PERSONALITY CORRELATES OF ANOREXIA NERVOSA
IN A NONCLINICAL SAMPLE

THESIS

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

Rebecca L. Rogers, B.A.
Denton, Texas
December, 1994
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The purpose of this study was to examine the relationship between anorexia nervosa and several personality traits. Past research in this area has been contradictory for several reasons. Sociocultural theories have described the media's role in promoting eating disorders by portraying a thin body-type as the ideal. However, they have neglected to describe the personality ideal which our society promotes in women. It is proposed here that anorexics incorporate and oppose this ideal. Therefore, the anorexic personality is one filled with conflict. Two levels of anorexia were defined by scores obtained on the Eating Attitudes Test (EAT; Garner & Garfinkel, 1979). These two groups, plus a control group, were assessed on obsessiveness, dependency, over-controlled hostility, and assertiveness using various scales. Participants included 196 nonclinical female undergraduates.
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CHAPTER I

INTRODUCTION

Although the incidence of eating pathology can be traced to the fourth century (Lacey, 1982), eating disorders, such as anorexia and bulimia nervosa continue to affect a significant percentage of women in today's society. Recently, the prevalence of the disorders has been reported to have reached almost epidemic rates (Brisman & Siegel, 1984; Waltos, 1986) and yet knowledge in this area is still lacking considerably. In addition, anorexia nervosa is one of few mental disorders that in and of itself can be fatal, with mortality rates ranging from 6-20% depending on the length of follow-up (Schwartz & Thompson, 1981; Theander, 1970). Given the urgency and seriousness of this disorder, research surprisingly and unfortunately has failed to provide consistent findings regarding the nature of this disorder.

Sociocultural factors. Researchers and clinicians have long debated the etiology of eating disorders, and today, most conclude that society plays a major role in their occurrence. Striegel-Moore, Silberstein, and Rodin (1986), in examining factors associated with bulimia, provided an insightful overview as to why women are more susceptible to developing eating disorders. They argued that women are at
greater risk than males due to the socialization and sex-role stereotypes that our culture promotes. While qualities such as thinness and attractiveness are valued by society in general, they apply more to women than men. In addition, environments that emphasize unrealistic standards of weight or body shape may encourage the use of disordered eating behaviors (e.g., restricting or binging and purging) as women attempt to meet these unrealistic beauty ideals. Striegel-Moore et al. (1986) suggested that sociocultural or environmental factors were key in the etiology of bulimia.

In a seminal study examining the influences of societal expectations on eating pathology, Garner, Garfinkel, Schwartz, and Thompson (1980) demonstrated that the weight of the average American woman was increasing while the weight of the ideal woman (i.e., Playboy centerfolds and beauty pageant contestants) was decreasing. In addition, they found that the ratio of bust and hip measurements to waist size in these beauty ideals had been decreasing over the years, suggesting a movement toward a more tubular body shape. During this same time period, there was a corresponding increase in the number of diet articles published in popular women’s magazines.

Silverstein, Perdue, Peterson, and Kelly (1986) not only confirmed these trends, but found they were gender specific. The media’s portrayal of each gender’s ideal body or standard of attractiveness was slimmer for women than for
men. In addition, recent images of the female standard were found to be slimmer than past portrayals. Silverstein et al. (1986) also found that the proportion of diet, exercise, and food articles were significantly higher in women's, as opposed to men's, magazines. These findings suggest that women receive contradictory messages from the media as to how they should look and what they should eat. Women are expected to meet the beauty ideal by staying trim and fit while at the same time being bombarded about the benefits associated with food and eating.

Wiseman, Gray, Mosimann, and Ahrens (1992), also in confirming these trends, made two additional claims. First, they found that, between 1979-1988, 65% of women portrayed as beauty ideals (i.e., Playboy centerfolds and beauty pageant contestants) weighed 15% below average expected weight as determined by actuarial tables based on height and weight. They pointed out that this is one of the major criteria of anorexia nervosa as listed by the DSM-III-R (American Psychiatric Association, 1987). Second, although both exercise and diet articles had increased between 1959-1988, the number of exercise articles surpassed the number of diet articles within the last eight years of the study. They suggested that this new trend toward fitness may serve as a more discrete and socially accepted form of purging.

Silverstein, Peterson, and Perdue (1986) implicated the media further with their findings that women's magazines
portrayed a more noncurvaceous figure during the mid-1920s and 1960s, time periods that correlated with a higher proportion of very thin women in college as well as a higher incidence of eating disorders. Still, they raised the question as to why certain women strive toward the slim standard. Silverstein, Perdue, Peterson, Vogel, and Fantini (1986) found that women who believed that their fathers perceived them as unintelligent tended to ascribe to the slim standard. They speculated that women who are concerned about other's perceptions of them and who associate curvaceousness with incompetence may be more susceptible to eating disorders. This concern may have influenced more women in the 1920's and 1980's since the media was portraying a tubular body shape as the ideal at a time when the number of college graduate and professional women was increasing. In this manner, eating disorders can be viewed as a psychological manifestation of a society biased against women.

These studies provide a theory suggesting that eating disorders result from the sociocultural representations of the beauty ideal that pressure women to reach a standard that is physically impossible to obtain. This theory cannot, however, account for all of the questions concerning the etiology of the eating disorders. First, if women are exposed basically to the same environments, why do some women develop an eating disorder while others do not?
Second, the media's role in the development of eating disorders does not provide a complete picture as it would be unrealistic to assume that anorexic or bulimic women watch more television or read more women's magazines. Third, why do some women develop anorexia nervosa as opposed to bulimia or even healthy dieting patterns (Crisp, & Bhat, 1982; Norman & Hertzog, 1983)? As it is known that anorexia may develop early in childhood (Neuman & Halvorson, 1983), should we assume that these children are attempting to conform to the ideal body image portrayed by models? Given these questions, it appears important to examine other factors as well in determining the etiology of these complex psychological disorders.

**Personality factors.** An aspect of the sociocultural theory that seems to be lacking is the message that may be conveyed concerning ideal female roles and personalities. Society sends messages not only about how women should look but about how they should behave. Women are socialized to adopt stereotypic female behaviors reflected in all areas of the social environment. Women generally are portrayed as weak, emotional, incompetent, passive, timid, innocent, and dependent. From an early age, traits such as assertiveness, intelligence, and independence are discouraged (Ruth, 1990). Through socialization, women are taught to be inferior, and they learn to nurture others while sacrificing their own needs (Horney, 1950). In fact, Orbach (1986) suggested that
women are uncomfortable with their place in society and often question their right to have needs. These stereotypes are so pervasive and complete that they become real for many women. Thus, believing in these definitions of femininity, women strive to incorporate characteristics into their personalities (Ruth, 1990) that may be physically and psychologically damaging.

It is interesting to note that the increase in eating disorders reported in the '20s and '60s coincided with the two major women's movements. These movements brought new definitions of femininity that conflicted with society's expectations. Standards of attractiveness and societal pressures for ideal female behavior become increasingly stringent or more obvious during these time periods. Feminists often refer to this as a societal backlash (Wolf, 1991).

While women were obtaining the right to vote, underweight models were presented by the media. When the birth control pill was being marketed, Twiggy, too, was being promoted as the beauty ideal. It has been noted in the feminist literature (e.g., Wolf, 1991) that society's definition of "beautiful" is merely a symbol of accepted and desired female behavior; therefore, society's standards of beauty actually prescribe expected behaviors rather than outward appearance. By instilling a preoccupation with weight, society attempts to create personality traits that
run counter to the values espoused in women's liberation. Passivity, weakness, and mental illness counteract much of the progress made through women's equality. In this manner, society's obsession with beauty involves obedience, not thinness (Wolf, 1991).

In trying to conform to this personality ideal, women again experience conflict. Expanding theories proposed by Horney (1950), Westkott (1986) described this conflict as the attempt to develop a healthy personality in a society that devalues women. Women must conform to society's standards in order to gain acceptance, yet in doing so, they devalue the self. Westkott, consistent with Horney, viewed women as simultaneously incorporating and opposing this devaluation. That is, women internalize yet struggle against values and characteristics that either prescribe female inferiority or are devalued by society. They struggle between perfection and genuineness, dependence and autonomy, caring and anger, and passivity and assertiveness. When this conflict is in its extreme forms, it can manifest specific neuroses (Horney, 1950).

Horney (1950) presented a theory of neurosis that described the person as being in conflict. The determinants of this conflicted character are based within the individual's culture. That is, as occurs with women in general, societal messages are devaluing and contradictory. The neurotic, however, perceives these messages more
intensely and, consequently, responds by incorporating the devaluation and conflict in an extreme manner.

Horney (1950) described neurosis as a fight against the real self. Specifics within Horney’s theory may be used to illustrate the conflict of the individual with anorexia nervosa. The self-hate that the neurotic feels may be caused by discrepant feelings she has towards her ideal image and actual self. By condemning imperfections, self-hate serves to shape the actual self into the ideal. The anorexic holds on to her self-hate because she is afraid that if she stops condemning her imperfections, she will lose control and be less than perfect. As a consequence, the anorexic is difficult to treat because she wants to continue hating herself; it is a defense that works for her. From this theoretical perspective, anorexia may be viewed as egosyntonic in nature and may signify a particular character pattern.

Anorexia also may be seen as a form of subtle opposition to perceptions of inferior status. Women with anorexia nervosa strive to meet their perception of society’s expectations of being good, pure, and submissive. They believe it is inappropriate to outwardly express "negative" behaviors (i.e., hostility) so that when these emotions arise, assertive behavior is repressed and the anorexics’ anger is taken out on their bodies. Thus, it is feasible to assume that certain personality traits, such as
obsessiveness, dependence, overcontrolled hostility, and unassertiveness, work together to contribute to the dynamics of anorexia nervosa.

One topic of controversy within the eating disorders literature is the notion of the "anorexic personality" (Strober, 1980). Research examining the underlying character of the anorexic has been equivocal. Some researchers believe that the disorder is too heterogeneous to classify (Blitzer, Rollins, & Blackwell, 1961; Thoma, 1964), while others contend that the connection between eating pathology and personality has been overlooked (Aronson, 1990; Crisp, 1965; Smart, Beumont, & George, 1976; Strober, 1980). Also, anecdotal evidence (Boskind-Lodahl, 1976; Bruch, 1982; Selvini-Palazzoli, 1978) as well as clinical observations suggest that a correlation between anorexia and a distinct personality style exists.

Several factors may contribute to the conflicting evidence existing within the literature (Smart et al., 1976). First, definitions of the construct have been inconsistent. Anorexia nervosa has been defined using various weight cutoffs (Garner & Garfinkel, 1982; Strauss & Ryan, 1987) which may present problems in comparing results since the relationship between weight gain and personality traits is unclear (Channon & DeSilva, 1985; Crisp, Hsu, & Stonehill, 1979; Stonehill & Crisp, 1977; Strober, 1981). Also, some studies have examined anorexia in combination
with symptoms of bulimia, sometimes referred to as bulimarexia (Boskird-Lodahl, 1974; Channon & DeSilva, 1985; Strober, 1980), while others have separated the two disorders to examine their differences (Casper, Eckert, Halmi, Goldberg, & Davis, 1980; Crisp & Bhat, 1982; Scott & Baroffio, 1986). Although individuals with the two disorders have been compared, some researchers have reported similarities between the personalities of bulimics and anorexics (Ben-Tovim, et al., 1979; Scott & Baroffio, 1986; Strober, 1980) while others have argued that they are quite different (Casper, 1990; Powers, 1984).

Another factor contributing to conflicting evidence concerning the existence of the "anorexic personality" may involve the fact that, as mentioned previously, much of the literature consists of anecdotal evidence. The lack of empirical data makes generalizing such observations difficult. Finally, there is a problem in trying to compare research focusing on an abnormal personality structure and research examining personality traits common to all (Smart et al., 1976). For example, studies examining the comorbidity of obsessive compulsive personality disorder and anorexia nervosa (Norris, 1979; Russell, 1970) have been compared to studies examining the relationship between obsessiveness and anorexia (Ben-Tovim, Marilov, & Crisp, 1979; Crisp & Bhat, 1982; Smart, et al., 1976; Stonehill & Crisp, 1977).
Given the limitations and equivocal findings of past research, additional investigations appear warranted. In the present study, the relationship of four personality traits--obsessiveness, dependency, overcontrolled hostility, and unassertiveness--to anorexic symptomatology will be examined. While several studies have considered these personality traits separately, no study has examined them in combination to support a personality profile. Rather than associating a symptom with anorexia, this study will attempt to uncover personality traits that, together, define the character of the anorexic. The personality of the anorexic may provide further understanding concerning the development and maintenance of the disorder.

**Obsessiveness.** Obsessive-compulsive symptoms have long been noted in anorexia nervosa (Kay & Leigh, 1954) with several studies demonstrating relationships between the two. (Ben-Tovim, et al., 1979; Crisp & Bhat, 1982; Smart, et al., 1976; Stonehill & Crisp, 1977). The anorexic may constantly ruminate about food and the rituals used to avoid it. Ritualistic behaviors often are employed to defend against the anxiety associated with such obsessions. Superstitions and magical thinking help to maintain these rituals (Roth, & Golloway, 1984). For example, the anorexic may chew each bite of food a certain number of times before swallowing. In this way, her thoughts are occupied by counting so that
her awareness of the underlying anxiety associated with eating is diminished.

The debate over obsessiveness in anorexia involves the origin of these symptoms (Ben-Tovim et al., 1979). Many of the obsessive thoughts reported by anorexics have been found in starved individuals who do not have anorexia, supporting a physiological basis (Keys, Brozek, Henschel, Mickelsen, & Taylor, 1950; Schiele & Brozek, 1948). These symptoms, however, also tend to be related to issues of power and control, and therefore may be a characterological aspect of the anorexic (Roth & Golloway, 1984). Smart et al., (1976) found that anorexic patients reported more obsessional symptoms, traits, and related distress than normal subjects. When compared to obsessional patients, however, anorexics exhibited less behaviors and distress, yet maintained a similar amount of obsessional traits. Similarly, Strober (1980) found that while the presence and severity of obsessional symptoms (e.g., ruminations and ritualistic behaviors) in young, nonchronic anorexics decreased with weight restoration, the underlying obsessional trait-structure remained stable. He speculated that underlying obsessional character structures facilitate the emergence of the obsessive thought patterns and compulsive behaviors that are present during the acute phase of the disorder. In other words, the anorexic has an obsessional character at onset of the disorder and the obsessional thinking patterns
and compulsive behaviors that serve to perpetuate her disorder are manifestations of the underlying character structure.

Several researchers have noted that obsessive-compulsive symptoms in anorexia are associated with a poor prognosis (Crisp & Bhat, 1982; Dally, 1969). Halmi, Brodland, and Loney (1973), in examining anorexics and recovered anorexics, found certain demographic and clinical features that correlated with each group. Among other variables, obsessive-compulsive symptoms were associated with a poor prognosis (i.e., nonrecovered anorexics). They also found, however, that the correlation between a premorbid obsessional personality and prognosis was not significant between groups. It is believed in the present study that these symptoms are in fact a manifestation of the underlying character of the anorexic. Therefore, other personality traits (dependency, overcontrolled hostility, and unassertiveness) may work in combination with the obsessive behaviors to further complicate treatment.

Dependency. Westkott (1986) defined dependency as involving submission to confirm a devalued self-concept as well as the need to merge with valued others. While dependency also has long been noted in an anorexic population (Kay & Leigh, 1954), the relationship between the disorder and dependent traits is less clear. This lack of clarity appears to be due to problems in conceptualization
as well as measurement. Some researchers have examined this relationship in terms of independence (Smart, Beumont, & George, 1976) while others have focused on submissiveness (Pillay & Crisp, 1977; Strober, 1980). For example, Smart et al., (1976) found that, among other personality traits, anorexic patients were more independent than controls, while Pillay and Crisp (1977) concluded that low dominance scores and high abasement needs suggested submissiveness.

Psychoanalytic theorists, emphasizing the relationship between mother and infant, proposed that difficulties in separation and individuation contributed to eating disorders (Bruch, 1982; Orbach, 1985; Selvini-Palazzoli, 1978; Wilson, 1983). This construct may be defined as the developmental process toward achieving "a sense of separate individual entity" (Edward, Ruskin, & Turrini, 1981, p.3) and appears to be closely related to dependency. These theorists posited that the anorexic's relationship with her mother is enmeshed. Therefore, in order to maintain this relationship, the anorexic is discouraged from autonomous behavior and rewarded for compliant, dependent behavior.

Friedlander and Siegel (1990) examined the relationship between separation and individuation and eating problems. Their results provided support for the theory of separation difficulties as a contributing factor to eating disorders. Specific to the present study, they found that dependency conflicts were predictive of a stronger drive for thinness,
the primary indicator of anorexia nervosa as measured by the Eating Disorders Inventory. This empirical relationship was so strong they suggested that women who seek treatment for dependency issues be assessed for an over-preoccupation with weight and body image.

Shisslak, Crago, and Yates (1989) examined the characteristics of atypical anorexics through structured interviews. Atypical anorexia, as Bruch (1973) had defined secondary anorexia, involves weight loss due to reasons other than a preoccupation with weight. In contrast, primary anorexia involves weight preoccupation as well as rigorous efforts to reduce body size at the expense of social and/or medical difficulties. Shisslak et al. (1989) supported Bruch's description (1973) in that atypical anorexics were characterized by, among others traits, unmet dependency needs. They asserted that while dependency issues exist within both primary and secondary anorexia, these conflicts are experienced quite differently. The environment of the patient with primary anorexia is seen as over-controlling. Although the patient is discouraged from autonomy and rewarded for her dependency, she struggles for an identity and independence. On the other hand, the environment of the patient with atypical anorexia is perceived as being uninvolved. The patient uses the anorexic symptoms in order to get her dependency needs met.
Related to the conceptualization problem, a psychometrically sound measure of dependency for an eating disordered population is lacking. For example, as mentioned previously, measures of dependency in eating disorders research have been based on structured interviews (Shisslak et al., 1989). In addition, researchers have often relied on the results of personality profiles to interpret the existence of dependent traits. For example, Scott and Baroffio (1986) found that anorexics had elevations on scales 2 and 4 on the MMPI. Gilberstadt and Duker (1965) interpreted this profile as suggesting dependency, oral fixation, and addictive personality traits. Similarly, Strober (1980) examined anorexics' scores on the California Psychological Inventory and the Hopkins Symptom Checklist. He concluded that, in addition to other personality variables, anorexics are insecure, overcompliant, and lack autonomy and independence.

Because of neglect in assessing anorexics with a psychometrically sound measure of dependency, much of the information concerning dependency is provided by clinical observations. A review by Garner and Garfinkel (1982) described the character of anorexics in a manner that indicates a dependent personality. That is, anorexics ignore their own needs and seek approval by conforming and pleasing others. In this way, they affirm their self-worth. Friedrichs (1986) extended Horney's 'dependent character
solution" (1950) to eating disorders by noting that several of the symptoms of eating disorders (i.e., compliance, interpersonal distrust, perfectionism, ineffectiveness, maturity fears, a lack of interoceptive awareness, body dissatisfaction, and drive for thinness) are central to Horney's theory. She argued that women often rely on a dependent character to defend against the devaluation and sexualization of society. Anorexia and bulimia are more prevalent among women because they are manifestations of this dependent character.

The present study addresses the problem of conceptualization by providing an objective definition (Westkott, 1986) that may be applied in future research on dependency. In addition, this definition coincides with that offered by Hirschfeld, Klerman, Gough, Barrett, Korchin, and Chodoff (1977) in their development of the Interpersonal Dependency Inventory. Essentially, they define interpersonal dependency as both the positive and negative aspects of thoughts, beliefs, feelings, and behaviors concerning the need to interact and rely upon valued others. Although this scale appears to be psychometrically sound, it has been overlooked as a measure of dependency, especially within an eating disorder population. The present study addresses current problems in measurement by providing empirical data on the inventory
itself as well as the relationship between dependency and
anorexia.

**Overcontrolled hostility.** Overcontrolled hostility has
been defined as anger that is not overtly expressed
(Megargee, Cook, & Mendelsohn, 1967), and noted in the
clinical observations of eating disorder individuals. For
example, Neuman and Halvorson (1983) described anorexics as
having a high level of hostility but lacking the ability or
permission to express their anger. In addition, Crisp
(1980) provided anecdotal evidence describing the anorexic
as defending against hostility by appearing either
unemotional or overly cheerful.

Research has provided empirical evidence supporting the
relationship between overcontrolled hostility and eating
disorders. Williams, Chamove, and Millar (1990) compared
anorexic and bulimic females to female psychiatric patients,
dieters, and non-dieting controls on measures of eating
pathology and hostility (among other variables). They found
that both anorexics and bulimics reported significantly more
self-directed hostility (as measured by the Hostility and
Direction of Hostility Questionnaire) than non-psychiatric
controls. In addition, eating disorder symptomatology (as
measured by the Eating Disorders Inventory) was associated
with inwardly directed hostility.

In using the same measure of hostility, Ben-Tovim,
Marilov, and Crisp (1979) found no difference between
abstaining anorexics and binging and purging anorexics. In their attempt to subcategorize anorexics, however, they decreased their sample size from twenty-one anorexics to twelve abstainers and nine purgers thereby complicating analyses. In fact, when they compared their sample of anorexics (both abstainers and vomiters) to normal samples of past studies, differences were revealed between anorexics and controls.

Scott and Baroffio (1986) used the Minnesota Multiphasic Personality Inventory to investigate differences between anorexics, bulimics, and the obese and a non-disordered control group. Although the profiles of the patients were similar, there were discrepancies between the patients and the controls. Elevations on scales 2 and 4 were interpreted as reflecting individuals who are immature, passive-aggressive, self-defeating, and often struggling with interpersonal control. In addition, a moderate elevation on scale 1 demonstrated the tendency to displace emotions onto somatic problems. From these findings, it may be hypothesized that anorexics, unable to express their hostility in a mature and direct manner, express their anger mentally and physically toward the self.

Casper (1990) examined personality characteristics among recovered anorexics at an 8-10 year follow-up. Although she found that women who scored higher on the Eating Attitudes Test reported more hostility using the
Hopkins Symptom Checklist, this finding was not discussed within the study. It appears that the relationship between eating pathology and hostility needs further examination.

**Assertiveness.** Assertiveness has been defined as the expression of thoughts, feelings, and needs in claiming one’s rights while respecting the rights of others. Assertive communication is direct, honest, and self-enhancing (Bloom, Coburn, & Pearlman, 1975). Clinical reports have described anorexics as exhibiting less assertive behavior in their relationships for fear of rejection (Neuman & Halvorson, 1983). By not expressing their genuine thoughts and feelings, these anorexics are giving up their rights so that others will not be offended or angry. Williams, Chamove, and Millar (1990), unable to find published studies that directly examined the relationship between assertiveness and anorexia, hypothesized a relationship between the two based solely on anecdotal evidence. Assessing assertiveness in a somewhat direct manner (i.e., self-report), they found that anorexics and bulimics were less assertive than non-psychiatric controls.

Other studies, while not directly assessing assertiveness, have reported characteristics of anorexics that suggest unassertive behavior. Crisp, Hsu, and Stonehill (1979) found that anorexics tended to score low on emotionality yet high on other scales suggesting that they
were denying the extent of their emotions. In addition, Pillay and Crisp (1977) found that while anorexics have more fears and sensitivities, they are less likely to communicate these to others. Casper (1990) found that recovered anorexics exhibited a restricted amount of emotional expression and initiative when compared to women without a history of eating disorders. These studies appear to lack definition and therefore make it difficult to determine what exactly is being measured. The present study assessed assertiveness in a direct manner and therefore provides empirical data concerning its relationship to anorexia nervosa.

Personality profile. Previous research has tended to focus on the relationship between anorexia nervosa and individual personality traits, providing little or no context for these relationships. Orbach (1986), however, has described the profile of an anorexic personality in relation to these four personality traits and women's roles in society. That is, the anorexic female experiences conflict around accommodating and rebelling against society's expectations. She appears to comply to society's message of submission yet takes her control back by exerting extreme control over her body. By doing so, she is giving in to society's message to be thin, and therefore, is actually conforming to society's expectations and being controlled. This creates tremendous hostility that cannot
be overtly expressed since her dependent character relies upon the approval of others. The anorexic fears rejection, and therefore, controls her hostility towards others by expressing her anger on her body.

In an effort to empirically document the presence of the anorexic personality profile presented by Orbach (1986), the present study examined the relationship of obsessiveness, dependency, overcontrolled hostility, and assertiveness to eating pathology (i.e., anorexia, subclinical anorexia, normal) in a nonclinical sample of female undergraduates. This population was studied for several reasons. First, a relatively high prevalence of eating pathology has been reported on college campuses (Aronson, 1990). Second, most studies addressing the issue of personality variables and eating disorders have been conducted with clinical populations (Ben-Tovim, Marilov, & Crisp, 1979; Strober, 1980). Research conducted with eating disordered females who have not been diagnosed is lacking, and since most do not seek treatment, findings from this nonclinical sample may be more generalizable. Also, subjects from this population may define a "purer" sample; a psychiatric population may be more likely to include patients with a dual diagnosis as well as other psychological distress.

Third, since research has focused on personality variables present during the course of the disorder, it is
not clear if these factors reflect an underlying personality structure or merely symptoms related to the disorder. Studies have attempted to assess personality after weight restoration (Channon & DeSilva, 1985; Crisp, Hsu, & Stonehill, 1979; Stonehill & Crisp, 1977; Strober, 1981) and recovery (Casper, 1990) in an effort to provide evidence of an underlying personality structure. Findings from these studies, however, are conflictual and include problems related to the high relapse rate within eating disorders (Neuman & Halvorson, 1983). Evidence of personality characteristics within this sample may lend support to the theory of a personality type that predisposes some women to anorexia nervosa.

Specifically, it was hypothesized that women in the anorexic group (AN) would score significantly higher than controls (C) on measures assessing all of these personality traits except for assertiveness. On this variable, it was expected that anorexics would score significantly lower than controls. While subclinical anorexics' (SA) scores on the four variables were expected to fall between those of the controls and clinical anorexics, due to the lack of research in this area it was not clear whether these differences would reach statistical significance. These specific, yet related hypothesis are illustrated below.
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Participants

Participants were solicited from undergraduate psychology classes at a large, southwestern university. Although 196 females initially participated, data from four subjects were excluded from analyses due to incomplete questionnaires. The mean age of the 192 female undergraduates was 21.68 years ($SD = 5.31$). In terms of academic rank, 28% of the participants classified themselves as freshmen, 20% as sophomores, 30% as juniors, and 20% as seniors. The majority reported grade point averages ranging from 3.0-3.49 (39%), and most also identified themselves as single (94%) and Caucasian/non-Hispanic (83%). The reported mean body mass for all participants was 21.96 (kg/m$^2$) ($SD = 4.25$).

Instruments

Demographic and weight information. A demographic and weight questionnaire was developed to obtain information regarding age, year in school, grade point average, marital status, racial/ethnic group, present weight and height, ideal weight and height, and lowest and highest weight at present height (see Appendix A).
Anorexia nervosa. The 40-item Eating Attitudes Test (EAT; Garner & Garfinkel, 1979) assesses psychological and behavioral symptoms associated with anorexia nervosa. Sample items include, "Other people think that I am too thin," and "Feel that others pressure me to eat." For each item, individuals indicate the degree to which it applies to them on a six-point Likert-type scale ranging from "always" to "never." Although there are six response options, each item is scored as follows: 3 points for the extreme anorexic response, 2 points for the next most extreme response, 1 point for the next. The remaining three responses are all scored as 0 (zero). A total score is obtained by summing across all items and can range from 0 to 120.

The EAT was found to be a highly reliable measure with an internal consistency (Cronbach's alpha) of .94 for a pooled sample of anorexics and controls (Garner & Garfinkel, 1979). In addition, scores were significantly correlated with criterion group membership ($r = .87; p < .001$) demonstrating a high degree of concurrent validity (Garner & Garfinkel, 1979). Garner and Garfinkel (1979; 1980) have suggested using a cutoff score of 30 to maximize differentiation between anorexics and normal-weight female undergraduates. This cutoff reduced the number of false positives to 12% and false negatives to 6%. A discriminant
function analysis found the EAT to be 91% accurate in classifying anorexics and controls (see Appendix B).

**Obsessiveness.** The Leyton Obsessional Inventory-Questionnaire (LOI-Q; Snowdon, 1980) is a 70-item self-report that was based on the (individually administered) Leyton Obsessional Inventory (Cooper, 1970). In addition, a few items were reworded to reduce gender bias that was present in the original questionnaire. The LOI-Q consists of four subscales: (a) Obsessional symptoms, (b) Obsessional traits, (c) Resistance, and (d) Interference. Obsessional symptoms are described as chronic thoughts and feelings that are ego-dystonic and often result in compulsive behaviors used to decrease anxiety associated with resisting these thoughts and feelings. For example, subjects answer yes or no to symptom items such as, "Do you like to put your personal belongings in set places or patterns?" Obsessional traits are described as ego-syntonic character traits such as rigidity, perfectionism, and excessive attention to details (Johnson & Holloway, 1988). For example, subjects answer yes or no to trait items such as, "Do you pride yourself in thinking things over very carefully before making a decision?"

The resistance and interference subscales measure subjects' attitudes and experiences of their obsessive behaviors. For each symptom and trait item answered positively, subjects are asked how they feel about the
behavior as well as how much the behavior interferes with their other activities. Scores may be obtained by summing the items (symptoms and traits) or points (resistance and interference) within each of the four subscales. On the basis of past research (Solyom, Ledwidge, & Solyom, 1986), the present study did not include the resistance and interference scales; instead, three separate scores were computed by summing all symptom items endorsed, all trait items endorsed, and a combination of both obsessive symptoms and traits.

Test-retest reliabilities reported for the original and revised questionnaires given two months apart range from .73 to .77 (Snowdon, 1980). In the original study, Cooper (1970) found the LOI to be a valid measure in differentiating between obsessional and normal patients with little overlap. Symptom scores between high scoring normals and low scoring obsessionals may be further distinguished through the use of the resistance and interference subscales. In addition, the LOI has been frequently used within an eating disorders population as it is claimed to be the best measure of obsessionality (Johnson & Holloway, 1988; see Appendix C).

Dependency. The 48-item Interpersonal Dependency Inventory (IDI; Hirschfeld, Klerman, Gough, Barrett, Korchin, & Chodoff, 1977) assesses the thoughts, feelings, beliefs, and behaviors relating to one's needs to associate
with valued others. Factor analysis revealed the presence of three factors: Emotional Reliance on another Person (concerning emotional attachment, needs for affection, and doubts of independence), Lack of Social Self-Confidence (reflecting a more generalized wish for attention and approval), and Assertion of Autonomy (involving the denial of attachment or dependency needs). The authors proposed that these three scales, in combination, measure interpersonal dependency.

Sample items of the IDI include, "As a child, pleasing my parents was very important to me," and "I am quick to agree with the opinions expressed by others." Individuals indicate the degree to which each item applies to them on a four point Likert-type scale ranging from 4, "very characteristic of me," to 1, "not characteristic of me." The developers of the IDI (Hirschfeld et al., 1977) suggested obtaining a score for each of the three subscales as well as a total score. Obtaining raw scores for each scale entailed (a) reversing values of items 10, 23, and 44 on subscale 2, and then (b) summing across all items within each scale. After obtaining the subscale scores, a fourth term was computed by multiplying the scores on scales 2 and 3 and dividing the product by 30. A total score was derived by entering the four terms into the following equation:

Dependency = 40.84 + .20(1) + .18(2) - .66(3) + .53(4)
Hirschfeld (personal communication, September 23, 1993) reported that large, heterogeneous samples will produce means approaching 50 and standard deviations approaching 6 when scores are computed with the above equation. The present study found similar values when examining scores for all participants (M = 50.75, SD = 5.66).

Hirschfeld et al. (1977) found that split-half correlations for the subscales were .87, .78, and .72, respectively. They also reported, as expected, Emotional Reliance on Another Person and Lack of Social Self-confidence correlated with measures of neuroticism (r = .49, \( r^2 = .47 \)), depression (r = .44, \( r^2 = .42 \)), anxiety (r = .34, \( r^2 = .27 \)), and social desirability (r = -.44, \( r^2 = -.56 \)), respectively. These two scales also were able to discriminate scores between normals and patients while Assertion of Autonomy differentiated scores between males and females. Internal consistency reliabilities (Cronbach’s alphas) from the current investigation were .85, .84, .76, and .86 for Emotional Reliance, Lack of Social Self-Confidence, Assertion of Autonomy, and the total inventory, respectively (see Appendix D).

**Overcontrolled hostility.** The Hostility and Direction of Hostility Questionnaire (HDHQ; Caine, Foulds, & Hope, 1967) consists of 51 items selected from the MMPI that measure the degree and direction of overall hostility. Individuals are asked to answer true or false to items such
as, "My hardest battles are within myself," and "At times I think I am no good at all." Items reflecting hostile responses are scored 1 and items reflecting non-hostile responses are scored 0 (zero).

The questionnaire is based on five subscales: (a) Urge to act out hostility, (b) Criticism of others, (c) Projected delusional (i.e., paranoid) hostility, (d) Self-criticism, and (e) Guilt. The first three subscales are used to measure extrapunitiveness while subscales (d) and (e) comprise the measure of intropunitiveness, or self-directed hostility. Therefore, scoring includes summing items across these two subscales. This measure of inwardly directed hostility has been significantly correlated with an eating disordered sample (r = .64; Williams, Chamove, & Millar, 1990). Although the present study was designed to examine the scales measuring intropunitiveness, the entire questionnaire was employed for ease and standardization of administration. Internal consistency reliability (KR-20) from the current investigation was .78 for the intropunitive subscale (see Appendix E).

**Assertiveness.** The 30-item Rathus Assertiveness Schedule (RAS; Rathus, 1973) measures the extent of expressed assertive behaviors in a variety of social situations. Sample items include, "I have avoided asking questions for fear of sounding stupid," and "I am open and frank about my feelings." The scale is presented in a 6-
point Likert-type format ranging from "very characteristic of me, extremely descriptive," to "very uncharacteristic of me, extremely nondescriptive." Although there are six response options, each item is scored as follows: 3 points for the extreme assertive response, 2 points for the next extreme response, 1 point for the next. In addition, points are subtracted for unassertive responses: -3 points for the extreme unassertive response, -2 points for the next extreme response, -1 point for the next. A total score is obtained by summing points assigned to assertive responses and subtracting points assigned to unassertive responses, and can range from -90 (extremely unassertive) to +90 (extremely assertive).

Rathus (1973) reported 2-month test-retest and split-half reliabilities to be .78 and .77, respectively. Validity coefficients are based on comparisons of RAS scores with two external criteria. First, impressions of the respondents were rated by others close to them, yielding correlations from $r = .33$ to $r = .62$ ($p < .01$) with the RAS. Second, impressions of respondents were rated objectively, based on responses indicating how they would behave in specific social situations. This yielded a correlation coefficient of $r = .70$ ($p < .01$) with the RAS. A recent study employing this scale (Williams, Chamove, & Miller, 1990) found that eating disorder symptomatology (as measured
by the Eating Disorders Inventory) was negatively correlated with assertiveness ($r = -.51$; see Appendix F).

**Procedure**

Participants were given a statement of the study's general purpose as well as information regarding anonymity, confidentiality, and the right to discontinue participation. They signed a consent form indicating their understanding of the study's purpose and their rights as participants. The various measures were administered during group testing sessions. The demographic form was administered first while the remaining questionnaires were counterbalanced to minimize ordering effects. Upon completion, participation in the study was verified so subjects might receive extra class credit. In addition, participants were given a list of several mental health referrals in case their involvement in the study contributed to feelings of distress. (See Appendix G)

**Analysis of data**

Based on previous research (Garner & Garfinkel, 1979; 1980), participants were classified into one of three levels of eating pathology using the EAT scores:

(a) **Anorexia**: EAT score $> 30$ ($n = 26$)

(b) **Subclinical Anorexia**: EAT score between 20 to 29 inclusive ($n = 31$)

(c) **Normal**: EAT score $\leq 19$ ($n = 135$)
To address the hypotheses outlined previously, the following statistical analyses were conducted:

1. A one-way multivariate analysis of variance (MANOVA) was used to determine if differences existed among the three eating groups on the personality measures (i.e., total obsessiveness, obsessive symptoms, obsessive traits, total dependency score, emotional reliance, lack of self-confidence, assertion of autonomy, intropunitiveness, and assertiveness).

2. Planned comparisons among groups were tested by separate univariate ANOVAs for each of the dependent measures. ANOVAs reaching significance were followed by Duncan post-hoc analyses to determine the specific difference between mean scores. Alpha was set at .05 for all analyses. In addition, based on the computed effect sizes, the sample size of 192 in the present study would yield a power of .98 (Lipsey, 1990).
CHAPTER III

RESULTS

. The MANOVA, conducted to detect differences among eating levels on the four personality scales, reached significance, Wilks' Lambda = .73, $F(16, 364) = 3.95, p < .0001$. Subsequent univariate ANOVAs revealed that differences existed among the groups on obsessiveness total score, $F(2, 189) = 19.28, p < .0001$, obsessive symptoms, $F(2, 189) = 17.89, p < .0001$, obsessive traits, $F(2, 189) = 16.91, p < .0001$, dependency total score, $F(2, 189) = 12.99, p < .0001$, emotional reliance, $F(2, 189) = 14.04, p < .0001$, lack of self-confidence, $F(2, 189) = 10.34, p < .0001$, and assertion of autonomy, $F(2, 189) = 3.16, p < .05$; however, no differences were found among eating levels on intropunitiveness $F(2, 189) = 2.87, p < .06$ or assertiveness, $F(2, 189) = .97, p < .38$.

Post-hoc analyses indicated that Anorexics scored greater on the total LOI-Q than Subclinical Anorexics, who in turn scored greater than Normals. A similar finding was revealed on the obsessive symptom subscale in that Anorexics scored higher than Subclinical Anorexics, who in turn scored higher than Normals. On the obsessive trait subscale, Anorexics and Subclinical Anorexics scored similarly yet
reported significantly more traits than Normals. These findings indicate that while Anorexics demonstrate greater obsessive symptoms than Subclinical Anorexics, these two groups express a similar level of obsessive traits.

In terms of the total IDI, Anorexics and Subclinical Anorexics scored higher than Normals. On factors 1 (Emotional Reliance on Another Person) and 2 (Lack of Social Self-Confidence), Anorexics and Subclinical Anorexics scored similarly, though endorsed significantly more of these items than Normals. These findings suggest that Anorexics and Subclinical Anorexics are similar in their needs for emotional attachments and social attention and approval, yet they possess more of these dependent traits than Normals. On factor 3 (Assertion of Autonomy), Anorexics scored higher than Subclinical Anorexics and Normals, who endorsed a similar number of items. This finding suggests that Anorexics deny needs for dependency to a greater extent than both Subclinical Anorexics and Normals; Subclinical Anorexics and Normals are similar in the degree to which they deny dependency needs (see Table 1 for mean scores).
Table 1
Means of Personality Variables by Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>Anorexic (n=26)</th>
<th>Subclinical Anorexic (n=31)</th>
<th>Normal (n=135)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOI-Q</td>
<td>39.04&lt;sup&gt;a&lt;/sup&gt;</td>
<td>30.87&lt;sup&gt;b&lt;/sup&gt;</td>
<td>23.08&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Sx</td>
<td>26.35&lt;sup&gt;a&lt;/sup&gt;</td>
<td>19.77&lt;sup&gt;b&lt;/sup&gt;</td>
<td>14.91&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Tr</td>
<td>12.69&lt;sup&gt;a&lt;/sup&gt;</td>
<td>11.10&lt;sup&gt;a&lt;/sup&gt;</td>
<td>8.17&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>IDI</td>
<td>56.14&lt;sup&gt;a&lt;/sup&gt;</td>
<td>54.85&lt;sup&gt;a&lt;/sup&gt;</td>
<td>50.75&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Factor 1</td>
<td>47.85&lt;sup&gt;a&lt;/sup&gt;</td>
<td>48.29&lt;sup&gt;a&lt;/sup&gt;</td>
<td>41.04&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Factor 2</td>
<td>36.00&lt;sup&gt;a&lt;/sup&gt;</td>
<td>33.58&lt;sup&gt;a&lt;/sup&gt;</td>
<td>29.70&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Factor 3</td>
<td>30.58&lt;sup&gt;a&lt;/sup&gt;</td>
<td>27.48&lt;sup&gt;b&lt;/sup&gt;</td>
<td>27.11&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>HDHQ</td>
<td>7.96</td>
<td>7.29</td>
<td>6.36</td>
</tr>
<tr>
<td>RAS</td>
<td>.04</td>
<td>10.03</td>
<td>7.16</td>
</tr>
</tbody>
</table>

Note. LOI-Q - represents Leyton Obsessional Inventory-Questionnaire. Sx = Obsessive symptoms; Tr = Obsessive traits. IDI - represents Interpersonal Dependency Inventory. Factor 1 = Emotional Reliance; Factor 2 = Lack of Social Self-Confidence; Factor 3 = Assertion of Autonomy. HDHQ - represents Hostility and Direction of Hostility Questionnaire (Intropunitive Scale). RAS - represents Rathus Assertiveness Scale.

<sup>a,b,c</sup> - variables that do not share common superscripts are different at p < .05.
CHAPTER IV

DISCUSSION

This study investigated the relationship between anorexia nervosa and specific personality traits. Females representing three different levels of anorexic symptomatology were compared on measures of obsessiveness, dependency, overcontrolled hostility, and assertiveness. In order to fully examine the findings related to each of these personality traits, the remainder of this chapter will be divided into 6 categories: (a) personality correlates of anorexia, (b) levels and prevalence of anorexia, (c) research limitations (d) clinical implications, (e) recommendations for future research, and (f) summary.

Personality correlates of anorexia

This investigation provides tentative support for the notion of the "anorexic personality" as well as the association between level of anorexic symptomatology and greater endorsement of personality characteristics. Although no differences were found among the groups on overcontrolled hostility or assertiveness, the level of anorexic symptoms was associated with the degree to which female college students' endorsed obsessive and dependent features. Additional findings revealed that anorexic symptomatology was related to both obsessive symptoms and
traits as well as specific factors of dependency including emotional reliance, lack of social self-confidence and assertion of autonomy.

Consistent with past research (Smart et al., 1976), the present investigation found that anorexics endorsed more obsessive symptoms and traits than normals. In addition, females classified as anorexic reported greater obsessive symptoms than females who were designated as subclinical anorexic; however, anorexics reported a similar level of obsessive traits as subclinical anorexics. This second finding supports previous research by Strober (1980) indicating that obsessional symptoms decrease with weight restoration while the underlying obsessional character traits endure. Strober theorized that an underlying obsessive trait-structure facilitated the emergence of the more overt symptoms of obsessional thoughts or actions. In terms of the present study, subclinical anorexics possess the obsessional character structure but lack the corresponding symptomatic behaviors. On the other hand, anorexics maintain the obsessional character as well as the symptomatic behavior associated with the acute phase, and thus score higher on an obsessiveness measure.

In terms of dependency, the present investigation found that anorexic females report higher levels than normal females. This supports psychoanalytic theories asserting that the anorexic is encouraged to display compliant,
dependent behavior to maintain the relationship with her mother. Support also is provided for the notion that, as Friedlander and Seigel (1990) proposed, separation difficulties contribute to the onset of anorexia. They found that a drive for thinness was strongly predicted by a female's level of dependency conflict. This finding is in accord with the present study claiming that a dependent character structure underlies anorexic symptomatology.

On the specific factors underlying dependency, the current investigation found that subclinical anorexics were similar to anorexics in terms of emotional reliance and lack of self-confidence. Both groups reported higher levels than the normal controls. On the third factor, assertion of autonomy, subclinical anorexics were similar to normal controls; both groups scored significantly lower than anorexics. If a subclinical level of anorexia is defined as atypical anorexia, the findings in the present study may be consistent with Shisslak et al. (1989) who claimed that while issues of dependency are present in both typical and atypical anorexics, the conflict is experienced differently. The present study examined three factors of dependency and found that both subclinical anorexics and anorexics experience needs for dependency, yet subclinical anorexics are less likely to deny such needs.

In measuring inwardly directed hostility, the current investigation found no significant differences among
anorexics, subclinical anorexics, and normal controls; however, the failure to find a difference is based on a statistically set criterion of $p < .05$, and results suggest a trend in the proposed direction. The trend is consistent with past research (Williams et al., 1990) which found that anorexic and bulimic patients reported more self-directed hostility than non-psychiatric controls. Williams et al. (1990) also demonstrated that eating disorder symptomatology correlated with inward hostility. The present study examined a nonclinical population, and this may account for the weaker relationship between anorexic symptomatology and overcontrolled hostility.

In terms of assertiveness, no significant differences were found among females classified as anorexic, subclinical anorexic, or normal. This result was unexpected and contradicts past evidence correlating anorexic symptomatology with assertiveness. Clinical reports described the anorexic as being unable to assert her rights (Neuman & Halvorson, 1983). In addition, Williams et al. (1990) measured assertiveness with the RAS and found that both anorexic and bulimic patients were less assertive than non-psychiatric controls; however, no significant difference in assertiveness was found when comparing anorexic and bulimic patients to a psychiatric control group. It may be that the current study failed to find differences in reported assertiveness because a nonclinical population was
examined. It is possible that one's level of assertiveness is less associated with anorexic symptomatology than it is with psychiatric functioning, and as all participants were students in a university setting, a moderate level of psychiatric health/functioning could be assumed.

A second explanation for the lack of group differences in assertiveness is that using a college population may result in more homogeneous levels of assertiveness. In general, women who enter a four year university may be more intelligent, goal-directed, and proficient with interpersonal and coping skills. Alternatively, college women may understand assertiveness skills cognitively but fail to follow through behaviorally. This discrepancy would illustrate the fundamental limitation in self-report measures, providing attitudinal rather than behavioral evidence. Finally, Williams et al. (1990) conducted their investigation in the United Kingdom, and it may be that women in the United States, rather than college women specifically, are not as diverse in their level of assertiveness.

Overall, the findings from the current investigation are consistent with theories that describe the personality profile of an anorexic in relation to women's roles in society (Horney, 1950; Orbach, 1986; Westkott, 1986). That is, the anorexic female experiences conflict around accommodating and rebelling against society's expectations.
Appearing to comply with society's message of submission, she regains control by exerting extreme restrictions on her body. By doing so, she is giving in to society's message to be thin, and therefore, is actually conforming to society's expectations and being controlled. This reality creates tremendous hostility which conflicts with her dependent need to rely upon the approval of others. The anorexic fears rejection; therefore, she attempts to control her hostility towards others by expressing the anger on her body. Thus, individuals characterized by an obsessive, dependent, and hostile personality profile may be more likely to manifest anorexic symptomatology.

Levels and prevalence of anorexia nervosa

In examining anorexia nervosa in a nonclinical sample, female participants were classified into one of three categories based upon their scores on the Eating Attitudes Test (Garner & Garfinkel, 1979). The developers of the EAT suggested applying a cutoff score of 30 to classify anorexia, and several studies have implemented this cutoff as well (Aronson et al., 1990; Clarke & Palmer, 1983). A secondary purpose of the present study was to examine a subclinical level of anorexia. Since no previous studies addressed this question using the EAT, there was no existing empirical basis for determining this level. In this study, the range of the subclinical anorexic category was defined as 2/3 the standard deviation below the 30 cutoff.
Therefore, with a $SD = 15$, the subclinical anorexic range was 10. This decision resulted in three categories defined as (a) Anorexic, EAT score $> 30$, (b) Subclinical Anorexic, EAT score $> 20$ and $< 29$, and (c) Normal, EAT score $< 19$.

In diagnosing anorexia nervosa with the criteria previously established by Garner and Garfinkel (1979), the present study found a prevalence rate of 14%. In other words, 26 of the 192 participants scored 30 or above on the EAT. It should be noted, however, that this categorization was based upon the EAT score alone. Clinical interviews were not conducted and, therefore, a pure diagnosis according to DSM-III-R criteria can not be confirmed. This rate, however, is consistent with other studies that have examined anorexic symptomatology on college campuses (Aronson et al., 1990; Clarke & Palmer, 1983). For example, Aronson et al. (1990) found that 10% of the female undergraduates in their younger age group (i.e., between the ages of 18 and 27) scored within the anorexic range defined by the EAT. The current investigation used a representative sample of the college population as well as a psychometrically sound measure; therefore, the number of women falling within the anorexic range of symptomatology may be considered valid. For the subclinical range, 16% of the participants were classified as such (i.e., 31 participants scored between 20 and 29 on the EAT). Since there is no previous research on this level of anorexic
symptomatology, no direct comparisons can be made as to the validity of this prevalence rate.

Limitations

Although the current investigation provided important information concerning the relationship between anorexic symptomatology and personality traits, limitations exist that warrant discussion. First, results may have been biased due to the reliance on self-report. For example, participants may have under- or over-reported their eating disorder symptoms or personality traits. Although possible, the prevalence rate of anorexic classification is consistent with previous research suggesting relatively accurate reporting. As previously mentioned, reliance on an assertiveness self-report also may bias results by reflecting attitudinal rather than behavioral evidence. This sample of college women may have reported an awareness of how they should respond assertively, yet this attitude may not correspond to actual behaviors.

A second limitation concerns the subclinical anorexia classification. This category has not been researched and, therefore, has no previous empirical support. One of the goals of this investigation was to examine this level of anorexia and assess its potential for further research. Based on the present study, however, subclinical anorexia appears to be a useful category as it differed from anorexia on total obsessiveness, obsessive symptoms, and assertion of
autonomy. In addition, subclinical anorexics differed from normals on total obsessiveness, obsessive symptoms, obsessive traits, total dependency, emotional reliance, and lack of social self-confidence.

A third limitation involves defining, or labeling, the construct overcontrolled hostility. The developers of the Hostility and Direction of Hostility Questionnaire (Caine, Fouds, & Hope, 1967) defined this factor as intropunitiveness; however, in reviewing the scales that comprise this factor, the term overcontrolled hostility seemed appropriate to the current investigation. The scale was generated from the Overcontrolled Hostility Scale of the Minnesota Multiphasic Personality Inventory which has been described as a measure of inhibition of hostile expression (Megargee, 1966). Finally, the sample employed in this study was drawn from a single university in the southwestern region of the United States; therefore, the generalizability of the results may be limited.

Clinical Implications

Findings from the present study revealed that 14% of the women were classified as anorexic. This rate reflects a significant number of young women who report experiencing severe anorexic symptomatology, and clinicians should be aware of the prevalence and characteristics of this population. In addition, the fact that 16% of the participants were classified with subclinical anorexic
symptomatology would further indicate the scope of this problem. The results from the current investigation, in relating eating pathology with specific personality traits, suggest that females falling within this subclinical range may be at risk for developing anorexia nervosa. It also is possible, however, that many or all of these females will never progress to a clinical level of anorexia, thus warranting diagnoses. The subclinical anorexic category may be a precursor to anorexia nervosa or as a separate psychological disturbance. The present study demonstrates that females who fall within this range of anorexic symptomatology experience some degree of distress regarding eating, obsessiveness, and dependency. Given the prevalence rate on a college campus, it would not be surprising to find that many of these females seek treatment in outpatient facilities such as university counseling centers. Practitioners should note that anorexia is not a medical or psychiatric illness exclusively but a disorder involving several issues, such as level of eating pathology and character traits. Females with anorexic symptomatology are in need of intervention and treatment at multiple levels.

Results of the present study also suggest that practitioners would benefit by understanding the personality correlates of these disorders. The current investigation found that anorexics have a personality profile characterized by obsessiveness and dependency. Although the
present study did not provide evidence of a profile including overcontrolled hostility using a statistical criterion, the trend suggests that anorexics may be more intropunitive than normal controls. By considering the character of the patient, the clinician may be able to enhance her/his goals for treatment. For example, the therapist working with an anorexic should attempt to understand the underlying conflict of internalizing and opposing perceived messages of devaluation. The therapist will need to address the obsessive, dependent, and hostile features to facilitate acceptance of the real self. If these traits are not adequately addressed, they may interfere with therapy.

Implications for future research

Although this study failed to find a relationship between anorexic symptomatology and overcontrolled hostility as well as anorexia and assertiveness, and thus entirely support the "anorexic personality," future investigation appears warranted. Empirical evidence (Williams et al., 1990) as well as anecdotal information (Neuman & Halvorson, 1983) suggest that a correlation between anorexia and these two personality traits exist, yet it is possible that anorexic females do not differ from normal females in terms of intropunitive or assertive behavior. Conversely, it may be that a relationship between overcontrolled hostility and anorexia exists, yet the present study failed to support
this relationship when using a statistically set criterion. In addition, it may be that the Rathus Assertiveness Scale (RAS), which was employed in the present study, was not appropriate and that another questionnaire, such as the College Self-Expression Scale (Galassi, DeLo, Galassi, & Basien, 1974) may be more beneficial in measuring assertiveness in an undergraduate, non-psychiatric, population.

Second, it appears that further examination is needed in the construct of dependency. Results of the present study suggest that specific aspects of dependency (i.e., emotional reliance, lack of social self-confidence, and assertion of autonomy) are significant in relation to anorexic symptomatology. Past research (Pillay & Crisp, 1977; Smart et al., 1976; Strober, 1980) has provided confusing results in relating dependency and eating disorders due to disagreement in definition as well as lack in appropriate measures of dependency. Future investigations may want to examine dependency as measured by various objective scales. This would allow studies of the relationship between dependency and anorexia to be more discernable.

Results of this study also suggest a need for examination of a subclinical anorexic range. This study found that subclinical anorexics experience more pathology than controls. Subclinical anorexic symptomatology was
associated with higher levels of obsessiveness and dependency. More specifically, subclinical anorexics reported levels similar to anorexics in terms of obsessional traits, emotional reliance, and lack of social self-confidence, though scored lower than anorexics on obsessional symptoms.

Investigators may want to examine subclinical levels of symptomatology on a longitudinal basis to determine if this category predicts subsequent diagnoses of anorexia. This method of examination also would address the issue involving eating pathology as measured on a continuum or on separate criteria. That is, do subclinical anorexics develop anorexia with time? A similar direction of study may be to investigate the degree to which other psychological variables are correlated with this subclinical range. For example, past research in eating disorders has explored constructs such as self-esteem, body (dis)satisfaction, anxiety, and depression. It seems advantageous to compare the relationships of anorexic and subclinical anorexic symptomatology among these factors.

Another direction for future research in terms of personality traits and anorexia may include assessment of a clinical sample of anorexics. Similarly, other populations may be targeted to support the generalizability of these results. For example, investigators may want to examine personality correlates within bulimics and/or eating
disordered (i.e., anorexic) males. In addition, it may be interesting to investigate how the relationship between personality and eating disorders manifest in different cultures or age groups.

Finally, future research may focus on longitudinal studies to assess whether these personality correlates serve to predispose some women to anorexia. Such investigations may, instead, reveal that personality traits are merely symptoms which present during episodes of anorexia. Findings from longitudinal data may help in explaining the cause/effect relationship between personality and eating disorders and, therefore, assist practitioners in treating patients with these disorders.

Summary

The present study examined the relationship between several personality traits and anorexic symptomatology. Although no relationship was found with overcontrolled hostility and assertiveness, anorexics were more obsessive and dependent than normals. In addition, anorexics reported more obsessive symptoms and denial of dependency than subclinical anorexics, females scoring within the 20-29 range of the EAT. These subclinical anorexics, however, presented with higher levels of obsessive symptoms, obsessive traits, and dependency needs compared to controls. Additional research is needed to provide further support for these findings as well as determine the importance of the
subclinical anorexic classification. Moreover, the relationship between anorexia and other personality variables, particularly hostility and assertiveness, warrants examination.
APPENDIX A

QUESTIONNAIRE
Demographic Questionnaire

Directions: Please answer all items on this questionnaire as honestly and accurately as possible as they apply to you. All information you provide will be kept strictly confidential.

1. Age:_______

2. Marital Status: ___Single ___Married
   ___Divorced/Separated

3. Family of Origin: Number of Siblings:___
   Parental Marital Status:
   ___Married ___Divorced/Separated ___Other

4. Race/Ethnic Group:
   ___Black, non-Hispanic ___Caucasian
   ___Hispanic ___Asian-American
   ___Native American ___Other (please specify)_____

5. Annual Household Income:
   ___Less than 10,000 ___61,000-100,000
   ___10,000-30,000 ___More than 100,000
   ___31,000-60,000 Is this personal___ or family___?

6. Academic Rank in School:
   ___freshman ___senior
   ___sophomore ___graduate student
   ___junior ___other (please specify)_____

7. Number of Years Attending an Institution of Higher Education (e.g. community college, university):_______

8. Cumulative Grade Point Average:
   ___3.5-4.0 ___3.0-3.49 ___2.5-2.99
   ___2.0-2.49 ___less than 1.99

9. Academic Major (please specify):_____________________

10. Weight History:
    Present Weight:_____
    Present Height:_____

    Ideal Weight:_____
    Ideal Height:_____

    Lowest Weight at Present Height:_____
    Highest Weight at Present Height:_____

APPENDIX B

QUESTIONNAIRE
Directions: Please read each item below and circle the answer which applies best to you. All of the results will be strictly confidential. Most of the questions directly relate to food or eating, although other types of questions have been included. Please answer each question carefully. Thank-you.

1. Like eating with other people.
   Always  Usually  Often  Sometimes  Rarely  Never

2. Prepare foods for others but do not eat what I cook.
   Always  Usually  Often  Sometimes  Rarely  Never

3. Become anxious prior to eating.
   Always  Usually  Often  Sometimes  Rarely  Never

4. Am terrified about being overweight.
   Always  Usually  Often  Sometimes  Rarely  Never

5. Avoid eating when I am hungry.
   Always  Usually  Often  Sometimes  Rarely  Never

6. Find myself preoccupied with food.
   Always  Usually  Often  Sometimes  Rarely  Never

7. Have gone on eating binges where I feel that I may not be able to stop.
   Always  Usually  Often  Sometimes  Rarely  Never

8. Cut my food into small pieces.
   Always  Usually  Often  Sometimes  Rarely  Never

9. Aware of the calorie content of foods that I eat.
   Always  Usually  Often  Sometimes  Rarely  Never

10. Particularly avoid foods with a high carbohydrate content (e.g. bread, potatoes, rice, etc.).
    Always  Usually  Often  Sometimes  Rarely  Never

11. Feel bloated after meals.
    Always  Usually  Often  Sometimes  Rarely  Never

12. Feel that others would prefer if I ate more.
    Always  Usually  Often  Sometimes  Rarely  Never

13. Vomit after I have eaten.
    Always  Usually  Often  Sometimes  Rarely  Never
14. Feel extremely guilty after eating.
   Always  Usually  Often  Sometimes  Rarely  Never

15. Am preoccupied with a desire to be thinner.
   Always  Usually  Often  Sometimes  Rarely  Never

16. Exercise strenuously to burn off calories.
   Always  Usually  Often  Sometimes  Rarely  Never

17. Weigh myself several times a day.
   Always  Usually  Often  Sometimes  Rarely  Never

18. Like my clothes to fit tightly.
   Always  Usually  Often  Sometimes  Rarely  Never

   Always  Usually  Often  Sometimes  Rarely  Never

20. Wake up early in the morning.
   Always  Usually  Often  Sometimes  Rarely  Never

21. Eat the same foods day after day.
   Always  Usually  Often  Sometimes  Rarely  Never

22. Think about burning up calories when I exercise.
   Always  Usually  Often  Sometimes  Rarely  Never

23. Have regular menstrual periods.
   Always  Usually  Often  Sometimes  Rarely  Never

24. Other people think that I am too thin.
   Always  Usually  Often  Sometimes  Rarely  Never

25. Am preoccupied with the thought of having fat on my body.
   Always  Usually  Often  Sometimes  Rarely  Never

26. Take longer than others to eat my meals.
   Always  Usually  Often  Sometimes  Rarely  Never

27. Enjoy eating at restaurants.
   Always  Usually  Often  Sometimes  Rarely  Never

28. Take laxatives.
   Always  Usually  Often  Sometimes  Rarely  Never

29. Avoid foods with sugar in them.
   Always  Usually  Often  Sometimes  Rarely  Never

30. Eat diet foods.
   Always  Usually  Often  Sometimes  Rarely  Never
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<tr>
<td>31. Feel that food controls my life.</td>
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<td>Always</td>
<td>Usually</td>
<td>Often</td>
<td>Sometimes</td>
<td>Rarely</td>
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<td>32. Display self control around food.</td>
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<td>Always</td>
<td>Usually</td>
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<td>Sometimes</td>
<td>Rarely</td>
<td>Never</td>
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<td>33. Feel that others pressure me to eat.</td>
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<td>Always</td>
<td>Usually</td>
<td>Often</td>
<td>Sometimes</td>
<td>Rarely</td>
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<td>34. Give too much time and thought to food.</td>
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<td>Always</td>
<td>Usually</td>
<td>Often</td>
<td>Sometimes</td>
<td>Rarely</td>
<td>Never</td>
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<td>35. Suffer from constipation.</td>
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<td>Always</td>
<td>Usually</td>
<td>Often</td>
<td>Sometimes</td>
<td>Rarely</td>
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<td>36. Feel uncomfortable after eating sweets.</td>
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<td>Always</td>
<td>Usually</td>
<td>Often</td>
<td>Sometimes</td>
<td>Rarely</td>
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<td>37. Engage in dieting behavior.</td>
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<td>Always</td>
<td>Usually</td>
<td>Often</td>
<td>Sometimes</td>
<td>Rarely</td>
<td>Never</td>
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<td>38. Like my stomach to be empty.</td>
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<td>Always</td>
<td>Usually</td>
<td>Often</td>
<td>Sometimes</td>
<td>Rarely</td>
<td>Never</td>
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<tr>
<td>39. Enjoy trying new rich foods.</td>
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<tr>
<td>Always</td>
<td>Usually</td>
<td>Often</td>
<td>Sometimes</td>
<td>Rarely</td>
<td>Never</td>
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<td>40. Have the impulse to vomit after meals.</td>
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<tr>
<td>Always</td>
<td>Usually</td>
<td>Often</td>
<td>Sometimes</td>
<td>Rarely</td>
<td>Never</td>
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</table>
**LOI-Q**

**Directions:** Please read each item carefully and indicate whether the item applies to you or does not apply to you by circling **YES** or **NO**.

1. Are you often inwardly compelled to do certain things even though your reason tells you it is not necessary? **YES** **NO**

2. Do unpleasant or frightening thoughts or words ever keep going over and over in your mind? **YES** **NO**

3. Do you ever have persistent imaginings that someone close to you (e.g. children or parents) might be having an accident or that something might have happened to them? **YES** **NO**

4. Have you ever been troubled by certain thoughts or ideas of harming yourself or persons in your family- thoughts which come and go without any particular reason? **YES** **NO**

5. Do you often have to check things several times? **YES** **NO**

6. Do you ever have to check gas or water taps or light switches after you have already turned them off? **YES** **NO**

7. Do you ever have to go back and check doors, cupboards or windows to make sure that they are really shut? **YES** **NO**

8. Do you hate dirt and dirty things? **YES** **NO**

9. Do you ever feel that if something has been used, touched or knocked by someone else it is in some way spoiled for you? **YES** **NO**

10. Do you dislike brushing against people or being touched in any way? **YES** **NO**

11. Do you feel that even a slight contact with bodily secretions (such as sweat, saliva, urine, etc.) is unpleasant or dangerous, or liable to contaminate your clothes or belongings? **YES** **NO**
12. Do you worry if you go through a day without having your bowels open?  YES  NO
13. Are you ever worried by the thoughts of pins, needles, or bits of hair that might have been left lying about?  YES  NO
14. Do you worry about household things that might chip or splinter if they were to be knocked or broken?  YES  NO
15. Does the sight of knives, hammers, hatchets, or other possibly dangerous things in your home ever upset you or make you feel nervous?  YES  NO
16. Do you tend to worry a bit about personal cleanliness or tidiness?  YES  NO
17. Are you fussy about keeping your hands clean?  YES  NO
18. Do you ever wash and iron clothes, or ask for this to be done, when they are not obviously dirty in order to keep them extra clean and fresh?  YES  NO
19. Do you take care that the clothes you are wearing are always clean and neat, whatever you are doing?  YES  NO
20. Do you like to put your personal belongings in set places or patterns?  YES  NO
21. Do you take great care in hanging and folding your clothes at night?  YES  NO
22. Are you strict about the house always being kept very clean?  YES  NO
23. Do you dislike having a room untidy or not quite clean for even a short time?  YES  NO
24. Do you sometimes get angry that children (or other people) spoil your nice clean and tidy room(s)?  YES  NO
25. Do you like furniture or ornaments to be in exactly the same place always?  YES  NO
26. Do your easy chairs have cushions which you like to keep exactly in position? YES NO

27. If you notice any bits or specks on the floor or furniture, do you have to remove them at once? YES NO

28. Do you ever clean or dust rooms that haven't had time to get dirty, just to make sure that they are really clean? YES NO

29. Do you ever have to clean, dust, or wash things over again several times just to make sure they are really clean? YES NO

30. Do you have to keep to strict timetables or routines for doing ordinary things? YES NO

31. Do you have to keep a certain order for undressing and dressing, or washing and bathing? YES NO

32. Do you get a bit upset if you cannot do your work (and or housework) at set times or in a certain order? YES NO

33. Do you ever have to do things over again a certain number of times before they seem quite right? YES NO

34. Do you ever have to count things several times or go through numbers in your mind? YES NO

35. Do you ever get behind with work (and or housework) because you have to do something over again several times? YES NO

36. Are you a person who often has a guilty conscience over quite ordinary things? YES NO

37. Are you the sort of person who has to pay a great deal of attention to details? YES NO

38. Are you ever over-conscientious or very strict with yourself? YES NO

39. Do you ever waste time by doing a thing more thoroughly than is really necessary just to see it is really finished? YES NO
40. Even when you have done something carefully, do you often feel that it is somehow not quite right or complete? 
YES NO

41. Do you feel unsettled or guilty if you haven't been able to do something exactly as you would like? 
YES NO

42. Do you always fail to explain things properly, in spite of having planned beforehand exactly what to say? 
YES NO

43. Do you have difficulty in making up your mind? 
YES NO

44. Do you have to turn things over and over in your mind for a long time before being able to decide about what to do? 
YES NO

45. Do you ask yourself questions or have doubts about a lot of things you do? 
YES NO

46. Are there any particular things that you try to keep away from or that you avoid doing, because you know that you would be upset by them? 
YES NO

47. Do you find it difficult to throw things away? 
YES NO

48. Do you keep rather a lot of empty boxes, paper bags, old newspapers, or empty tins in case they come in useful one day? 
YES NO

49. Do you regard cleanliness as a virtue in itself? 
YES NO

50. Do you get more pleasure from saving money than from spending it? 
YES NO

51. Are you more careful with money than most people you know? 
YES NO

52. Do you keep regular accounts of the money you spend every day? 
YES NO

53. Do you usually look on the gloomy side of things? 
YES NO

54. Do people often get on your nerves and make you feel irritable? 
YES NO
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>When you feel critical of someone, do you usually say what you are</td>
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<td>thinking?</td>
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<td>Do you get angry or irritated if people don’t do things carefully or</td>
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<td>correctly?</td>
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<td>Do you try to avoid changes in your house or work or in the way you</td>
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<td>do things?</td>
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<td>Do you try to avoid changing your mind once you have made a decision</td>
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<td>about something?</td>
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<td>Are you a person who likes to stick to principles and decisions</td>
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<td>whatever the opposition or difficulties?</td>
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<td>Do you pride yourself on thinking things over very carefully before</td>
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<td>making decisions?</td>
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<td>Do you think that regular daily bowel movements are important for your</td>
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<tr>
<td>health?</td>
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<td>Do you often get scared that you might be developing some sort of</td>
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<td>serious illness or cancer?</td>
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<td>Are you very systematic and methodical in your daily life?</td>
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<td>Do you like to get things done exactly right, down to the smallest</td>
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<tr>
<td>detail?</td>
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<tr>
<td>Do you think it is important to follow rules and regulations exactly?</td>
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<tr>
<td>Do you like to have set times or orders for doing your work (and or</td>
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<tr>
<td>household jobs)?</td>
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<td>Are you ever late because you just can’t seem to get through everything</td>
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<td>in time?</td>
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<td>If you have to catch a train or keep an important appointment, do you</td>
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<td>have to plan out how to do it beforehand in great detail?</td>
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<td>Do you ever count things without there being any necessity to do so?</td>
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<tr>
<td>Do you like cushions on chairs to be kept exactly in position?</td>
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IDI

Directions: Please read each item below and, using the code given below, circle the number which indicates the item which is most characteristic of you.

1. not characteristic of me
2. somewhat characteristic of me
3. quite characteristic of me
4. very characteristic of me

1. I prefer to be by myself. 1 2 3 4
2. When I have a decision to make, I always ask for advice. 1 2 3 4
3. I do my best work when I know it will be appreciated. 1 2 3 4
4. I can't stand being fussed over when I am sick. 1 2 3 4
5. I would rather be a follower than a leader. 1 2 3 4
6. I believe people could do a lot more for me if they wanted to. 1 2 3 4
7. As a child, pleasing my parents was very important to me. 1 2 3 4
8. I don't need other people to make me feel good. 1 2 3 4
9. Disapproval by someone I care about is very painful to me. 1 2 3 4
10. I feel confident of my ability to deal with most of the personal problems I am likely to meet in life. 1 2 3 4
11. I'm the only person I want to please. 1 2 3 4
12. The idea of losing a close friend is terrifying to me. 1 2 3 4
13. I am quick to agree with the opinions expressed by others. 1 2 3 4
14. I rely only on myself. 1 2 3 4
<table>
<thead>
<tr>
<th></th>
<th>not characteristic of me</th>
<th>somewhat characteristic of me</th>
<th>quite characteristic of me</th>
<th>very characteristic of me</th>
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<tbody>
<tr>
<td>15.</td>
<td>I would be completely lost if I didn't</td>
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<td>2</td>
<td>3</td>
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<td></td>
<td>have someone special.</td>
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<td>16.</td>
<td>I get upset when someone discovers</td>
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<td>3</td>
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<td></td>
<td>a mistake I've made.</td>
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<td>17.</td>
<td>It is hard for me to ask someone for</td>
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<td></td>
<td>a favor.</td>
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<td>18.</td>
<td>I hate it when people offer me sympathy.</td>
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<td>2</td>
<td>3</td>
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<td>19.</td>
<td>I easily get discouraged when I don't</td>
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<td></td>
<td>get what I need from others.</td>
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<td>20.</td>
<td>In an argument, I give in easily.</td>
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<td>21.</td>
<td>I don't need much from people.</td>
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<td>22.</td>
<td>I must have one person who is very</td>
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<td>special to me.</td>
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<td>23.</td>
<td>When I go to a party, I expect that the</td>
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<td>other people will like me.</td>
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<td>24.</td>
<td>I feel better when I know someone</td>
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<td>else is in command.</td>
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<td>25.</td>
<td>When I am sick, I prefer that my friends</td>
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<td>leave me alone.</td>
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<td>26.</td>
<td>I'm never happier than when people</td>
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<td>say I've done a good job.</td>
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<td>27.</td>
<td>It is hard for me to make up my mind</td>
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<td>3</td>
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<td>about a TV show or movie until I know</td>
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<td>what other people think.</td>
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<td>28.</td>
<td>I am willing to disregard other people's</td>
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<td>feelings in order to accomplish something</td>
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<td>that's important to me.</td>
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<td>29.</td>
<td>I need to have one person who puts me</td>
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<td>2</td>
<td>3</td>
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<td></td>
<td>above all others.</td>
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<td>30.</td>
<td>In social situations I tend to be very</td>
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<td></td>
<td>self-conscious.</td>
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<td></td>
<td>not characteristic of me</td>
<td>somewhat characteristic of me</td>
<td>quite characteristic of me</td>
<td>very characteristic of me</td>
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<td>31.</td>
<td>I don’t need anyone.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>32.</td>
<td>I have a lot of trouble making decisions by myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>33.</td>
<td>I tend to imagine the worst if a loved one doesn’t arrive when expected.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>34.</td>
<td>Even when things go wrong I can get along without asking for help from my friends.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>35.</td>
<td>I tend to expect too much from others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>36.</td>
<td>I don’t like to buy clothes by myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>37.</td>
<td>I tend to be a loner.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>38.</td>
<td>I feel that I never really get all that I need from people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>39.</td>
<td>When I meet new people, I’m afraid that I won’t do the right thing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>40.</td>
<td>Even if most people turned against me, I could still go on if someone I love stood by me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>41.</td>
<td>I would rather stay free of involvements with others than to risk disappointments.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>42.</td>
<td>What people think of me doesn’t affect how I feel.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>43.</td>
<td>I think that most people don’t realize how easily they can hurt me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>44.</td>
<td>I am very confident about my own judgement.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>45.</td>
<td>I have always had a terrible fear that I will lose the love and support of people I desperately need.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>46.</td>
<td>I don’t have what it takes to be a good leader.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
1 not characteristic of me
2 somewhat characteristic of me
3 quite characteristic of me
4 very characteristic of me

47. I would feel helpless if deserted by someone I love.

48. What other people say doesn't bother me.
APPENDIX E

QUESTIONNAIRE
Directions: This questionnaire is concerned with your feelings and attitudes. Read each statement and decide if it is true or false. Show your decision by circling either TRUE or FALSE. Please answer truthfully and be careful to answer every statement.

1. Most people make friends because friends are likely to be useful to them. TRUE FALSE

2. I do not blame a person for taking advantage of someone who lays himself open to it. TRUE FALSE

3. I usually expect to succeed in the things I do. TRUE FALSE

4. I have no enemies who really wish to harm me. TRUE FALSE

5. I wish I could get over worrying about things I have said that may have hurt other people's feelings. TRUE FALSE

6. I think nearly everyone would tell a lie to keep out of trouble. TRUE FALSE

7. I don't blame anyone for grabbing everything he can in this world. TRUE FALSE

8. My hardest battles are with myself. TRUE FALSE

9. I know who, apart from myself, is responsible for most of my troubles. TRUE FALSE

10. Some people are so bossy, I feel like doing the opposite of what they say, even though I know they are right. TRUE FALSE

11. Some of my family have habits that bother and annoy me very much. TRUE FALSE

12. I believe my sins are unpardonable. TRUE FALSE

13. I have very few quarrels with members of my family. TRUE FALSE

14. I have lost out on things because I could not make up my mind soon enough. TRUE FALSE
15. I can easily make people afraid of me, and sometimes do it for fun. TRUE
16. I believe I am a condemned person. TRUE
17. In school I was sometimes sent to the headmaster for misbehaving. TRUE
18. I have sometimes stood in the way of people who were trying to do something, not because it was important, but because of the principle. TRUE
19. Most people are honest mainly through fear of being caught. TRUE
20. Sometimes I enjoy hurting people I love. TRUE
21. I have not lived the right kind of life. TRUE
22. Sometimes I feel that I must injure either myself or someone else. TRUE
23. I seem to be as capable and clever as most others around me. TRUE
24. I sometimes tease animals. TRUE
25. I get angry. TRUE
26. I am entirely self-confident. TRUE
27. Often, I can't understand why I have been so cross and grouchy. TRUE
28. I shrink from facing a crisis or difficulty. TRUE
29. I think most people would lie to get ahead. TRUE
30. I have sometimes felt that the difficulties were piling up so high that I would never overcome them. TRUE
31. If people had not had it in for me I would have been more successful. TRUE
32. I have often found people jealous of my good ideas, just because they had not thought of them first.  TRUE  FALSE
33. Much of the time I feel as if I have done something wrong or evil.  TRUE  FALSE
34. I have often given up doing something because I thought too little of my ability.  TRUE  FALSE
35. Someone has it in for me.  TRUE  FALSE
36. When somebody does me wrong, I feel I should pay him/her back if I can, just for the principle of the thing.  TRUE  FALSE
37. I am sure to get a raw deal from life.  TRUE  FALSE
38. I believe I am being followed.  TRUE  FALSE
39. At times I have a strong urge to do something harmful or shocking.  TRUE  FALSE
40. I am easily beaten in an argument.  TRUE  FALSE
41. It is safer to trust nobody.  TRUE  FALSE
42. I easily become impatient with people.  TRUE  FALSE
43. At times I think I am no good at all.  TRUE  FALSE
44. I often wonder what reason another person may have for doing something nice for me.  TRUE  FALSE
45. I get angry easily then get over it soon.  TRUE  FALSE
46. At times I feel like smashing things.  TRUE  FALSE
47. I believe I am being plotted against.  TRUE  FALSE
48. I certainly feel useless at times.  TRUE  FALSE
49. At times I feel like picking a fist fight with someone.  TRUE  FALSE
50. Someone has been trying to rob me.  TRUE  FALSE
51. I am certainly lacking in self-confidence.  TRUE  FALSE
APPENDIX F

QUESTIONNAIRE
RAS

Directions: Indicate how characteristic or descriptive each of the following statements is of you by using the code given below.

-3 very uncharacteristic of me, extremely nondescriptive
-2 rather uncharacteristic of me, quite nondescriptive
-1 somewhat uncharacteristic of me, slightly nondescriptive
+1 somewhat characteristic of me, slightly descriptive
+2 rather characteristic of me, quite descriptive
+3 very characteristic of me, extremely descriptive

1. Most people seem to be more aggressive and assertive than I am.
   -3 -2 -1 +1 +2 +3

2. I have hesitated to make or accept dates because of "shyness."
   -3 -2 -1 +1 +2 +3

3. When the food served at a restaurant is not done to my satisfaction, I complain about it to the waiter or waitress.
   -3 -2 -1 +1 +2 +3

4. I am careful to avoid hurting other people's feelings, even when I feel that I have been injured.
   -3 -2 -1 +1 +2 +3

5. If a salesman has gone to considerable trouble to show me merchandise which is not quite suitable, I have a difficult time in saying, "No."
   -3 -2 -1 +1 +2 +3

6. When I am asked to do something, I insist upon knowing why.
   -3 -2 -1 +1 +2 +3

7. There are times when I look for a good, vigorous argument.
   -3 -2 -1 +1 +2 +3
-3 very uncharacteristic of me, extremely nondescriptive
-2 rather uncharacteristic of me, quite nondescriptive
-1 somewhat uncharacteristic of me, slightly nondescriptive
+1 somewhat characteristic of me, slightly descriptive
+2 rather characteristic of me, quite descriptive
+3 very characteristic of me, extremely descriptive

8. I strive to get ahead as well as most people in my position.
   -3 -2 -1 +1 +2 +3

9. To be honest, people often take advantage of me.
   -3 -2 -1 +1 +2 +3

10. I enjoy starting conversations with new acquaintances and strangers.
    -3 -2 -1 +1 +2 +3

11. I often don't know what to say to attractive persons of the opposite sex.
    -3 -2 -1 +1 +2 +3

12. I will hesitate to make phone calls to business establishments and institutions.
    -3 -2 -1 +1 +2 +3

13. I would rather apply for a job or for admission to a college by writing letters than by going through with personal interviews.
    -3 -2 -1 +1 +2 +3

14. I find it embarrassing to return merchandise.
    -3 -2 -1 +1 +2 +3

15. If a close and respected relative were annoying me, I would smother my feelings rather than express my annoyance.
    -3 -2 -1 +1 +2 +3

16. I have avoided asking questions for fear of sounding stupid.
    -3 -2 -1 +1 -2 +3
-3 very uncharacteristic of me,  
-2 rather uncharacteristic of me,  
-1 somewhat uncharacteristic of me,  
+1 somewhat characteristic of me,  
+2 rather characteristic of me,  
+3 very characteristic of me,  

17. During an argument I am sometimes afraid that I will get so upset that I will shake all over.
-3 -2 -1 +1 +2 +3

18. If a famed and respected lecturer makes a statement which I think is incorrect, I will have the audience hear my point of view as well.
-3 -2 -1 +1 +2 +3

19. I avoid arguing over prices with clerks and salesmen.
-3 -2 -1 +1 +2 +3

20. When I have done something important or worthwhile, I manage to let others know about it.
-3 -2 -1 +1 +2 +3

21. I am open and frank about my feelings.
-3 -2 -1 +1 +2 +3

22. If someone has been spreading false and bad stories about me, I see him (her) as soon as possible to "have a talk" about it.
-3 -2 -1 +1 +2 +3

23. I often have a hard time saying "No."
-3 -2 -1 -1 +2 +3

24. I tend to bottle up my emotions rather than make a scene.
-3 -2 -1 +1 +2 +3

25. I complain about poor service in a restaurant and elsewhere.
-3 -2 -1 +1 +2 +3

26. When I am given a compliment, sometimes just don't know what to say.
-3 -2 -1 +1 +2 +3
-3 very uncharacteristic of me, extremely nondescriptive
-2 rather uncharacteristic of me, quite nondescriptive
-1 somewhat uncharacteristic of me, slightly nondescriptive
+1 somewhat characteristic of me, slightly descriptive
+2 rather characteristic of me, quite descriptive
+3 very characteristic of me, extremely descriptive

27. If a couple near me in a theater or at a lecture were conversing rather loudly, I would ask them to be quiet or to take their conversation elsewhere.
-3 -2 -1 +1 +2 +3

28. Anyone attempting to push ahead of me in a line is in for a good battle.
-3 -2 -1 +1 +2 +3

29. I am quick to express an opinion.
-3 -2 -1 +1 +2 +3

30. There are times when I just can't say anything.
-3 -2 -1 +1 -2 +3
APPENDIX G

INFORMED CONSENT
Informed Consent

I, ____________________________________________, agree to participate in a study concerning personality traits. As a participant in this study, I agree to complete a series of questionnaires designed to measure various personality traits. I understand that, following completion of the questionnaires, no additional time will be required or requested by the investigator. The purpose of this study is to better understand the personality variables found with a college population.

I understand that all information I provide will be confidential, and will not be recorded in any way that could identify me personally. In addition, I understand that the personal introspection required through participation may result in psychological discomfort. The risks are believed to be minimal; however, I have been given a list of several referrals in case my participation contributes to feelings of distress. Also, I am free to discontinue participation, without prejudice, at any time.

If I have any questions or problems that arise in connection with my participation in this study, I should contact Rebecca Rogers or supervisor, Dr. Trent Petrie, Department of Psychology, 565-2671 (work).

Date Participant’s Signature

Date Investigator’s Signature

THIS PROJECT HAS BEEN REVIEWED BY UNIVERSITY OF NORTH TEXAS COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (Phone 565-3940)

REFERRALS

University of North Texas Psychology Clinic
(817) 565-2631
8:00am-8:00pm M-R
8:00am-5:00pm Friday

University of North Texas Counseling and Testing Center
(817) 565-2741
8:00am-5:00pm M-F
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characteristics of patients with anorexia nervosa before 
and after treatment and at follow-up 4-7 years later. 

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