions of fathers, with perceptions of fathers being more negative. Further, results showed that perceptions of self was a significant predictor of symptom severity. However, analyses showed that perceptions of God was not a significant predictor of symptom severity among women beginning inpatient treatment for eating disorders.

A second purpose of the present investigation was to better understand the model of best fit among the three perceptions (parents, self, and God) as related to eating disorder symptom severity. Statistical analyses showed that, as a whole, the best model of fit among the three perceptions and eating attitudes, while accounting for certain demographic variables, included mother acceptance/rejection (MARQ) and self-esteem (GSE). However, the best model of fit among the three perceptions and body shape, while



accounting for certain demographic variables, included father acceptance/rejection (FARQ) and self-esteem (GSE). Although not a focus of this investigation, it should be noted that age of onset was a significant predictor of body shape until it was removed from the analysis. Once age of onset was removed however, father acceptance/rejection (FARQ) and self-esteem (GSE) remained significant predictors of body shape. The finding that father acceptance/rejection (FARQ) was a significant predictor of body shape when the perceptions were considered as a whole is particularly interesting, given that FARQ was not a significant predictor when considered separately. Certainly, these findings beg the larger question regarding differences between perceptions of mothers and fathers and how these perceptions interact with other variables of interest when considering eating disorder symptom severity.

Finally, the present investigation sought to understand if the three perceptions were predictive of eating disorder diagnosis subtype (AN, BN, NOS). Results indicated a significant association between self-esteem and a diagnosis of Anorexia Nervosa (AN).

## DISCUSSION

The present investigation sought to better understand the relationship between a woman's perceptions of parents, self, and God, and eating disorder symptom severity at the outset of inpatient treatment. While research has long supported the importance of an eating disordered woman's view of self and view of parents, a woman's view of God has not fully been explored, nor have the three perceptions been investigated together. Specifically, the present study sought to determine if perceptions of parents, perceptions of self, and perceptions of God, were predictive of eating disorder symptom severity separately and as taken as a whole.

The study was unique and important for several reasons. First, the study utilized a large sample of women beginning inpatient treatment for eating disorders, whereas many investigations in the extant research relied on smaller samples which did not include an inpatient population. Second, the study utilized measures not overly used in the research base, yet which are appropriate and could prove enlightening for addressing questions of interest in the eating disorder research domain. For instance, questions regarding differences between women's views of their mothers and fathers were able to be investigated in the present study, which sheds light on the complex relationships between eating disordered women and their parents. Third, the present investigation examined both eating attitudes and body shape among women with eating disorders, allowing distinctions to be drawn and contributing to the field's understanding of those factors that may be predictive of one type of eating disorder symptom but not another. This research, in turn, may direct treatment options depending on the symptoms of greatest concern.

Fourth, this study addressed potential confounding variables that have been shown, in previous research, to be associated with symptom severity, by including them in the statistical analyses. Fifth, there is a dearth of research on women's religious well-being and spirituality as related to eating disorder symptom severity, and this study represented an initial investigation in this area. Finally, the present investigation suggested a model or relationship among perceptions of parents, perceptions of self, and perceptions of God as related to eating disorder symptom severity at the outset of inpatient treatment.

### *Findings*

With regard to eating disordered women's perceptions of parents, the study found that a woman's view of maternal acceptance or rejection and a woman's attitudes towards father were predictive of eating disorder symptom severity (both attitudes and body shape). Of interest is that while mother acceptance/rejection was predictive of symptom severity, father acceptance/rejection was not, and that while attitudes towards father was predictive of symptom severity, attitudes towards mother was not. It appears that the eating disordered women in this study viewed their mothers and fathers differently, and that these distinct views were predictive of symptom severity. For instance, the findings suggest that the women had a specific view of mothers that contributed to their symptom severity— whether their mothers were accepting or rejecting. In contrast, the women's view of their fathers was perhaps a less specific attitude, but a significant contributor to symptom severity all the same. This finding is supported by a previous examination that daughters' perceptions of their fathers influenced the development of eating concerns (Wonderlich et al., 1994). For example, statements from the mother acceptance/rejection

measure such as [my mother] “viewed me as a burden” or “punished me severely when she was angry” speak to the specificity elicited by the questionnaire, whereas the attitudes towards father questionnaire include items such as “I dislike my father” and “my father is too demanding.” Thus, while the women’s views of mothers predictive of symptom severity seemed related to specific behaviors, their views of fathers were less specific, but convey perhaps a more pervasive, general attitude which is predictive of symptom severity. A pervasive attitude of father absence, whether physically or emotionally is supported in the literature base (Cole-Detke & Kobak, 1996; de Groot & Rodin, 1994; Leibowitz, 1991; Rhodes & Kroger, 1992), and may account for the differences found in parental perceptions.

The finding that there were indeed differences in the way eating disordered women view their mothers and fathers was particularly interesting, and finds some support in the research literature (Cole-Detke & Kobak, 1996; Dominy et al., 2000; Dozier et al., 1999; Godin & Hallez, 1964; Minuchin, Rosman, & Baker, 1980; Nelson & Jones, 1957; Rhodes & Kroger, 1992; Strunk, 1959; Vergote & Tamayo, 1981). While there is some disagreement in the literature regarding one’s perception of mother versus one’s perception of father, women in the present study viewed their fathers as more rejecting, hostile, and indifferent than their mothers and expressed more negative attitudes towards their fathers. This finding is supported by examinations of other addictive disorders which concluded that the father relationship is most predictive of addictive behavior (Campo & Rohner, 1992), and examinations in which daughters felt used in order to meet their fathers’ needs (Bemporad & Ratey, 1985; Bemporad et al., 1992).

As expected, the present investigation found a woman's perception of self to be a significant predictor of eating disorder symptom severity. This finding is not surprising, as it is widely accepted in the extant research (de Groot & Rodin, 1994; Ghaderi, 2001; Vohs et al, 2001; Vohs et al., 1999; Joiner et al., 1997).

Contrary to expectations, the present investigation failed to find that a woman's perception of God was predictive of eating disorder symptom severity. While Bowlby (1973) hypothesized that attachment processes can potentially be applied to many settings and phenomenon, including religious or spiritual beliefs (Kirkpatrick, 1999), this was not the case in the present study.

There may be several reasons that no significant relationship between perception of God and eating disorder symptom severity was found in the present investigation. Certainly it is possible that no such relationship exists—that one's religious well-being is not predictive of eating disorder symptom severity at the beginning of inpatient treatment, although some initial support for a relationship between perception of God and eating disorders has been evidenced (Richards et al., 1997). While support exists for the hypothesis that individuals tend to view God similarly to the way they view parents (Greeley, 1990; Freud, 1961; Kirkpatrick, 1999) and themselves (Benson & Spilka, 1973; Spilka et al., 1975), this phenomenon may not be predictive of behavioral patterns—in this case eating disorder symptomology. Religious well-being may well be just one small facet of an individual's perception of God, and may not fully speak to the ways religion and spirituality potentially impact eating disorder symptomology.

It is possible that the religious well-being scale, which was utilized in the present study, failed to fully address an individual's perception of God. Perhaps the RWB was not subtle or sensitive enough to fully address the construct. Further, in examining the distribution of scores on the RWB subscale, it was found that the subscale is susceptible to a ceiling effect, with individuals reporting a more positive relationship with God. The restricted range of the subscale lowers its ability to adequately detect correlations, which has been the case with another investigation which utilized the RWB (P.S. Richards, personal communication, April 29, 2005). Also at play may be that individuals with eating disorders often have a cognitive disconnect from God in that on a cognitive level they may endorse a relationship with God, wherein reality there is a spiritual and emotional disconnect, as these women are unable to let go and trust God. Such disconnect is common to women with eating disorders (Richards et al., 1997), and may help illuminate the discussion of perception of God.

The model of best fit among the variables and eating attitudes was different from the model of best fit for body shape. Mother acceptance/rejection and self-esteem were found to be most predictive of eating attitudes, while father acceptance/rejection and self-esteem were found to be most predictive of body shape.

The present investigation concludes that the model that best predicted eating disorder symptom severity at the beginning of inpatient treatment included perceptions of parents and perceptions of self. This conclusion supports one tenet of attachment theory—that an individual's perception of self may be inextricably tied to one's perception of parents (Bowlby, 1969, 1982; Dozier et al., 1999). Interactions with parents provide

the foundation for how an individual comes to see herself, and as shown in the present study, is predictive of symptom severity among eating disordered women. However, this investigation did not support the hypothesis that an eating disordered woman's perception of God would interact with the other two perceptions to predict symptom severity.

Individuals who perceive their parents as cold and rejecting, and in turn view themselves as rejected and unloved, invariably feel emotional distress related to this inattention to needs. It was hypothesized that an eating disorder may function as a coping behavior for these individuals who feel their needs are not met, and the present study supported this hypothesis. Such women may turn against parents and themselves, and the emotional distress they experience, and instead attempt to cope through controlling their eating behavior (Cole-Detke & Kobak, 1996).

Finally, with regard to eating disorder diagnosis subtype, a significant association was found between self-esteem and a diagnosis of Anorexia Nervosa. Anorexia is sometimes considered the more dire eating disorder diagnosis, and may reflect more disturbances in an individual's sense of self. Thus, treatment with individuals with anorexia would be strengthened by a clear focus on self-esteem improvement.

### *Conclusions*

The present study sought to investigate the relationship between perceptions of parents, self, and God, and eating disorder symptom severity at the beginning of treatment. While the findings that perception of parents and perception of self were predictive of eating disorder symptom severity are not surprising, the hypothesized perception of God was not predictive of symptom severity in this investigation. While

attachment theory serves as a useful foundation for discussing how one's perception of parents is tied to one's perception of self for predicting eating disorder symptom severity, it cannot be extended to one's perception of God—at least in the present study.

Indeed, the finding that there were differences between perceptions of mothers and fathers is intriguing, and serves as a call for more attention to the potentially different ways that perceptions of mothers and fathers may predict eating disorder symptomology. Finally, the significant association between self-esteem and a diagnosis of Anorexia Nervosa highlights the importance of attending to perceptions of self when working with individuals diagnosed with Anorexia Nervosa.

#### *Methodological Strengths*

The present study was a comprehensive investigation that utilized several measurements of psychological functioning. The investigation relied on instruments reported to have good reliability and validity, which have been supported by previous research. Further, the large number of cases made the use of multiple regression feasible without compromising statistical power.

#### *Limitations of the Study*

The present investigation relied solely on an inpatient sample of women being treated for eating disorders, and it is unknown whether there are potentially important differences on the questions of interest between an inpatient sample and the general population of eating disordered women. Severity of eating disorder may be another dimension in which an inpatient sample may differ from the general population of eating disordered women. Further, the study only investigated women, and while the vast



majority of individuals with eating disorders are women, there was no inquiry of men with eating disorders. Most of the women in this study were Caucasian, which limits the generalizability of the findings to other ethnicities. The majority of participants were affiliated with the LDS faith, which also limits generalizability to other religious affiliations. This investigation relied on one aspect of perception of God—religious well-being. Inclusion of other potentially important factors relating to religion and spirituality would have provided a firmer foundation for investigating perception of God as related to eating disorder symptom severity.

#### *Recommendations for Future Research*

While other investigations have found religion and spirituality to be a factor in eating disorders, it seems this topic warrants more investigation. Particularly, it would be important to utilize a variety of religion and spirituality factors in order to better understand the nature of the relationship between perception of God and eating disorder symptomology. It would also be valuable to understand how perception of God may be related to eating disorder treatment process and outcome.

Certainly, further investigation of the differences between mothers and fathers and eating disorder symptomology is warranted. A qualitative investigation of how eating disordered women perceive their relationships with mothers and fathers could set a foundation for better understanding the nuances in these relationships that are predictive of eating disorders. Appreciation of the different perceptions of mothers and fathers could be quite illuminating for understanding eating disorder etiology and could provide focus for treatment and recovery.

Further investigation of the differences between eating disorder diagnosis would also be beneficial. Of particular interest is the association between self-esteem and Anorexia Nervosa. Future investigations could examine the specific self-esteem deficits or factors that may be more closely tied to Anorexia Nervosa, thus proving helpful from both an etiological and treatment perspective.

*Implications and Recommendations for Practice*

The present investigation highlighted the importance of understanding an eating disordered woman's perceptions of self and parents. Practitioners would do well to focus on these perceptions in treatment, and in particular, to understand the specific ways that fathers and mothers may influence eating disorder symptomology. While perceptions of God may not be a core treatment issue for eating disorders, practitioners may do well to tentatively explore clients' relationship with God, religion, and spirituality, and if deemed important, to utilize individuals' perception of God in treatment. Finally, when working with individuals with a diagnosis of Anorexia Nervosa, practitioners must make perceptions of self a core treatment issue.

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## APPENDIX

*Journal Article**Introduction*

Anorexia nervosa and bulimia nervosa have received a great deal of media attention and have been the focus of much research. The debilitating effects of these disorders continue to plague individuals, especially young women, with research estimating that 95% of individuals with anorexia and 90% of individuals with bulimia are women (Killian, 1994). Consequently, most research and treatment interventions focus on women.

Certain groups are at heightened risk for the development of eating disorders. Eating disorders typically affect white, middle-to-upper class females, but more diverse populations, including Hispanics, Blacks, and lower socioeconomic groups are increasingly affected (Phelps & Bajorek, 1991). Women ages 12 to 25 are at greatest risk for the development of eating disorders (Garner, Garfinkel, & Goldbloom, 1987; Hesse-Biber & Marino, 1991; Pumariega & LaBarbera, 1986).

Much research has investigated the relationship between perceptions of parents, perceptions of self, and eating disorders. In contrast, there is a dearth of research regarding eating disorders and religious well-being, although there have been contributions implicating the importance of investigating religion and spirituality (Richards, Hardman, Frost, Berrett, Clark-Sly, & Anderson, 1997; Joughin, Crisp, Halek, & Humphrey, 1992; Graham, Spencer, & Andersen, 1991; Warren, Jackson, Thornton, Russell, Touyz, & Beumont, 1994). These investigations highlight the value of



understanding an eating disordered individual's religious life and spirituality, as these factors may have important implications for etiology, prevention, and treatment of eating disorders.

Currently, it appears as though there have been no investigations of the relationship between perceptions of parents, self, and God as related to eating disorder symptom severity, even though these three variables have been identified as potentially important to understanding the eating disordered individual. Thus, the present investigation sought to better understand these factors as they relate to women beginning inpatient treatment for eating disorders.

#### *Purpose of Present Study*

The present investigation sought to examine perceptions of parents, perceptions of self, and perceptions of God, and whether these variables were predictive of symptom severity of women beginning inpatient treatment for eating disorders. The purposes of the present investigation were two-fold. First, the investigator sought to understand whether each of the three variables individually (perception of parents, perceptions of self, and perceptions of God) were related to eating disorder symptom severity at the beginning of inpatient treatment. Second, utilizing the three variables of interest, the investigator sought to determine the best predictive model of eating disorder symptom severity among women beginning inpatient treatment.

Specifically, it was hypothesized that perceptions of parents, perceptions of self, and perceptions of God were all related to eating disorder symptom severity, and that the three variables were predictive of eating disorder symptom severity at the beginning of

inpatient treatment. Specifically, it was hypothesized that those women with more positive perceptions of parents, self, and God would have less symptom severity than those women with more negative perceptions of parents, self, and God. The present investigation examined the variables of interest while accounting for other predictors of less symptom severity and more favorable outcome (e.g., age of onset, comorbid diagnosis, and history of childhood sex abuse). While much research has documented the relationship between parents, self, and eating disorders, no single investigation has also examined perceptions of God, and whether this variable might be predictive of symptom severity among women beginning inpatient treatment for eating disorders.

There are several noteworthy contributions of the present study. The extant literature provides conflicting statements regarding whether perception of mother or father is more predictive of eating disorder symptom severity. The current investigation sought to provide more clarification on this matter, by investigating perceptions of father and mother separately, so as to delineate potentially important differences between one's perception of father and one's perception of mother and how these perceptions were related to eating disorder symptom severity.

Also important to the present study is that it sought to examine differences among the variables of interest and symptom severity according to eating disorder diagnosis. The literature has established some potentially important differences according to eating disorder diagnosis, and it seemed that a larger scale study that included investigation of diagnostic differences may shed light on these disorders and assist appropriate treatment planning.

Another potentially significant contribution relates to God as a substitute for parental attachment figure. While much research supports the contention that one's relationship with God is much like one's relationship with parental figures, there is some support for the notion that some individuals develop a positive, loving relationship with God as a substitute for negative, rejecting relationships with parental figures. Thus, a positive perception of God may serve to buffer an individual against negative perceptions of parents, and may have some effect on eating disorder symptom severity.

It was hypothesized that the way in which the woman with an eating disorder views her parents is related to how she views self and how she views God. The young girl whom views her parents as cold, rejecting, and distant, may view herself as unlovable and unworthy, and view God as unforgiving and rejecting. These views may contribute to the eating disordered individual turning away from parents, God, and self. Rather than turning to self and God for strength, these women may instead turn in on themselves, relying on self-punishment in the form of an eating disorder to make sense of the rejection and coldness felt from parents, self and God. Or, in contrast, individuals with negative perceptions of parents may rely on a loving, positive relationship with God as a buffer against the negative perceptions of parents.

The proposed study sought to test the hypothesis that perceptions of parents, perceptions of self, and perceptions of God were predictive of eating disorder symptom severity. Specifically, it was hypothesized that eating disordered women with more positive perceptions of parents, with more positive perceptions of self, and with more positive perceptions of God would experience less eating disorder symptom severity at

the beginning of inpatient treatment than those women with more negative parent-, self-, and God-perceptions.

### *Hypotheses*

*Hypothesis #1.* It was hypothesized that perceptions of parents are predictive of symptom severity among women beginning inpatient treatment for eating disorders, and that these perceptions are predictive of eating disorder diagnosis subtype. Further, it was hypothesized that there are differences between perceptions of mothers and perceptions of fathers.

*Hypothesis #2.* It was hypothesized that perceptions of self are predictive of symptom severity among women beginning inpatient treatment for eating disorders, and that these perceptions are predictive of eating disorder diagnosis subtype.

*Hypothesis #3.* It was hypothesized that perceptions of God are predictive of symptom severity among women beginning inpatient treatment for eating disorders, and that these perceptions are predictive of eating disorder diagnosis subtype.

*Hypothesis #4.* It was hypothesized that there is a model or relationship among perceptions of parents, perceptions of self, and perceptions of God that is most predictive of symptom severity among women beginning inpatient treatment for eating disorders, and that these perceptions, in relation to one another, are predictive of eating disorder diagnosis subtype.

### *Method*

*Setting & participants.* The present study included a sample of 464 women beginning inpatient treatment for eating disorders at a private treatment facility

specializing in the treatment of eating disorders (Center for Change, Orem, Utah). All women participated in inpatient treatment at Center for Change (CFC) during 1996-2004. Participants ranged in age from 12 to 56 years ( $M = 21.88$ ,  $SD = 7.46$ ). The majority of participants were in the 15 to 24 year-old age category ( $N = 325$ , 70%). The majority of participants were Caucasian ( $N = 428$ , 92.2%), with other racial and ethnic groups, such as African American ( $N = 3$ , .6%), Asian ( $N = 1$ , .2%), and Hispanic ( $N = 3$ , .6%), making up the minority of participants. Seven participants were from a racial heritage other than those listed above.

With regard to religious affiliation, the majority of participants were affiliated with the Church of Jesus Christ of Latter-day Saints ( $N = 296$ , 63.8%). Other religious affiliations represented in smaller numbers included Protestant ( $N = 32$ , 6.9%), Catholic ( $N = 22$ , 4.7%), Jewish ( $N = 5$ , 1.1%), and “other” ( $N = 31$ , 6.7%). Of the participants, 31 (6.7%) reported no religious affiliation while 6 (1.3%) participants identified themselves as “Christian.”

*Procedures.* Participants completed study measures as part of their initial battery of assessment measures, which were administered within the first week of being admitted to the inpatient unit of CFC. Before beginning inpatient treatment, each participant was assessed by a CFC therapist in order to assess motivation for treatment.

*Measures.* The present study included investigation of three variables—parent, self, and God perceptions. In addition to the three variables, eating disorder symptom severity was also assessed. Following are the instruments utilized for each of the three predictor variables as well as for the criterion variable, eating disorder symptomology.

The parent perception predictor variables included two measures, each of which had complementary instruments to assess perceptions of mothers and fathers separately. The Parental Acceptance-Rejection Questionnaire (MARQ for Mother and FARQ for Father) was developed to assess how individuals, as children, perceived their parents (Rohner, R., Saavedra, J., & Granum, E., 1978). The Attitudes Toward Mother Scale (AMS) and Attitudes toward Father Scale (AFS) were developed to assess the attitude individuals have toward their parents, from the individual's adult perception. The self-esteem predictor variable included the Multidimensional Self-Esteem Inventory (MSEI), which assesses several areas of self-esteem functioning, including a global self-esteem measure (GSE) (O'Brien & Epstein, 1988; Epstein, 1980, 1986; O'Brien, 1980). The religious well-being predictor variable utilized the religious well-being (RWB) scale of the Spiritual Well-Being Scale (SWBS). The RWB subscale assesses a religious or vertical dimension based on the individual's relationship to God.

The eating disorder symptom severity criterion variables utilized two measures, the Eating Attitudes Test (EAT-40) (Garner & Garfinkel, 1980), which is a 40 item test designed to assess those attitudes and behaviors similar to those with clinically diagnosed eating disorders, and the Body Shape Questionnaire (BSQ) (Cooper, Taylor, Cooper, & Fairburn, 1987), which is a 34-item self-report measure that assesses concerns about body shape in individuals with eating disorders.

Finally, there are some demographic predictors of more favorable outcome and less symptom severity. These variables include age of onset (Steinhausen, Rauss-Mason, & Seidel, 1991; Yager, 1989); lack of comorbid diagnosis or lack of mixed diagnosis

(Kennedy & Garfinkel, 1992; Sykes, Gross, & Subishin, 1986; Wilfley & Cohen, 1997); and lack of history of childhood sex abuse or other trauma (Palmer, 1995). Thus, examination of perceptions of parents, perceptions of self, and perceptions of God included these demographic variables in order to account for their effects on symptom severity.

*Methods of Analysis and Variables.* In addition to descriptive statistics of participants, the present investigation utilized multiple regression analysis to assess the relationships between parent-, self-, and God-perceptions and whether these variables were predictive of symptom severity at the beginning of inpatient treatment for eating disorders. Multiple regression analysis was utilized to assess the relationship between criterion variables (symptom severity at outset of inpatient treatment) and predictor variables (parental/acceptance, attitude toward mother/father, multidimensional self-esteem, and religious well-being) while accounting for demographic predictor variables. Logistic regression was utilized for assessment of associations between eating disorder diagnosis and symptom severity, as eating disorder diagnosis is a categorical variable and is best analyzed with logistic regression rather than multiple regression.

The criterion variables, or that which is predicted by the predictor variables, for each of the questions of interest were EAT and BSQ scores. The predictor variables—including those demographic variables which were to be accounted for—used to predict variance in the criterion variables included total scores on MARQ, FARQ, AMS, AFS, MSEI, RWB, as well as eating disorder diagnosis, age of onset, comorbid diagnosis, and history of childhood sex abuse.

Logistic regression is much like multiple regression, except that it assesses categorical variables rather than continuous variables. Logistic regression allows assessment of criterion variables as a function of categorical predictor variables. Since eating disorder diagnosis is considered a categorical variable (AN, BN, or NOS) rather than a continuous variable, logistic regression was the most appropriate analysis for the eating disorder diagnosis portion of the questions of interest.

### *Results*

*Hypothesis #1.* The first hypothesis sought to determine if perceptions of parents were predictive of symptom severity among women beginning inpatient treatment for eating disorders, and if these parental perceptions were predictive of eating disorder diagnosis subtype (AN, BN, NOS). Further, hypothesis one also sought to examine differences between perceptions of mothers and perceptions of fathers. To determine if perceptions of parents were predictive of symptom severity among women beginning inpatient treatment, stepwise multiple regression analysis was utilized. To answer whether parental perceptions were predictive of eating disorder diagnosis subtype, backward logistic regression was utilized, and to determine differences between perceptions of mothers and fathers, a paired t-test analysis was employed.

Two of the predictor variables, mother acceptance/rejection (MARQ) and attitudes towards father (AFS), were significant predictors of the eating attitudes (EAT) criterion variable ( $F = 15.445$ ,  $p = .000$ ). Similarly, the same two predictor variables, mother acceptance/rejection (MARQ) and attitudes towards father (AFS), were significant predictors of the body shape (BSQ) criterion variable ( $F = 16.528$ ,  $p = .000$ ).



Regarding whether parental perceptions were predictive of eating disorder diagnosis subtype, backward logistic regression was utilized. The parental perceptions variables were not significant predictors of eating disorder diagnosis subtype. Finally, hypothesis one sought to determine if there were differences between perceptions of mothers and fathers, utilizing paired t-test analyses. There was a significant difference between acceptance/rejection of mothers (MARQ) and acceptance/rejection of fathers (FARQ), with fathers being viewed as more rejecting, hostile, and indifferent than mothers ( $t = -4.467, p = .000$ ). Similarly, there was a significant difference between attitudes towards fathers (AFS) and attitudes towards mothers (AMS), with participants expressing more negative attitudes towards fathers ( $t = 2.045, p = .042$ ).

*Hypothesis #2.* Hypothesis two sought to determine if perceptions of self were predictive of symptom severity among women beginning inpatient treatment for eating disorders, and if these self perceptions were predictive of eating disorder diagnosis subtype. To determine if perceptions of self were predictive of symptom severity among women beginning inpatient treatment, stepwise multiple regression analysis was utilized, and to answer whether self perceptions were predictive of eating disorder diagnosis subtype, backward logistic regression was utilized.

The perceptions of self predictor variable (GSE) was a significant predictor of the eating attitudes (EAT) criterion variable ( $F = 87.534, p = .000$ ). Similarly, the perceptions of self predictor variable was a significant predictor of the body shape (BSQ) criterion variable ( $F = 124.710, p = .000$ ). The self perceptions variable was a significant predictor of eating disorder diagnosis subtype, with a significant association between self-esteem

(GSE) and a diagnosis of Anorexia Nervosa (AN) (Chi-Square = 6.727,  $p = .035$ ; Wald = 6.487,  $p = .011$ ).

*Hypothesis #3.* The third hypothesis sought to determine if perceptions of God were predictive of symptom severity among women beginning inpatient treatment for eating disorders, and if these God perceptions were predictive of eating disorder diagnosis subtype. To determine if perceptions of God were predictive of symptom severity among women beginning inpatient treatment, stepwise multiple regression analysis was utilized, and to answer whether God perceptions were predictive of eating disorder diagnosis subtype, backward logistic regression was utilized.

The perceptions of God predictor variable was not a significant predictor of the eating attitudes (EAT) criterion variable ( $F = .002$ ,  $p = .961$ ). Similarly, the perceptions of God predictor variable was not a significant predictor of the body shape (BSQ) criterion variable ( $F = .722$ ,  $p = .396$ ). The perceptions of God variable was not a significant predictor of eating disorder diagnosis subtype.

*Hypothesis #4.* The fourth hypothesis sought to determine what model or relationship among perceptions of parents, perceptions of self, and perceptions of God was most predictive of symptom severity among women beginning inpatient treatment for eating disorders, and if these perceptions, in relation to one another, were predictive of eating disorder diagnosis subtype. To determine the best model or fit among the variables, stepwise multiple regression analysis was utilized, and to answer whether these perceptions were predictive of eating disorder diagnosis subtype, backward logistic regression was utilized. The results of the analyses are shown in Tables 1 and 2.

As can be seen in Table 1, the model of best fit among the predictor variables on eating attitudes included mother acceptance/rejection (MARQ) and self-esteem (GSE). However, the model of best fit among the predictor variables on body shape included father acceptance/rejection (FARQ) and self-esteem (GSE), as is shown in Table 2. None of the predictor variables, as a whole, were significant predictors of eating disorder diagnosis subtype.

Table 1

*Stepwise Multiple Regression Analysis for Model of Best Fit among Perceptions of Parents, Self, and God Variables Predicting Eating Attitudes Test (EAT)*

Predictors	t	P	R <sup>2</sup>	F	P
MARQ	3.024	.003			
GSE	-7.944	.000			
			.197	44.396	.000

Variables Not in Equation: FARQ, AMS, AFS, RWB, Ageonset, Childsa, Comorbid  
*Note.* Attitudes Towards Mother (AMS), Attitudes Towards Father (AFS), age of onset (Ageonset), childhood sex abuse (Childsa), comorbid diagnosis (Comorbid), Father Acceptance/Rejection Questionnaire (FARQ), Mother Acceptance/Rejection Questionnaire (MARQ); Global Self-esteem (GSE); Religious well-being (RWB)

Table 2

*Stepwise Multiple Regression Analysis for Model of Best Fit among Perceptions of Parents, Self and God Variables Predicting Body Shape Questionnaire (BSQ)*

Predictors	t	P	R <sup>2</sup>	F	P
GSE	-9.859	.000			
FARQ	2.639	.009			
			.255	62.036	.000

Variables Not in Equation: MARQ, AFS, AMS, RWB, Ageonset, Childsa, Comorbid  
*Note.* Attitudes Towards Mother (AMS), Attitudes Towards Father (AFS), age of onset (Ageonset), childhood sex abuse (Childsa), comorbid diagnosis (Comorbid), Father Acceptance/Rejection Questionnaire (FARQ), Mother Acceptance/Rejection Questionnaire (MARQ); Global Self-esteem (GSE); Religious well-being (RWB)

*Summary of Results.* The present study sought to better understand perceptions of parents, perceptions of self, and perceptions of God as related to eating disorder symptom severity among women beginning inpatient treatment for eating disorders. One purpose of the study was to understand the association between eating disorder symptom severity and each of the three perceptions (parents, self, and God) separately, while accounting for certain demographic variables. Statistical analyses showed that perceptions of parents were significant predictors of eating disorder symptom severity at the outset of treatment, and that there were significant differences between perceptions of mothers and perceptions of fathers, with perceptions of fathers being more negative. Further, results showed that perceptions of self was a significant predictor of symptom severity. However, analyses showed that perceptions of God was not a significant predictor of symptom severity among women beginning inpatient treatment for eating disorders.

A second purpose of the present investigation was to better understand the model of best fit among the three perceptions (parents, self, and God) as related to eating disorder symptom severity. Statistical analyses showed that, as a whole, the best model of fit among the three perceptions and eating attitudes, while accounting for certain demographic variables, included mother acceptance/rejection (MARQ) and self-esteem (GSE). However, the best model of fit among the three perceptions and body shape, while accounting for certain demographic variables, included father acceptance/rejection (FARQ) and self-esteem (GSE). Although not a focus of this investigation, it should be noted that age of onset was a significant predictor of body shape until it was removed from the analysis. Once age of onset was removed however, father acceptance/rejection

(FARQ) and self-esteem (GSE) remained significant predictors of body shape. The finding that father acceptance/rejection (FARQ) was a significant predictor of body shape when the perceptions were considered as a whole is particularly interesting, given that FARQ was not a significant predictor when considered separately. Certainly, these findings beg the larger question regarding differences between perceptions of mothers and fathers and how these perceptions interact with other variables of interest when considering eating disorder symptom severity.

Finally, the present investigation sought to understand if the three perceptions were predictive of eating disorder diagnosis subtype (AN, BN, NOS). Results indicated a significant association between self-esteem and a diagnosis of Anorexia Nervosa (AN).

### *Discussion*

The present investigation sought to better understand the relationship between a woman's perceptions of self, parents, and God, and eating disorder symptom severity at the outset of inpatient treatment. While research has long supported the importance of an eating disordered woman's view of self and view of parents, a woman's view of God has not fully been explored, nor have the three perceptions been investigated together. Specifically, the present study sought to determine if perceptions of parents, perceptions of self, and perceptions of God, were predictive of eating disorder symptom severity separately and as taken as a whole.

The study is unique and important for several reasons. First, the study utilized a large sample of women beginning inpatient treatment for eating disorders, whereas many investigations in the extant research rely on smaller samples which do not include an

inpatient population. Second, the study utilized measures not overly used in the research base, yet which are appropriate and could prove enlightening for addressing questions of interest in the eating disorder research domain. For instance, questions regarding differences between women's views of their mothers and fathers were able to be investigated in the present study, which sheds light on the complex relationships between eating disordered women and their parents. Third, the present investigation examined both eating attitudes and body shape among women with eating disorders, allowing distinctions to be drawn and contributing to the field's understanding of those factors that may be predictive of one type of eating disorder symptom but not another. This research, in turn, may direct treatment options depending on the symptoms of greatest concern. Fourth, this study addressed potential confounding variables that have been shown, in previous research, to be associated with symptom severity, by including them in the statistical analyses. Fifth, there is a dearth of research on women's religious well-being and spirituality as related to eating disorder symptom severity, and this study represented an initial investigation in this area. Finally, the present investigation suggests a model or relationship among perceptions of parents, perceptions of self, and perceptions of God as related to eating disorder symptom severity at the outset of inpatient treatment.

*Findings.* With regard to eating disordered women's perceptions of parents, the study found that a woman's view of maternal acceptance or rejection and a woman's attitudes towards father were predictive of eating disorder symptom severity (both attitudes and body shape). Of interest is that while mother acceptance/rejection was predictive of symptom severity, father acceptance/rejection was not, and that while



attitudes towards father was predictive of symptom severity, attitudes towards mother was not. It appears that the eating disordered women in this study viewed their mothers and fathers differently, and that these distinct views were predictive of symptom severity. For instance, the findings suggest that the women had a specific view of mothers that contributed to their symptom severity— whether their mothers were accepting or rejecting. In contrast, the women’s view of their fathers is perhaps a less specific attitude, but a significant contributor to symptom severity all the same. This finding is supported by a previous examination that daughters’ perceptions of their fathers influenced the development of eating concerns (Wonderlich et al., 1994). For example, statements from the mother acceptance/rejection measure such as [my mother] “viewed me as a burden” or “punished me severely when she was angry” speak to the specificity elicited by the questionnaire, whereas the attitudes towards father questionnaire include items such as “I dislike my father” and “my father is too demanding.” Thus, while the women’s views of mothers predictive of symptom severity seemed related to specific behaviors, their views of fathers were less specific, but convey perhaps a more pervasive, general attitude which was predictive of symptom severity. A pervasive attitude of father absence, whether physically or emotional is supported in the literature base (Cole-Detke & Kobak, 1996; de Groot & Rodin, 1994; Leibowitz, 1991; Rhodes & Kroger, 1992), and may account for the differences found in parental perceptions.

The finding that there are indeed differences in the way eating disordered women view their mothers and fathers is particularly interesting, and finds some support in the research literature (Cole-Detke & Kobak, 1996; Dominy, Johnson, & Koch, 2000;

Dozier, Stovall, & Albus, 1999; Godin & Hallez, 1965; Minuchin, Rosman, & Baker, 1980; Nelson & Jones, 1957; Strunk, 1959; Rhodes & Kroger, 1992; Vergote & Tamayo, 1981). While there is some disagreement in the literature regarding one's perception of mother versus one's perception of father, women in the present study viewed their fathers as more rejecting, hostile, and indifferent than their mothers and expressed more negative attitudes towards their fathers. This finding is supported by examinations of other addictive disorders which concluded that the father relationship was most predictive of addictive behavior (Campo & Rohner, 1992), and examinations in which daughters felt used in order to meet their fathers' needs (Bemporad & Ratey, 1985; Bemporad et al., 1992).

As expected, the present investigation found a woman's perception of self to be a significant predictor of eating disorder symptom severity. This finding is not surprising, as it is widely accepted in the extant research (de Groot & Rodin, 1994; Ghaderi, 2001; Vohs et al, 2001; Vohs, Bardone, Joiner, Abramson, & Heatherton, 1999; Joiner, Heatherton, Rudd, & Schmidt, 1997).

Contrary to expectations, the present investigation failed to find that a woman's perception of God was predictive of eating disorder symptom severity. While Bowlby (1973) hypothesized that attachment processes can potentially be applied to many settings and phenomenon, including religious or spiritual beliefs (Kirkpatrick, 1999), this was not the case in the present study.

There may be several reasons that no significant relationship between perception of God and eating disorder symptom severity was found in the present investigation.

Certainly it is possible that no such relationship exists—that one’s religious well-being is not predictive of eating disorder symptom severity at the beginning of inpatient treatment, although some initial support for a relationship between perception of God and eating disorders has been evidenced (Richards et al., 1997). While support exists for the hypothesis that individuals tend to view God similarly to the way they view parents (Greeley, 1990; Freud, 1961; Kirkpatrick, 1999) and themselves (Benson & Spilka, 1973; Spilka et al., 1975), this phenomenon may not be predictive of behavioral patterns—in this case eating disorder symptomology. Religious well-being may well be just one small facet of an individual’s perception of God, and may not fully speak to the ways religion and spirituality potentially impact eating disorder symptomology.

It is possible that the religious well-being scale, which was utilized in the present study, failed to fully address an individual’s perception of God. Perhaps the RWB was not subtle or sensitive enough to fully address the construct. Further, in examining the distribution of scores on the RWB subscale, it was found that the subscale is susceptible to a ceiling effect, with individuals reporting a more positive relationship with God. The restricted range of the subscale lowers its ability to adequately detect correlations, which has been the case with another investigation which utilized the RWB (P.S. Richards, personal communication, April 29, 2005). Also at play may be that individuals with eating disorders often have a cognitive disconnect from God in that on a cognitive level they may endorse a relationship with God, wherein reality there is a spiritual and emotional disconnect, as these women are unable to let go and trust God. Such disconnect is common to women with eating disorders (Richards et al., 1997), and may help

illuminate the discussion of perception of God.

The model of best fit among the variables and eating attitudes was different from the model of best fit for body shape. Mother acceptance/rejection and self-esteem were found to be most predictive of eating attitudes, while father acceptance/rejection and self-esteem were found to be most predictive of body shape.

The present investigation concludes that the model that best predicts eating disorder symptom severity at the beginning of inpatient treatment included perceptions of parents and perceptions of self. This conclusion supports one tenet of attachment theory—that an individual’s perception of self may be inextricably tied to one’s perception of parents (Bowlby, 1969, 1982; Dozier et al., 1999). Interactions with parents provide the foundation for how an individual comes to see herself, and as shown in the present study, is predictive of symptom severity among eating disordered women. However, this investigation did not support the hypothesis that an eating disordered woman’s perception of God would interact with the other two perceptions to predict symptom severity.

Individuals who perceive their parents as cold and rejecting, and in turn view themselves as rejected and unloved, invariably feel emotional distress related to this inattention to needs. It was hypothesized that an eating disorder may function as a coping behavior for these individuals who feel their needs are not met, and the present study supported this hypothesis. Such women may turn against parents and themselves, and the emotional distress they experience, and instead attempt to cope through controlling their eating behavior (Cole-Detke & Kobak, 1996).

Finally, with regard to eating disorder diagnosis subtype, a significant association

was found between self-esteem and a diagnosis of Anorexia Nervosa. Anorexia is sometimes considered the more dire eating disorder diagnosis, and may reflect more disturbances in an individual's sense of self. Thus, treatment with individuals with anorexia would be strengthened by a clear focus on self-esteem improvement.

*Conclusions.* The present study sought to investigate the relationship between perceptions of parents, self, and God, and eating disorder symptom severity at the beginning of treatment. While the findings that perception of parents and perception of self were predictive of eating disorder symptom severity are not surprising, the hypothesized perception of God was not predictive of symptom severity in this investigation. While attachment theory serves as a useful foundation for discussing how one's perception of parents is tied to one's perception of self for predicting eating disorder symptom severity, it cannot be extended to one's perception of God—at least in the present study.

Indeed, the finding that there were differences between perceptions of mothers and fathers is intriguing, and serves as a call for more attention to the potentially different ways that perceptions of mothers and fathers may predict eating disorder symptomology. Finally, the significant association between self-esteem and a diagnosis of Anorexia Nervosa highlights the importance of attending to perceptions of self when working with individuals diagnosed with Anorexia Nervosa.

*Methodological strengths.* The present study was a comprehensive investigation that utilized several measurements of psychological functioning. The investigation relied on instruments reported to have good reliability and validity, which have been supported

by previous research. Further, the large number of cases made the use of multiple regression feasible without compromising statistical power.

*Limitations of the study.* The present investigation relied solely on an inpatient sample of women being treated for eating disorders, and it is unknown whether there are potentially important differences on the questions of interest between an inpatient sample and the general population of eating disordered women. Severity of eating disorder may be another dimension in which an inpatient sample may differ from the general population of eating disordered women. Further, the study only investigated women, and while the vast majority of individuals with eating disorders are women, there was no inquiry of men with eating disorders. Most of the women in this study were Caucasian, which limits the generalizability of the findings to other ethnicities. The majority of participants were affiliated with the LDS faith, which also limits generalizability to other religious affiliations. This investigation relied on one aspect of perception of God—religious well-being. Inclusion of other potentially important factors relating to religion and spirituality would have provided a firmer foundation for investigating perception of God as related to eating disorder symptom severity.

*Recommendations for future research.* While other investigations have found religion and spirituality to be a factor in eating disorders, it seems this topic warrants more investigation. Particularly, it would be important to utilize a variety of religion and spirituality factors in order to better understand the nature of the relationship between perception of God and eating disorder symptomology. It would also be valuable to

understand how perception of God may be related to eating disorder treatment process and outcome.

Certainly, further investigation of the differences between mothers and fathers and eating disorder symptomology is warranted. A qualitative investigation of how eating disordered women perceive their relationships with mothers and fathers could set a foundation for better understanding the nuances in these relationships that are predictive of eating disorders. Appreciation of the different perceptions of mothers and fathers could be quite illuminating for understanding eating disorder etiology and could provide focus for treatment and recovery.

Further investigation of the differences between eating disorder diagnosis would also be beneficial. Of particular interest is the association between self-esteem and Anorexia Nervosa. Future investigations could examine the specific self-esteem deficits or factors that may be more closely tied to Anorexia Nervosa, thus proving helpful from both an etiological and treatment perspective.

*Implications and recommendations for practice.* The present investigation highlights the importance of understanding an eating disordered woman's perceptions of self and parents. Practitioners would do well to focus on these perceptions in treatment, and in particular, to understand the specific ways that fathers and mothers may influence eating disorder symptomology. While perceptions of God may not be a core treatment issue for eating disorders, practitioners may do well to tentatively explore client's relationship with God, religion, and spirituality, and—if deemed important—to utilize individuals' perception of God in treatment. Finally, when working with individuals with

a diagnosis of Anorexia Nervosa, practitioners must make perceptions of self a core treatment issue.



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