

EATING PATTERNS AND CONTROL ISSUES AMONG ADOLESCENT FEMALES

by

Christina M. Frye

A Research Paper
Submitted in Partial Fulfillment of the
Requirements for the
Master of Science Degree
in

Guidance and Counseling

Approved: Two Semester Credits

Gary Rockwood

The Graduate School
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August, 2004

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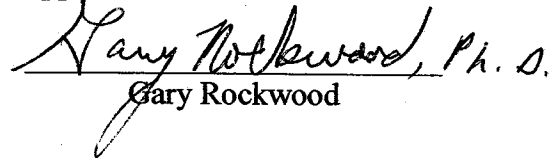
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ABSTRACT

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Eating disorders are a significant problem for adolescents, especially among those who diet. Hsu (1990) reported that adolescents who diet are more likely to develop an eating disorder than their peers who do not diet. The problem of dysfunctional eating behavior as a component of eating disorders is explored in this study in addition to the correlation between eating disorders and control issues in adolescent females.

This study will acknowledge and discuss the importance of identifying and treating eating disorders in adolescent females. Sender and Talreja (1997) reported that eight million Americans suffer from eating disorders, with 90% being women and six percent will die from the eating disorder. Kinoy, Holman and Lemberg (1999) further

noted that in anorexia nervosa, the pursuit for the perfect body often disrupts other responsibilities in the person's life, such as family and social relationships. This study is pertinent in today's society and can provide insight into reducing the incidence of eating disorders. The purpose of this research is to determine whether a relationship exists between eating disordered behavior among adolescent females and their desired level of control. The research hypothesis is adolescent females that display eating disordered behavior associated with anorexia and bulimia will display more negative modes of control than adolescent girls who do not display eating disordered behavior. The subjects for this study consisted of 9th through 12th grade females, attending Prescott High School. Parental consent was obtained and student's participation was voluntary. Students completed the Eating Disorder Inventory-2 and the Shapiro Control Inventory.

Data analyses using Pearson product-moment correlation coefficients were used in this research. Analyses suggested that there was a positive correlation between the Shapiro Control Inventory's negative assertive mode of control scale and 9 of the 11 Eating Disorder Inventory-2 subscales. In addition, significance was found between the Shapiro Control Inventory positive assertive mode of control and 3 of the 11 Eating Disorder Inventory-2 subscales, two of those correlations being negative. Implications of this study are discussed and recommendations are offered in this research.

TABLE OF CONTENTS

ABSTRACT.....	ii
CHAPTER ONE: Introduction	1
Statement of the Problem.....	3
Null Hypotheses.....	4
Definition of Terms.....	5
Assumptions and Limitations	6
CHAPTER TWO: Literature Review	7
Anorexia.....	7
Bulimia Nervosa	14
Control	17
CHAPTER THREE: Methodology.....	22
Introduction.....	22
Subjects	22
Sample Selection.....	22
Instrumentation	22
Data Collection	26
Limitations	26
CHAPTER FOUR: Results.....	27
Introduction.....	27
Results.....	27
Table 1	32
CHAPTER FIVE: Summary, Conclusions and Recommendations	34
Summary	34
Conclusions.....	35
Recommendations.....	39
References.....	41
Appendix A: Parental Consent Letter	44
Appendix B: Instructions	45

CHAPTER ONE

Introduction

Eating disorders amongst young adults are a growing problem in today's society. An estimated eight million Americans suffer from an eating disorder (Sender and Talreja, 1997). Of those Americans, 90% are female and six percent will die from the eating disorder (Sender and Talreja, 1997). Many studies have been done looking at this problem. Cavanaugh and Lemberg (1999) reported that in the United States, as many as 45% of third graders display restrained eating behavior and this number can be as high as 80% for fourth and fifth graders. Although eating disorders are more represented in females, the incidence in males is growing. According to Cavanaugh and Lemberg (1999), almost 10% of all eating disordered cases are males. Anderson (1999) discussed the reasons that fewer males develop an eating disorder than females. These include biological explanations such as a higher testosterone to estrogen ratio in males which leads to an increased lean muscle mass to body fat. These biological realities lead to an increase incidence of eating disorders in females.

The incidence of these illnesses usually starts in early adolescence and continues through adult life. Hsu (1990) reported that they are most common in young females between the ages of 16 and 23. Hsu (1990) also reported that adolescents who diet are more likely to develop an eating disorder than their peers who do not diet. This is in a society where an estimated \$33 billion is spent annually on diets and diet related products, according to Cavanaugh and Lemberg (1999).

For the purpose of this study, when referring to eating disorders, anorexia nervosa and bulimia nervosa are the focus. Anorexia nervosa, according to Kinoy et al. (1999):

...is an eating disorder characterized by a purposeful weight loss far beyond the normal range. Fear of being fat is almost always an overriding factor in this pursuit. A desire to perfect one's self through one's body, and by extension in every other way, is also a strong characteristic and can supersede the reality of body structure and function, resulting in a distorted body image. This pursuit can also displace or change other requirements of living, such as family and social relationships (p. 2).

Kinoy et al. (1999) also describe the characteristics of bulimia nervosa as continued episodes of binge eating; lack of control felt by the patient during the eating binges; self induced vomiting to prevent weight gain; use of laxatives or diuretics; diet severely or fast; excessive exercise; on average a minimum of two binge eating episodes a week for at least three months; and a continuous over concern with body shape and weight. There are two types of bulimia nervosa: (1) purging type; use of vomiting, laxatives, diuretics, or enemas following a binge, and (2) non-purging type. The symptoms of anorexia nervosa and bulimia nervosa can overlap. Individuals may show symptoms of both the eating disorders.

There have been many speculations as to the causes and reasons that an individual develops an eating disorder. These range from physical reasons to psychological reasons. The media has bombarded us with pictures of the "ideal" image. Whether that is a picture of a supermodel or a body builder, young people are vulnerable to these images. Peer pressures and societal pressures affect the decisions and self-esteem of young people. The psychological issues that an individual is dealing with in life affect the decisions that he/she makes. Claude-Pierre (1997) believes that two minds, one positive

mind and one negative mind drive the anorexic. To help the individual, the positive mind must be fed while the negative mind is starved. Furthermore, Hsu (1990) explains the psychological problems of eating disordered patients, such as feelings of sadness and low self-esteem. Eating disordered patients are often socially and emotionally withdrawn. A high incidence of depression has also been reported in eating disordered patients.

Levine (1987) explains the importance of schools to help students with eating disorders. He states that most middle school and high school teachers want to learn more about these disorders and want to help the students in a positive way. Eating disorders are a serious problem and are most common in the teen years. It is important for the schools to be involved due to the fact that the students spend the majority of their time in school or at school activities. Furthermore, Berg (1997) describes attacking this problem with a unifying approach. This includes building positive attitudes in all aspects of the student's life such as emotional, mental, physical, intellectual, spiritual and social development.

Control issues have been studied as a factor related to eating disorders. Eating disorders may be better understood with more understanding about the role of control and how it relates with eating disorders. Shapiro, Blinder, Hageman and Pituck (1993) report that a risk factor for bulimia nervosa is the individual displaying an external locus of control due to the fact that eating disorder patients tend to show a high external locus of control.

Statement of the Problem

The purpose of this research is to determine whether a correlation exists between the level of severity of disordered eating patterns in adolescent females and their desired

level of control. Data will be collected via the Eating Disorder Inventory-2 and the Shapiro Control Inventory, in Spring 2004, distributed in Prescott High School in Prescott, WI.

Null Hypotheses

Ho1: There is no relationship between the SCI Modes of Control scores and the EDI-2 Drive for Thinness Scale.

Ho2: There is no relationship between the SCI Modes of Control scores and the EDI-2 Bulimia scale.

Ho3: There is no relationship between the SCI Modes of Control scores and the EDI-2 Body Dissatisfaction scale.

Ho4: There is no relationship between the SCI Modes of Control scores and the EDI-2 Ineffectiveness scale.

Ho5: There is no relationship between the SCI Modes of Control scores and the EDI-2 Perfectionism scale.

Ho6: There is no relationship between the SCI Modes of Control scores and the EDI-2 Interpersonal Distrust scale.

Ho7: There is no relationship between the SCI Modes of Control scores and the EDI-2 Interoceptive Awareness scale.

Ho8: There is no relationship between the SCI Modes of Control scores and the EDI-2 Maturity Fears scale.

Ho9: There is no relationship between the SCI Modes of Control scores and the EDI-2 Asceticism scale.

Ho10: There is no relationship between the SCI Modes of Control scores and the EDI-2 Impulse Regulation scale.

Ho11: There is no relationship between the SCI Modes of Control scores and the EDI-2 Social Insecurity scale.

Definition of Terms

The following is a list of definition of terms that will be used in this study.

Asceticism: The act of seeking virtue through the pursuit of spiritual ideals such as self discipline, self denial, self restraint, self sacrifice, and control of bodily urges.

Amenorrhea: The cessation of menstrual cycles.

Anorexia Nervosa: Purposeful weight loss beyond normal range. Characteristics include fear of being fat, perfectionism, excessive exercise, ritualistic eating patterns and disturbance of body image. Anorexia nervosa is classified into two types: (1) the restricting type and (2) binge eating/purging type.

Bulimia Nervosa: Is an emotionally based disorder in which bingeing and purging is a response to distress in the individual's life.

Binge: Rapid consumption of high-calorie foods.

Bradycardia: Abnormally slow heartbeat.

Constipation: Difficult, incomplete, or infrequent evacuation of the bowels.

Eating Disorder: Anorexia nervosa or bulimia nervosa.

Edema: An excessive accumulation of serous fluid in the tissues.

Emaciation: Starvation

External Locus of Control: The belief that one does not have control over what happens.

Internal Locus of Control: The belief that one has control over situations and the result of a situation.

Interoceptive Awareness: The ability to recognize and respond appropriately to emotional states and visceral sensations related to hunger and satiety.

Purge: An act of getting rid of the consumed food by vomiting, using laxatives or diuretics.

Assumptions and Limitations

The assumptions, which are apparent in this research, are that all subjects will be honest when completing the survey. The limitations in this study are that the subjects may not answer honestly, and subjects may not be representative of the population.

CHAPTER TWO

This chapter will contain a review of the literature on eating disorders and the issues surrounding eating disorders. It will cover the history, definition and precipitating factors of eating disorders; control issues, and control issues related to eating disorders.

Eating disorders are a significant problem in today's modern society. This epidemic is hitting a younger population at alarming rates. It has been found that as many as eight percent of 10 year old girls are displaying dysfunctional eating patterns and 6 out of 10 high school girls diet (Berg, 2001). Young females strive for perfection. Often this perfection equates to the "perfect body." Concern for education, family relationships, friendships and even world peace come second to their desire for thinness. Girls between the ages 11- 17 were asked, "If you had three wishes, what would you wish for?" The wish to lose weight was number one on the list (Berg, 2001). This is evidence that our society places an impression on young girls that appearance is more important than what is inside the person.

Along with the desire for thinness, other factors are involved with eating disorders. Eating disorder patients often experience emotional and psychological issues. It has been reported that an individual with an eating disorder experiences significant pain in his/her life. The development of the eating disorder is an attempt at trying to control the pain (Jantz, 1995). The irony of an eating disorder is that the individual wants control over his/her life but the eating disorder often controls him/her (Jantz, 1995).

Anorexia

Eating disorders are not a new phenomenon and have been examined for many years. Silverman (1997) outlines the early literature on eating disorders reporting that in

1689 Richard Morton published what is thought to be the first medical account of anorexia nervosa. Morton described this condition as a nervous consumption caused by sadness and anxiety. Two patients Morton treated with anorexia nervosa were an 18-year-old female, who suffered for two years before seeking help, and a 16-year-old male who also suffered for two years before seeking help. Morton administered different treatments to help these individuals.

In the 19th century, further examination of anorexia continued. Sir William Whitley Gull, a physician at Guy's Hospital in London, and Charles Lasegue, professor of clinical medicine in the Faculty of Medicine of Paris and physician to La Pitie Hospital appear to be the medical pioneers concerning the research of this disorder (Silverman, 1997). In 1874 Gull published a paper which described the case histories of four women. Gull initially termed the disorder aepsia hysterica, during a medical address at Oxford in 1868. He then decided that the term anorexia nervosa would be more appropriate. Gull described the clinical characteristics of the illness, which include amenorrhea, constipation, bradycardia, loss of appetite, emaciation, and low body temperature, edema of legs, and cyanotic peripheries. He reported that the illness occurs mainly in young females between the ages of 16 and 23 (Silverman, 1997).

Laseque also published an article in 1873 in which he reported on eight patients. Laseque's findings differ only slightly from Gull's. Laseque found that the illness occurred most commonly in females between the ages of 15 and 20. The precipitating factor of the illness was believed to be an emotional upset. Laseque's characteristics of anorexia nervosa included occurrence of diminished food intake, constipation, increased

activity, amenorrhea, and the patient's contentment with her condition despite the threats from family members.

Further developments continued in the 20th Century. In the early 20th Century, Pierre Janet described anorexia as a psychological disorder (Silverman, 1997). Pierre Janet categorized anorexia into two subtypes, (1) obsessional type and (2) hysterical type. In the obsessional type, the individual refused to eat because of the intense fear of becoming fat and the desire not to develop psychosexual maturity. Issues of self-concept and body image were apparent in the obsessional type. The individual refused to eat although he/she may have experienced intense hunger. In the hysterical type, the individual simply lost his/her appetite.

In 1914, Morris Simmonds reported a pituitary insufficiency as leading to the severe weight loss in some patients. Due to this, anorexia was viewed as a pituitary pathology until about 1930. During this time, the treatment for anorexia nervosa included pituitary extracts and implants. Simmonds research is credited for the progress on the endocrinological approaches to treat anorexia but little attention was given to the psychological aspects of the disorder.

In 1930, Berkman applied psychological interpretations to anorexia nervosa. The theories seemed to shift toward a psychological framework from the physiological framework at this time. John A. Ryle, Regius Professor of Physic at the University of Cambridge and a consulting physician to Guy's Hospital, presented at the Schorstein Memorial Lecture at the London Hospital on this issue of anorexia nervosa.

Hilde Bruch, Arthur Crisp, and Gerald Russell are the most influential in the modern day research on the subject. Silverman (1997) reported that Bruch's perspective

on anorexia is that self starvation expresses the struggle for autonomy, competence, control and self respect. This confusion is the result of a mother's denial of the child's need for independence. This results in body image disturbance, interoceptive disturbance, and feelings of ineffectiveness (Silverman, 1997). In addition to Brush's views, Silverman (1997) explains Crisp's perspective on anorexia. In Crisp's view, the anorexic resists the changing, developing body and prefers the body shape of a pre-pubertal person. Lastly, Silverman (1997) reviews Russell's point that the fear of fatness is the main concern for the anorexic.

Most recently, binge eating has been added to the definition of anorexia nervosa. It has been noted that episodes of binge eating may take place in addition to loss of appetite or refusal to eat.

The definition of anorexia nervosa has been developed over the past 300 years. Each researcher has contributed to the progress that has been reached today on eating disorders. Societal messages have also been a factor in the development and the treatment of eating disorders. The diagnostic criteria for anorexia nervosa, according to the DSM-IV-TR (American Psychiatric Association, 2000), includes a body weight of less than 85% of the normal weight according to age and height; a fear of gaining weight; over concern with body image and shape or a denial of low weight; and the presence of amenorrhea in post-menarcheal females. The two specific types are the restrictive type and binge-eating/purging type. In the restrictive type the individual does not binge and purge. In the binge-eating/purging type the individual regularly displays binge eating or purging.

The criteria for anorexia focus on weight and food. This is only one dimension concerning eating disorders. In fact, the reason an individual may engage in eating disordered behavior has little to do with these behaviors and food. The focus of eating disorders is usually about the food but Jantz (1995) states that the focus should be on the control of the behavior and actions that surround the food. Jantz goes on to state that individuals with an eating disorder are engaged in a conflict. They are struggling to control something that in reality has control over them. This struggle could stem from many reasons. It has been reported that 80% or more of individuals with eating disorders have been victims of abuse such as verbal, emotional, physical or sexual abuse (Jantz, 1995).

Levine (1987) describes the major characteristics of anorexia nervosa as significant weight loss, the drive for thinness, extreme fear of becoming fat, distorted experience of the body, refusal to maintain a healthy weight and abnormal reproductive functioning. Defining significant weight loss may be a difficult task. The DSM-IV-TR (American Psychiatric Association, 2000) has operationally defined this as 85% of normal body weight according to height and weight. Levine (1987) states that although weight loss should not be the determining factor for anorexia, a weight loss of 10%-15% of body weight should initiate further investigating into other factors. The drive for thinness is approached by the anorexic with determination and dedication in response to the extreme fear of becoming fat (Levine, 1987). It would be more logical to assume that the extreme fear of becoming fat would create the drive for thinness. However for an anorexic individual the opposite is true. The drive for thinness creates the fear that one may lose control and become fat. The method of losing weight and maintaining the

weight loss is attained by motivated eating restraint furthermore, the individual may attempt to ignore his/her hunger urges (Palmer, 2000). The individual tends to eat very little and may deny that he/she is hungry. This may, at times, develop into the true definition of 'anorexia' which means 'loss of appetite'. Another characteristic of the drive for thinness and fear of becoming fat is a temporary loss of control of appetite followed by a binge eating episode. The individual may compensate for this episode by excessive exercise and/or use of diuretics or laxatives and will go back to restrictive eating patterns.

Anorexics tend to display a distorted experience of the body. This can take on two forms: distorted body image and disturbances of interoceptive awareness. With a distorted body image, the individual displays an inaccurate perception of what his/her body actually looks like. Even though thin or underweight, the individual still sees a larger body image. The second type of distorted body image is more emotional rather than perceptual as in the initial type. This individual sees the weight loss but feels a sense of accomplishment and embraces the thinness as a shield against the undesirable body of being overweight (Levine, 1987). The disturbance of interoceptive awareness is described as a blank feeling inside and an inability to interpret and express feelings in an appropriate manner (Levine, 1987).

The anorexic displays a refusal to maintain a healthy body weight. The individual will do whatever it takes to avoid eating or to make it appear that he/she is eating. He/she may hide food in an attempt to make it appear that he/she has eaten. The last characteristic is abnormal reproductive functioning. In females this is the cessation of menstrual periods.

Much observation has been done on what triggers anorexia nervosa and how the disease is maintained. The onset of anorexia occurs in adolescence, which is marked by many developmental changes in a person's body. Challenges to a person's sense of identity and competence may be triggers to anorexia nervosa (Gordon, 2000). In the families of anorexic patients, it is noted that typically there is a great emphasis on achievement, external appearance, and weight control. The individual is seen as compliant, shows a need to please and to "be good". Underlying this public image of good behavior are feelings of weakness, unworthiness, and the need to live up to the demands of perfection (Gordon 2000).

Anorexia begins with a decision to diet that may be an honest attempt to lose weight. Through the dieting the person gains a sense of control due to the feeling of a sense of accomplishment as seen from others and an internal sense of control contrary to previous feelings of weakness and depression (Gordon 2000). The anorexic gains power through control of the refusal to eat. This may be represented by the ability to manipulate and hide it from family and friends. Once the individual has lost a great amount of weight, he/she may wear baggy, loose fitting clothing in order for the people around him/her not to notice the signs of starvation.

Anorexia nervosa is a multidimensional disorder. It affects a person physiologically, psychologically and affects every aspect of his/her life. Control issues are an important factor concerning eating disorders. The person attempts to gain control over what he/she eats, relationships and one's achievements. These issues of control may disrupt normal functioning and instead of the individual controlling his/her surroundings, the disorder controls the individual.

Bulimia Nervosa

The history of bulimia is limited compared to the history of anorexia. Bulimia has just recently been recognized as an eating disorder within the last 30 years. It is important to note the evolution of the definition of bulimia. Ancient Egyptians were known to purge themselves for three days once per month. This practice occurred due to the belief that diseases came from the food; the purging was a way to cleanse themselves (Russell, 1997). Vomitoriums, a place where people went to obtain medicine to make themselves vomit, were common in ancient Rome. In fact, it was known that the ancient Roman Emperors Claudius and Vitellius displayed patterns of bulimic behaviors by feasting on lavish meals and drinking heavily. Both men were over-weight and were said to have vomited regularly (Russell, 1997).

Bulimic behavior was also noted in the mid 1500's. Russell (1997) reported that Saint Mary Magdalen de Pazzi and Saint Veronica showed patterns of behavior of fasting and episodes of bingeing. Saint Mary Magdalen de Pazzi died in 1607, and it was believed that her premature death was caused by feelings of humiliation, self-abuse and unhealthy eating behaviors. Her diet consisted of bread and water for long periods of time. Then cravings for food would begin, that were blamed on the works of the devil, and Saint Mary Magdalen de Pazzi would binge on all the food that she could find, as observed by the other sisters (Russell, 1997). These accounts of bulimic behavior differ from the modern definition of bulimia in that the fear of being fat is not noted. Pierre Janet in 1906 describes a case study of one of his patients, Nadia. Nadia displayed a negative self image and expressed a great fear of becoming fat. Nadia was initially diagnosed with anorexia nervosa (Russell, 1997). She survived on a restrictive diet, but

was often preoccupied with thoughts of food. At times she would binge on whatever food she could find and eat until stuffed. Nadia displayed bulimic behavior in that she binged but there was no indication that she found ways to rid herself of the food that she ingested (Russell, 1997).

Another notable case study is about Ellen West, a patient of Ludwig Binswanger in the early 1920's (Gordon, 2000). Ellen was an intelligent girl living in Switzerland with her Jewish family. There was a family history of depression and suicide. At 20 years old Ellen took a trip and did not care what she ate. She gained some weight and was teased for being fat. Ellen developed a great fear of becoming fat and exercised but was preoccupied with thoughts of food. Over the next three years Ellen experienced mood swings and an increased desire to be thin. She lost weight at the expense of taking thyroid medication, laxatives and purging. She continued to drop weight, even after treatment. At the age of 33 she developed severe depression and attempted suicide. She was then admitted to a medical clinic and agreed to treatment. During her treatment she was observed bingeing and purging. Shortly after her discharge from the clinic, Ellen died at the age of 33 (Russell, 1997).

Bulimia nervosa is an eating disorder in which the recognized characteristics are bingeing and purging. The diagnostic criteria according to the DSM-IV-TR (American Psychiatric Association, 2000) are: binge eating episodes which are characterized by eating a large amount of food in a small period of time and a feeling of loss of control over the eating; use of self induced vomiting, laxatives, diuretics, enemas or other medications and/or fasting or excessive exercise to prevent weight gain; the above two conditions take place at least twice a week for three months; body weight and shape is the

criteria for self evaluation; and this behavior occurs outside episodes of anorexia nervosa. The two specific types of bulimia are purging type in which the individual uses self-induced vomiting, laxatives, diuretics, or enemas, and non-purging type in which the individual uses other negative behaviors such as fasting or exercise.

It is suggested that bulimia is seven times more common than anorexia (Gordon, 2000). Bulimic behavior seems to be a cycle in which the individual feels a build up of high levels of tension before a binge-eating episode (Gordon, 2000). The bulimic is aware that his/her behavior is abnormal and may even feel possessed during a binge-eating episode, as if another personality has taken over the person's behavior (Gordon, 2000). After the binge-eating episode begins the bulimic feels an instant relief of tension followed by guilt and anxiety related to possible weight gain and the large amount of food that the person consumed. The individual then induces vomiting or other method of purging for relief. The individual may feel content but the cycle continues with another episode after a build up of tension (Gordon, 2000).

There are predispositions to why an individual develops bulimia. Bulimic individuals report depression symptoms and it has been noted by Levine (1987) that the risk for major depression or mania could be 75% as compared to about 15% to 20% in the general population. Families of bulimics may display high levels of stress, high levels of conflict, dysfunctional problem solving skills, confused perception of autonomy and dependence, trust issues and lack of emotional support (Levine, 1987). As in the characteristics for anorexia, Levine (1987) reported that the bulimic is subjected to high expectations for achievement in the absence of support from the family. The disorganization of the family creates anxiety for the bulimic individual. Stability is

sought but not received. Instead mixed messages are sent to the individual by the family.

Control is sought and obtained through the eating disorder in the initial phases.

Eventually the eating disorder controls the individual and becomes chronic to the individual.

In summary, anorexia nervosa is a disorder that is characterized by low body weight, fear of becoming fat, distorted body image, and amenorrhea. The two types of anorexia nervosa are restricting type and binge eating/purging type (American Psychological Association, 2000). Bulimia nervosa is a disorder that is characterized by bingeing and a lack of control over the eating episodes, use of methods to prevent weight gain such as vomiting, laxatives, diuretics, enemas, fasting or excessive exercise (American Psychological Association, 2000). Psychological issues surrounding the disorder include depression, low self esteem, dysfunctional family make up, and control issues. The issue of control and its importance in the development of eating disorders will be examined in the next section.

Control

Control issues affect many areas of a person's life. In recent years, a reemergence of studying control issues has surfaced. Control can be viewed as a positive force in a person's life, such as having control over one's life. Control can also be a negative force, such as being over-controlling. Shapiro, Schwartz & Astin (1996) report that, "personal sense of control was the only psychosocial factor that predicted adaptation in cancer patients after six month of follow up" (p. 1215). On the other hand, the same article reported that feelings of depression and anxiety by cancer patients might occur due to

lack of control. The feeling of control or sense of control may be an important factor in a persons well being. A study involving nursing home residents found that residents who were given more control over decisions such as movies, time of meals and content of meals lived longer (Shapiro, et. al., 1996). Having control of the surroundings promotes a positive sense of being. Shapiro et al. (1996) noted that the idea of control is central to many other psychological issues such as the concept of learned helplessness which occurs due to continued experiences of lack of control.

Control can be defined in terms of modes of control. Shapiro et al. (1996) defines a positive assertive mode of control as, “an active, altering mode of control to influence or change a situation” (p. 1218). The positive assertive mode of control differs from the negative yielding mode of control which is a control style in which an individual displays too little active control. The person may be viewed as indecisive, manipulated or timid. The next mode of control discussed by Shapiro et al. (1996) is positive yielding mode of control. This yielding mode is an accepting control style. An individual who can accept what he/she cannot change would be displaying this type of control. The negative assertive mode of control is an individual exhibiting too much control over his/her life. Words to describe this mode of control are manipulating and over controlling. The above four modes of control display both passive and active styles of control.

Control is also defined in terms of locus of control. The two constructs are internal locus of control and external locus of control. Persons with internal locus of control feel they have control over situations and the results of a situation. A person with an external locus of control does not believe that he/she has control over what happens (DeBranbender and Hellemans, 1996).

Burger (1989) has defined control as, “The perceived ability to significantly alter events” (p. 246). Burger focuses on perceived control versus the actual amount of control that a person possesses. Burger believes that a person’s perceived control affects his/her attitude toward a situation. For example a person who believes that he/she possesses a great amount of control will elicit positive reactions while an individual who has the perception of no control will experience negative affects (Burger, 1989). Burger (1989) provides the following example to explicate how a person’s perceived control affects the result; a person who is put in charge of an important project for her company may take advantage of this opportunity and perceive it as a chance to complete the task well and show off her abilities. She feels the control of her influence on a positive outcome. Person number two was given the same task but with the feedback that her performance on this task will influence the management’s evaluation of her based on her performance relating to the task. She may doubt her ability to complete the task well, therefore creating a negative feeling. The two individuals were given the same task, however, their perception of their personal control differed, therefore creating different perceptions of control.

Hsu (1990) reports that anorexic patients feel that their eating patterns are the only aspect of their life over which they have control. In addition, bulimic patients display impulse control issues (Hsu, 1990). Shapiro et al. (1993) completed a study on control issues and patients with anorexia and bulimia. In this study the groups of subjects consisted of a group of identified eating disorder patients, a group of psychiatrically screened normals and a group of unscreened college students. Each group completed the Shapiro Control Inventory and scores were compared. It was found that the eating

disordered group scored lower on the overall general domain sense of control and on the positive sense of control than the comparison groups. In contrast, out of the three groups, the eating disordered group scored highest on the negative assertive mode of control scale (Shapiro et al., 1993).

Another study looks at the relationship between control and anorexia nervosa in women going through treatment for anorexia (Surgenor, Horn and Hudson, 2003). Those who participated in this study were women aged 17-40 years old who are seeking help for anorexia. Participants were interviewed regarding age, past history with anorexia nervosa, and menstrual status. Participants completed the Eating Disorders Inventory and the Shapiro Control Inventory. A significant relationship was found between the EDI total score and the following SCI scales: general sense of control scale, positive assertive mode of control scale, and negative yielding mode of control scale. Furthermore, the data support the finding that as eating disturbances become more severe, so does an adverse sense of control, negative strategies to achieve control and less use of positive active strategies to achieve control. In addition, those individuals who have been diagnosed with anorexia nervosa six or more years ago display more negative assertive styles of control compared to those who were diagnosed within one year. In relation to purging and control issues, it was found that individuals who use laxatives feel less control over their body.

Control issues play a role in eating disorder pathology. The components of control include sense of control, locus of control and modes of control. The examination of control issues and eating disorders shows that control issues are a focus for eating disorder patients. The purpose of the present study is to determine whether a relationship

exists between eating disordered behavior among adolescent females and their desired level of control.

CHAPTER THREE

Methodology

Introduction

This chapter will describe the subjects under study and how they were selected for this study. In addition, the instruments being used to collect information will be discussed as to their content, validity, and reliability. Data collection and analysis procedures will also be included. This chapter will conclude with some of the methodological limitations.

Subjects

The subjects for this study consisted of 9th through 12th grade females, attending Prescott High School. There were 107 subjects who participated in this study.

Sample Selection

In order to obtain permission to conduct this research study, a proposal was sent to the UW-Stout Internal Review Board. Permission was granted following a review from the UW-Stout Internal Review Board. The subjects were told what their involvement would entail and were given an overview of the study. Participation in this study was voluntary and consent from the parents and subjects was obtained.

Instrumentation

Shapiro Control Inventory

The Shapiro Control Inventory, by Deane H. Shapiro, Jr. (1994), is a nine-scale, 187 item standardized paper and pencil test. The questionnaire takes about 20 to 30 minutes to complete.

The SCI provides a control profile which includes four scales related to sense of control, four scales related to modes of control, a motivation for control scale and an

agency of control concept. The sense of control scales includes three general domain scales and one specific domain scale. Scale four, the Domain Specific Sense of Control Scale consists of 25 items related to specific domains of the human experience.

The next sets of scales are the Modes of Control Scales which are the scales that were used for this study. These four scales produce a four-quadrant model. Quadrant one of this model is Positive Assertive, describing characteristics of a person who has the ability to use an active, altering mode of control to change the environment, others, and oneself. Quadrant two is Positive Yielding. Words to describe this quadrant include patient, trusting and accepting. Positive Yielding includes the ability to know when a sense of control needs to come from letting go of active control. Quadrant three is Negative Assertive which includes too much active control. Characteristics of this quadrant are manipulating, over controlling, and dogmatic. The fourth quadrant is Negative Yielding which includes too little control. Characteristics include indecisive, manipulated and timid.

The next section of the SCI is the Motivation for Control. The ninth scale, Desire for Control scale measures how an individual gains control and maintains control in their life. The last section of the SCI is the Agency of Control.

Reliability for the SCI was determined with studies on coefficient alpha reliability, whether the items in a scale are internally consistent with each other, and test-retest reliability, whether the questions are answered consistently by individuals over time. The alpha reliability coefficients ranged from .70 to .89 for the nine scales of the SCI. Test-retest coefficients over a five week period ranged from .67 to .93 for the nine scales. Interscale correlations were also studied. It was found that the correlation

between the overall sense of control scale and the two scales from which it is constructed, the positive and negative sense of control scales is, as would be expected, quite high. The other SCI scales show small to moderate intercorrelation with each other (Shapiro, 1994).

In order to establish validity of the Shapiro Control Inventory, 12 studies were completed with different populations of subjects. It was found that the SCI can be viewed as a valid instrument (Shapiro, 1994).

Eating Disorder Inventory-2

The Eating Disorder Inventory-2, (Garner, 1991), also known as EDI-2, is an instrument used to assess for symptoms of an eating disorder. The EDI-2 is a self report inventory which consists of 91 items that the respondents answer on a six point likert scale as to whether each item applies to them "always," "usually," "often," "sometimes," "rarely," or "never."

The EDI-2 subscales are drive for thinness, bulimia, body dissatisfaction, ineffectiveness, perfectionism, interpersonal distrust, interoceptive awareness and maturity fears. The EDI provisional subscales are asceticism, impulse regulation, and social insecurity. The EDI-2 is not a diagnostic tool, but is used to assess symptomology of eating disordered behavior.

The desired internal consistency reliability coefficients for the subscales of the EDI are above .80 for the eating disorder sample. Internal consistency reliability coefficients for the original EDI subscales were between .83 and .93. The updated

subscales internal consistency reliability coefficients were between .84 to .92 (Garner, 1991).

Three test-retest studies include tests taken one week apart, three weeks apart, and one year apart. The coefficients for the one-week study were .79 to .95 for all subscales except for the interoceptive awareness subscale, which was .67. The reliability coefficients for the three-week study were above .80 for all subscales except for the maturity fear subscales. The reliability coefficients for the one-year study ranged from .41 to .75. The lowest reliability coefficients were on the interoceptive awareness and body dissatisfaction subscale. The reliability tests of the EDI-2 have proven that this instrument is reliable and consistent over time.

To achieve content validity of the EDI-2, 146 items were generated by clinicians who were both familiar with the research literature on eating disorders and who were involved in patient care. The items that were retained for the EDI-2 have a high degree of face validity. Criterion validity or the ability of the items to discriminate between eating disorder and non-patient samples was met in the original EDI validation study. Not all items retained for the EDI-2 provisional subscales met the standard for criterion validity, however there is a difference in the scale correlations between the eating disorder group and non-patient female group. Concurrent validity was tested by comparing patient self-report profiles with the judgements of experienced consultants or therapists familiar with the patient's clinical presentation. Correlations between the EDI-2, EAT-26 and the restraint scale for eating disorder patients were calculated. Correlations were significant with most subscales of the EDI-2 (Garner, 1991).

Data Collection

All subjects were administered two instruments, The Shapiro Control Inventory and the Eating Disorder Inventory-2. The two instruments were administered by the researcher to groups of students during school hours. Testing time was approximately 40 minutes. The testing occurred at Prescott High School. The two instruments, the EDI-2 and the Shapiro Control Inventory were paired and coded before administering to the subjects. Scripted instructions were read to each group of students (see Appendix B). After completion of the assessments, the subject placed her own answer sheets into an envelope. This was to insure confidentiality of the subjects. To address the possible risks of this study, the school counselor and the researcher were available for the subjects to ask questions or address concerns related to the content of the study.

Data Analysis

The data was analyzed to determine if there was a relationship between eating disordered behavior and modes of control. Pearson product-moment correlation coefficients were computed to identify whether correlations exist between the Shapiro Control Inventory four modes of control scales and the 11 subscales of the Eating Disorder Inventory-2.

Limitations

The methodology may contain the following limitations:

1. The subjects may not answer honestly to the eating disorder or control inventory.
2. The subjects may not be a true representation of the population.

CHAPTER FOUR

Results

Introduction

This chapter will include the results of this study in relation to the null hypotheses. The results from the data analysis between the Shapiro Control Inventory modes of control scales and the Eating Disorder Inventory-2 subscales will be examined.

Results

Ho1: There is no relationship between the SCI Modes of Control scores and the EDI-2 Drive for Thinness Scale.

Pearson's product moment correlations (Pearson r) were calculated to assess the relationship between mode of control scores and the EDI-2 drive for thinness scale score. Results confirm that there is a statistically significant correlation between negative assertive mode of control and the drive for thinness, $r=.291$, $p=.002$, and negative yielding mode of control and the drive for thinness, $r=.227$, $p=.019$. There was no statistical significant correlation between positive assertive mode of control and drive for thinness scale, $r=.065$, $p=.508$ nor with the positive yielding mode of control scale and drive for thinness scale, $r=.123$, $p=.207$ (see Table 1).

Ho2: There is no relationship between the SCI Modes of Control scores and the EDI-2 Bulimia scale.

Pearson's product moment correlations (Pearson r) were calculated to assess the relationship between mode of control scales and the bulimia scale. There was no statistical significant correlation between positive assertive mode of control and bulimia scale, $r=.046$, $p=.641$, positive yielding mode of control and bulimia scale, $r=.052$,

$p=.595$, negative assertive mode of control and bulimia scale, $r=.160$, $p=.100$, nor with the negative yielding and bulimia scale, $r=.176$, $p=.069$ (see Table 1).

Ho3: There is no relationship between the SCI Modes of Control scores and the EDI-2 Body Dissatisfaction scale.

Pearson's product moment correlations (Pearson r) were calculated to assess the relationship between mode of control scales and the body dissatisfaction scale. Results confirm that there is a statistically significant correlation between negative assertive mode of control and body dissatisfaction, $r=.368$, $p=.000$, and negative yielding mode of control and body dissatisfaction, $r=.228$, $p=.018$. There was no statistical significant correlation between positive assertive mode of control and body dissatisfaction, $r=-.027$, $p=.779$, nor with the positive yielding mode of control and body dissatisfaction, $r=.077$, $p=.428$ (see Table 1).

Ho4: There is no relationship between the SCI Modes of Control scores and the EDI-2 Ineffectiveness scale.

Pearson's product moment correlations (Pearson r) were calculated to assess the relationship between mode of control scales and the ineffectiveness scale. Results confirm that there is a statistically significant correlation between negative assertive mode of control and ineffectiveness, $r=.371$, $p=.000$. There was no statistical significant correlation between positive assertive mode of control and the ineffectiveness scale, $r=-.180$, $p=.063$, positive yielding mode of control and the ineffectiveness scale, $r=-.119$, $p=.221$ nor with the negative yielding mode of control and the ineffectiveness scale, $r=.183$, $p=.059$ (see Table 1).

Ho5: There is no relationship between the SCI Modes of Control scores and the EDI-2 Perfectionism scale.

Pearson's product moment correlations (Pearson r) were calculated to assess the relationship between mode of control scales and the perfectionism scale. Results confirm that there is a statistically significant correlation between positive assertive mode of control and perfectionism, $r=.196$, $p=.043$ and negative assertive mode of control and perfectionism, $r=.244$, $p=.011$. There was no statistical significant correlation between positive yielding mode of control and perfectionism, $r=.094$, $p=.335$, nor with the negative yielding mode of control and perfectionism, $r=.065$, $p=.507$ (see Table 1).

Ho6: There is no relationship between the SCI Modes of Control scores and the EDI-2 Interpersonal Distrust scale.

Pearson's product moment correlations (Pearson r) were calculated to assess the relationship between mode of control scales and the interpersonal distrust scale. Results confirm that there is a statistically significant correlation between positive assertive mode of control and interpersonal distrust, $r=-.335$, $p=.000$, and positive yielding mode of control and interpersonal distrust, $r=-.341$, $p=.000$. There was no statistical significant correlation between negative assertive mode of control and interpersonal distrust scale, $r=.147$, $p=.132$, nor with the negative yielding mode of control and interpersonal distrust scale, $r=.128$, $p=.189$ (see Table 1).

Ho7: There is no relationship between the SCI Modes of Control scores and the EDI-2 Interoceptive Awareness scale.

Pearson's product moment correlations (Pearson r) were calculated to assess the relationship between mode of control scales and the interoceptive awareness scale.

Results confirm that there is a statistically significant correlation between negative assertive mode of control and interoceptive awareness, $r=.384$, $p=.000$, and negative yielding mode of control and interpersonal distrust, $r=.324$, $p=.001$. There was no statistical significant correlation between positive assertive mode of control and interoceptive awareness scale, $r=.083$, $p=.397$, nor with the positive yielding mode of control and interoceptive awareness scale, $r=.117$, $p=.231$ (see Table 1).

Ho8: There is no relationship between the SCI Modes of Control scores and the EDI-2 Maturity Fears scale.

Pearson's product moment correlations (Pearson r) were calculated to assess the relationship between mode of control scales and the maturity fears scale. Results confirm that there is a statistically significant correlation between negative assertive mode of control and maturity fears scale, $r=.214$, $p=.027$. There was no statistical significant correlation between positive assertive mode of control and maturity fears scale, $r=.056$, $p=.566$, positive yielding mode of control and maturity fears scale, $r=.101$, $p=.301$, nor with the negative yielding mode of control and maturity fears scale, $r=.051$, $p=.602$ (see Table 1).

Ho9: There is no relationship between the SCI Modes of Control scores and the EDI-2 Asceticism scale.

Pearson's product moment correlations (Pearson r) were calculated to assess the relationship between mode of control scales and the asceticism scale. Results confirm that there is a statistically significant correlation between negative assertive mode of control and asceticism, $r=.354$, $p=.000$, and negative yielding mode of control and asceticism, $r=.216$, $p=.026$. There was no statistical significant correlation between

positive assertive mode of control and asceticism, $r=.108$, $p=.267$, nor with the positive yielding mode of control and asceticism, $r=.102$, $p=.297$ (see Table 1).

Ho10: There is no relationship between the SCI Modes of Control scores and the EDI-2 Impulse Regulation scale.

Pearson's Product moment correlations (Pearson r) were calculated to assess the relationship between mode of control scales and the impulse regulation scale. Results confirm that there is a statistically significant correlation between negative assertive mode of control and impulse regulation scale, $r=.420$, $p=.000$. There was no statistical significant correlation between positive assertive mode of control and impulse regulation, $r=-.102$, $p=.297$, positive yielding mode of control and impulse regulation, $r=-.119$, $p=.222$, nor with the negative yielding mode of control and impulse regulation scale, $r=.130$, $p=.183$ (see Table 1).

Ho11: There is no relationship between the SCI Modes of Control scores and the EDI-2 Social Insecurity scale.

Pearson's product moment correlations (Pearson r) were calculated to assess the relationship between mode of control scales and the social insecurity scale. Results confirm that there is a statistically significant correlation between positive assertive mode of control and social insecurity, $r=-.310$, $p=.001$, positive yielding mode of control and social insecurity, $r=-.357$, $p=.000$, and negative assertive mode of control and social insecurity, $r=.270$, $p=.005$. There was no statistical significant correlation between negative yielding mode of control and social insecurity scale, $r=.143$, $p=.141$ (see Table 1).

Table 1
Correlation Coefficients Comparing EDI-2 Sub-Scales and SCI Modes of Control Scales

EDI-2 Sub-scales	Positive Assertive	Positive Yielding	Negative Assertive	Negative Yielding
Drive for Thinness	r=.065 p=.508	r=.123 p=.207	r=.291 p=.002**	r=.227 p=.019*
Bulimia	r=.046 p=.641	r=.052 p=.595	r=.160 p=.100	r=.176 p=.069
Body Dissatisfaction	r=-.027 p=.779	r=.077 p=.428	r=.368 p=.000***	r=.228 p=.018*
Ineffectiveness	r=-.180 p=.063	r=-.119 p=.221	r=.371 p=.000***	r=.183 p=.059
Perfectionism	r=.196 p=.043*	r=.094 p=.335	r=.244 p=.011*	r=.065 p=.507
Interpersonal Distrust	r=-.335 p=.000***	r=-.341 p=.000***	r=.147 p=.132	r=.128 p=.189
Interoceptive Awareness	r=.083 p=.397	r=.117 p=.231	r=.384 p=.000***	r=.324 p=.001***
Maturity Fears	r=.056 p=.566	r=.101 p=.301	r=.214 p=.027*	r=.051 p=.602
Asceticism	r=.108 p=.267	r=.102 p=.297	r=.354 p=.000***	r=.216 p=.026*
Impulse Regulation	r=-.102 p=.297	r=-.119 p=.222	r=.420 p=.000***	r=.130 p=.183
Social Insecurity	r=-.310 p=.001***	r=-.357 p=.000***	r=.270 p=.005**	r=.143 p=.141

*Significant at $p < .05$

**Significant at $p < .01$

***Significant at $p < .001$

Results from this study found significance between the Shapiro Control Inventory positive assertive mode of control and the following Eating Disorder Inventory-2 subscales: ineffectiveness, perfectionism, interpersonal distrust and social insecurity. Significance was found between the Shapiro Control Inventory positive yielding mode of control and the following Eating Disorder Inventory-2 subscales: interpersonal distrust and social insecurity. Significance was found between the Shapiro Control Inventory negative assertive mode of control and the following Eating Disorder Inventory-2 subscales: drive for thinness, body dissatisfaction, ineffectiveness, perfectionism, interoceptive awareness, maturity fears, asceticism, impulse regulation and social insecurity. Significance was found between the Shapiro Control Inventory negative yielding mode of the control and the following Eating Disorder Inventory-2 subscales: drive for thinness, body dissatisfaction, interoceptive awareness and asceticism.

Chapter five will provide a discussion of the results found in this study, and the conclusions that can be drawn from the findings. Recommendations for further research about the issues of control and eating disorders will also be discussed.

CHAPTER FIVE

Summary, Conclusions, and Recommendations

Summary

This chapter will provide a discussion of the results of this research and conclusions and recommendations that can be drawn from this research. Eating disorders have been noted to be a growing issue amongst adolescents. Anorexia is a disorder in which the individual follows a restrictive diet and displays an extreme fear of becoming fat. Bulimia is a disorder in which the individual binges and purges.

Control may be a positive force in life. Whether an individual seeks more control, lacks control or is over-controlling, control affects many aspects of a person's life. Control is measured in terms of sense of control, modes of control and locus of control.

The research has shown that control issues do relate to eating disordered behavior. Shapiro et al. (1993) stated that eating disorder patients with anorexia and bulimia are less assertive, display more inward hostility, show a lower sense of personal effectiveness, have lower self esteem, and demonstrate more psychopathology than non eating-disordered control groups. As eating disorders become more prevalent, targeting younger populations of victims, it is important to study the causes and precipitating events that initiate an individual to engage in eating disordered behavior.

The purpose of this study was to determine whether a correlation exists between the level of severity of disordered eating patterns in adolescent females and their desired level of control. One hundred and seven high school female students from a Western Wisconsin high school participated in this study. Students completed the Eating Disorder Inventory- 2 and the Shapiro Control Inventory.

Data analysis using the Pearson's r correlation coefficients were used in this research. It was found that a significant correlation exists between the Shapiro Control Inventory's (SCI) negative assertive mode of control scale and nine of the 11 Eating Disorder Inventory-2 (EDI-2) subscales, between the SCI's negative yielding mode of control scale and four of the 11 EDI-2 subscales, between the SCI's positive assertive mode of control scale and three of the 11 EDI-2 subscales, and between the SCI's positive yielding mode of control scale and two of the EDI-2 subscales.

Conclusions

The greatest response in this study resulted from the SCI's negative assertive mode of control and the EDI-2 subscales. The negative assertive mode of control is described as an individual who exerts too much control. Words to describe this individual would include manipulating and over-controlling. In the research, it has been mentioned that an individual with an eating disorder feels like he/she has no control and in an attempt to gain a sense of control, controls his/her eating patterns. It appears that, from this study, the attempt to gain control may manifest itself in an over-controlling personality type. This self defeating conflict to gain control over life may cause the individual to manipulate people and situations to make it appear as if he/she has control over his/her life. Surgenor et al. (2003) explains the control issues with anorexics. He states that when an anorexic purges, the way in which he/she chooses to do so displays the type of control he/she is feeling. For example, a person who chooses a rigid exercise routine feels an increased sense of control. It appears that this sense of increased control may explain the over-controlling, negative assertive mode of control. The individual feels that if he/she exercises excessively then he/she is taking control of his/her body to

gain the body shape that he/she wants. This may be viewed as a positive sense of control over one's life but in the negative assertive mode of control the individual would exercise to the extreme, becoming exhausted and exercising at an unhealthy level. Significance was found between the negative assertive mode of control and the following EDI-2 subscales: drive for thinness, body dissatisfaction, ineffectiveness, perfectionism, interoceptive awareness, maturity fears, asceticism, impulse regulation, and social insecurity.

A negative yielding mode of control is characterized by having too little control. Words to describe a negative yielding personality include indecisive, manipulated, and timid. As stated with the negative assertive mode of control the way the individual chooses to purge explains the type of control the individual feels. A person who chooses to misuse laxatives and/or diuretics feels less control over his/her eating and body (Surgenor et al. 2003). This feeling of not having control over one's eating describes the negative yielding mode of control. Significance was found between the SCI's negative yielding mode of control and four of the EDI-2 subscales: drive for thinness, body dissatisfaction, interoceptive awareness and asceticism. As a result, it appears that significance with the negative yielding mode of control and these four EDI-2 subscales support what the research has shown, especially with interoceptive awareness and asceticism. Interoceptive awareness is defined as disturbances in how the individual sees himself/herself. For example, the people around the individual may see a skinny person but the individual looks in the mirror and sees a fat person. The individual does not feel control over his/her body and possibly feels as if he/she never will gain the control that he/she wants. Asceticism is the act of seeking virtue through the pursuit of spiritual

ideals. If the person does not feel in control over his/her body and is destructive to his/her body then the concept of asceticism would be difficult to achieve.

The positive assertive mode of control and the positive yielding mode of control can be viewed as the desired personality type concerning control. It may be seen as a person who appears to have a healthy amount of control in his/her life. The majority of significance in this study was not found in these two areas of control. Furthermore the correlations that were found significant in the positive mode of control were negative correlations except for the perfectionism subscale and positive assertive mode of control which was a positive correlation. A negative correlation means that as one variable increases the other variable decreases. As a result it appears that from this study as eating disordered behavior increases, the desired amount of control shifts away from the positive modes of control.

The SCI's positive assertive mode of control describes a person who has the ability to use an active, altering mode of control to change the environment, others, and oneself. This is viewed as a healthy mode of control. There was a negative correlation between this healthy mode of control and the EDI-2 interpersonal distrust scale. This means that as the positive assertive mode of control decreases, internal personal distrust increases. There was also a negative correlation between the positive mode of control and social insecurity. As a person's sense of being able to positively change events around him/her decreases, feeling of interpersonal distrust and social insecurity increases. It appears that the positive correlation between this mode of control and perfectionism may be a result of perfectionism being socially acceptable to a certain degree. A person exhibiting characteristics related to perfectionism may be viewed as in control of his/her

life. Significance was found between the positive assertive mode of control and only three of the EDI-2 subscales: perfectionism, interpersonal distrust and social insecurity, two of which were a negative correlation.

The SCI's positive yielding mode of control is the ability to know when a sense of control needs to come from letting go of active control. Patient, trusting, and accepting would describe an individual displaying this type of behavior. The research has shown that eating disordered patients tend to have difficulty trusting or accepting, especially over their looks and body image. Significance was found between only two subscales of the EDI-2 and the positive yielding mode on control; interpersonal distrust and social insecurity, both of which were a negative correlation. It may be concluded that individuals with eating disorder issues have difficulty with letting go of active control and accepting things which they cannot change.

The implications of this study exist in the treatment for eating disorders. If control issues exist within the eating disorders, one aspect of treatment should be aimed at correcting the individuals' perceptions of control. Shifting the focus in the treatment of eating disorders from weight gain to correcting maladaptive behaviors such as negative issues of control may better treat the problem instead of eliminating the symptoms. Weight gain is the ultimate goal, but without teaching the individual positive coping and decision making strategies the individual will slip into the same negative patterns of behavior. It may help individuals with eating disorders to receive help with assertiveness training and self esteem building therapy in order to improve their self confidence and decision making ability to gain the positive control in his/her life.

There are also implications for school counselors and personnel in education. This study targeted adolescent females and it was shown that control issues and disordered eating patterns are an issue within this population. Teachers, counselors, and principals must be aware of the signs and behaviors of eating disorders in order to refer help to those individuals.

Recommendations

Recommendations for school counselors are to recognize the warning signs of eating disorders among their students. School counselors are a vital component when identifying the issue of eating disorders. Adolescents spend most of their time in school or school related activities. School personnel have a greater opportunity to recognize an eating disorder problem among one of the students. School counselors must educate themselves about the signs and symptoms of eating disorders. As a preventative measure school counselors have the responsibility to teach students how to be assertive and to build self esteem. As was mentioned earlier, one strategy in treating eating disorders is to correct the negative perceptions of control through assertiveness training and building self esteem. All students can benefit from such training. Giving students responsibilities and letting them experience being a part of a group increases their self esteem and gives them a sense of feeling special. Implementing these programs in schools may decrease the incidence of eating disorders among young people.

This study used a sample of female high school students (9th grade through 12th grade). It examined the relationship between responses to the Eating Disorder Inventory-2 and the Shapiro Control Inventory. It is recommended that a study of adolescent females who have been diagnosed with an eating disorder be compared to a control

sample of adolescent females. The results may reveal a more detailed explanation of the impact that control has on eating disorder patients and how to effectively help those individuals. A study comparing control issues of a group of anorexics to a group of bulimics would show how the control issues differ between the two types of eating disorders. More could be learned about control and eating disorders if further research is completed on this issue.

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Appendix A

Dear Parent or Guardian,

Hi, my name is Christina Frye and I am a School Guidance and Counseling student at UW- Stout. Currently I am the Elementary Guidance Counselor Intern at Malone Elementary School. I am working on a research project about eating behaviors among female adolescents. Your child's class has an opportunity to take part in this study about eating behaviors among adolescent females. I am asking your permission for your child to be included in this study.

Two questionnaires will be distributed to the students with questions relating to eating patterns in females and questions relating to control factors in their life. Completion time of the questionnaire is approximately 40 minutes. Participation in this study is voluntary and your daughter can withdraw from the study at any time. There may be an emotional risk factor to students who are struggling with eating disordered behavior. Students are encouraged to talk to the school counselor, Kevin Sipple, with questions or concerns related to the information presented in the questionnaires, after participating in this study. Students who do not participate in this study will have a study period during this time.

If you have any questions about the study, please call me, Christina Frye at (715) 829-4715 or 715-262-5463, my advisor, Gary Rockwood at (715) 232-1303 or Sue Foxwell, Research Administrator, UW-Stout Institutional Review Board of the Protection of Human Subjects in Research, at (715) 232-2477. Please sign the attached form indicating whether or not you have agreed to have you child participate and return it by April 26, 2004.

A completed report will be available for review at the school office upon completion of this research. All responses will be kept confidential. Thank you very much for you time and support.

Sincerely,

Christina Frye

- Do allow my child to participate in this study on eating behaviors.
- Do Not allow my child to participate in this study on eating behaviors.

Parent Signature _____ Date _____

Student Signature _____ Date _____

Appendix B

Instructions to read to participants in the study:

“You will be participating in a study about eating pattern and control issues among adolescent females. Each of you has agreed to participate in this study by signing a consent form and turning in a parental consent form. Please understand that your participation is voluntary and you may withdraw at any time. You will receive two assessments, the Shapiro Control Inventory and the Eating Disorder Inventory-2. The Shapiro Control Inventory looks at different types of control in individuals. The Eating Disorder Inventory-2 assesses eating patterns in individuals. Please use a no. 2 pencil to complete both assessments. You can answer the questions right on the Shapiro Control Inventory test. For the Eating Disorder Inventory- 2 use the answer sheet to mark your answers, do not write in the Item Booklet. There are no right or wrong answers. It should take you about 40 minutes to complete the assessments however there is no time limit. Please read all the items carefully and answer honestly. All responses will be kept confidential. To insure confidentiality please do not put your name or any identifying marks on the answer sheet. When you are finished, insert your answer sheet into the identified envelope. If you have any questions, raise your hand and someone will help you. To learn more about this study or to learn about the results from this study you can contact Mr. Sipple (High School Guidance Counselor) or me at Malone Elementary School. You may now begin.”