AN ABSTRACT OF THE THESIS OF

Annette M. Bruyer for the degree of Doctor of Philosophy in Education presented on April 30, 1987.

Title: The Construction and Preliminary Validation of an Instrument to Assess the Food Fantasies of Individuals with Eating Disorders

Abstract approved: Redacted for privacy

Dr. Forrest Gathercoal

The study's goal was to develop and initially validate the Food Fantasies Questionnaire, a self-report therapeutic and research instrument which assesses the occurrence and content of highly irrational food cognitions (fantasies) common to eating disorders in relation to seven theoretically derived factors characterisic of the disorders: fear, anxiety, revulsion, pleasure, gender, animation and control. Whether food fantasies can be grouped by common factors, and if the fantasies as described reflected their designated factor

and control. The purpose was to construct a self-report objective measure of food and/or eating fantasies useful in both therapy and research. A further intention was to determine if food fantasies can be grouped by common factors; and, if so, to determine if the fantasies as described by the items reflected the factor they had been related to. A final goal was to specify activites to further the knowledge and investigation of eating disorders and food fantasies.

To establish validity, the initial 110 items were evaluated by and designated as representative of a factor based on the concensus of a modifed DELPHI Panel. The final tool contained 42 items, six (6) items representing each of the seven (7) factors, with a six-point Likert-type scale used to indicate the how often the individual experienced each fantasy. Instructions for usage and a scoring key were drawn up. A field test of non-eating disordered individuals indicated that less than 15 minutes was required for completing and scoring the questionnaire. The instrument was administered by therapists experienced in treating eating disorders to 52 young women in outpatient individual and/or group therapy for anorexia nervosa, bulimia, compulsive overeating or bulimia nervosa. The computed reliability coefficiant was +.9411. The R-mode factor

was also investigated.

One hundred and ten (110) fantasy-items were evaluated and designated represesntative of a factor by a DELPHI Panel. The final tool contained 42 items, six per factor. A six-point Likert scale indicated the frequency of occurrence. The instrument was administered by specialized therapists to 52 young women in outpatient individual and/or group therapy for anorexia, bulimia, bulimia nervosa or compulsive overeating.

The reliability coeffeciant was +.9411. The seven factor solution of the R-mode analysis extracted 39 fantasies with factor loadings equal to or above +.44. The generated factors were labeled: Control Fears and Anxieties; Animation and Ambivalence; Gender and Social Acceptance; Autonomous versus Conscious Control of Food Thoughts; Pleasure; Animation, Childlike Reasoning; and Revulsion. It is concluded that fantasies can be grouped by factors, four which were similar to those designated by the DELPHI Panel. Fear and Anxiety appear to address the same trait and are related to Control. The research design utilizing *a priori* factors, the DELPHI Technique and factor analysis shows promise as a method of establishing initial validity.

THE CONSTRUCTION AND PRELIMINARY VALIDATION OF AN INSTRUMENT TO ASSESS THE FOOD FANTASIES OF INDIVIDUALS WITH EATING DISORDERS

by
Annette Bruyer

A THESIS
Submitted to
Oregon State University

In Partial Fulfillment of
the requirement for the
Degree of Doctor of Philosophy

Completed April 30, 1987

Commencement June, 1987

APPROVED:

Redacted for privacy

Associate Professor of Education, in charge of major

Redacted for privacy

Head of Department of Educational Foundations

Redacted for privacy

Dean of the School of Education

Redacted for privacy

Dean of Graduate School

Date Thesis is presented April 30, 1987

Typed by Janet M. Squire and Annette Bruyer for Annette Bruyer

DEDICATION:

This research is dedicated to a number in individuals who helped and supported me through it:

to Forrest Gathercoal, who believed in me, listened to my anxieties and taught me how to listen as well;

to Ed Strowbridge, Ken Naffziger, Charles Warnath and Robert Frank who gave me their advice and encouragement;

to Wayne Courtney, who answered my persistent questions about statistics;

to the therapists who entrusted me with their clients;

to the eating disordered individuals who entrusted me with their thoughts;

to Janet Squire, who provided me with her valued editorial input and long hours at the microcomputer lab;

to my parents, who provided for me and never let me forget that they love me;

but my work is dedicated especially to my mother, Marion Bruyer. She has been through all of it right with me--the ups and the downs, the fears, deadlines, scan sheets and typing. Mom, Angela's for you.

Thank you all from the bottom of my heart.

TABLE OF CONTENTS

Table of Contents, Continued

Table of Contents, Continued

LIST OF FIGURES

LIST OF TABLES

THE CONSTRUCTION AND PRELIMINARY VALIDATION OF AN INSTRUMENT TO ASSESS THE FOOD FANTASIES OF INDIVIDUALS WITH EATING DISORDERS

Chapter I

INTRODUCTION

Background to the Study

Contemporary Western society places a great deal of importance on physical and bodily attractiveness, especially on slimness (Hsu, 1983). Even children share the cultural view that fat is ugly, socially undesirable and indicative of negative personality traits (Wooley & Wooley, 1983a). Love, success and respect are accorded only to the thin individuals (Bruch, 1978). This has led to a preoccuaption with thinness and dieting. Weight loss books featuring diets of questionable nutritional value are best sellers (Willis, 1982).

This anti-fat attitude affects females more than males (Schwartz, Thompson & Johnson, 1983). The roles society holds for women today are contradictory, complex and confusing (Hsu, 1983). Increasingly, women are expected to pursue a career, yet still maintain the role of wife and mother. As per tradition, the females are expected to be the nurturers and the ones who prepare their family's tasty meals and treats, but now the women aren't supposed to eat because they are or should be dieting. Indeed, they grow up expecting to be on a diet most of their adult life (Orbach, 1986). Women trying to enter the professions are faced with the common belief that slim, non-curvaceous women are perceived to be more

competent than curvaceous ones (Silverstrein, Perdue, Peterson, Vogel & Fantini, 1986). Controlling one's weight has come to be considered a measure of self-control; an enviable and visible accomplishment, which to many women is indicative of control and success in other areas of their lives (Garner, Garfinkel & Olmsted, 1983).

Futhermore, the standard of bodily attractiveness for women is slimmer than that for males, perhaps unrealistically so (Silverstein, Perdue, Peterson & Kelly, 1986). Women's fashions and the media in general reinforce the slim standard of bodily attractiveness. The women appearing in popular ladies' magazines, Miss America Beauty Pageant contestants, television and movie actresses and even Playboy conterfolds have become thinner over the last twenty years. Concurrently, the number of diet articles and references to obesity in woman's magazines has significantly increased (Garner, Garfinkel, Schwartz & Thompson, 1980; Silverstein, Peterson & Perdue, 1986).

Today, however, food is abundant and easily available. The food industry spends over one billion dollars a year to influence eating habits by temptingly portraying calorie-dense foods (Greenfield, 1986; Stunkard, 1980). Perhaps as a consequence, during the same twenty year period, the average weight of young women has increased (Garner, et al., 1980). When comparing their bodies to the thin cultural standard, it is not surprising that most women perceive themselves as fat, are dissatisfied with their shape, want to weigh less and are almost constantly concerned about being or becoming overweight (Kelly & Patten, 1985; Wooley & Wooley, 1984b).

From early adolescence on, many of these teenagers and adults

feel their self-concept and esteem is based on their weight, and feel good about themselves only when they consider their bodies to be "thin enough" (Kelly & Patten, 1985). Consequently, they do not want to be "fat" or gain weight; some even fear it and will turn to extreme, nutritionally unbalanced diets or drastic measures to prevent it (Bruch, 1978; Wooley & Wooley, 1984).

All eating disorders start with a diet, based on the individual's perception, real or imagined, that they are fat (Bruch, 1978). Generally, weight loss by dieting occurs when fewer calories are ingested than expended; the less eaten, the faster and greater the weight loss. But a prolonged diet which does not provide enough calories to supply the energy needed to sustain normal body functioning leads to malnourishment and eventually to starvation (Keys, Brozek, Henschel, Mickelson & Taylor, 1950). The diets typical of eating-disordered individuals are severely restrictive and/or nutritionally inadequate. Augmenting the diet by fasting or engaging in purging behaviors (laxative and/or diuretic abuse, self-induced vomiting) hastens the starvation process (Bruch, 1973; Crisp 1983; Russell, 1979). This leaves an eating disordered individual in a state of starvation Bruch, 1973; Garfinkel & Kaplan, 1985; Russell, 1979). This incidence of eating disorders among adolescents and young women is increasing (Garner, Garfinkel & Olmsted, 1983; Pope, Hudson, Yurgelun-Todd & Hudson, 1984).

Even "normal" dieting is a stressful, frustrating and emotionally draining experience which can precipitate depression, distractability, hyperemotionality and anxiety (Herman & Polivy, 1980). But a diet that leads to starvation has more profound and serious consequences. Starvation or semi-starvation, whether

naturally occuring, experimentally induced or as a consequence of an eating disorder, causes physiological, behavioral, affective, perceptual and cognitive changes and/or disturbances (Keys, et al., 1950). Eating disordered and starving individuals share a number of clinical and personality characteristics: bizarre eating behaviors, anxiety, social withdrawal, perceptual disturbances, impaired concentration, cognitive distortions and irrational thoughts. They become increasingly interested in and preoccupied with food, cooking and eating; devoting much time to thinking, imagining, reading and talking about it. They even dream about food or eating when asleep (Bruch, 1978; Crisp, 1983; Garfinkel & Garner, 1983; Keys, et al., 1950). The preoccupation and obsessive food thoughts, many of which may appear autonomously, become predominant, often to the point of obscuring all other thoughts (Abraham & Beumont, 1982; Garfinkel & Kaplan, 1985; Russell, 1979). For an eating disordered individual, there is a point where control is lost and "something takes over" (Garfinkel & Kaplan, 1985, p. 652). It appears that the dieting, starvation, binging and purging and the fear of weight gain takes control of the person's life--the disorder becomes or subsumes their personality (Bemis, 1983; Bruch, 1978; Orbach, 1986). As described by anorexics and bulimics, the disorder operates as an "internal dictator" or "monster" that tells them what to think and do, especially about what, when and how much to eat and/or purge (Bruch, 1978; Crisp, 1984; Mitchell & Pyle, 1985; Synder & Levy, 1984). It appears that as the starvation state worsens, cognitions become more irrational, subjective and distorted. Additionally, these thoughts and any assumptions that may underlie them play a role in the perpetuation of the eating disorder (Fairburn, 1984; Garfinkel & Kaplan, 1985; Hatsukami, 1985). As distorted, absurd or trivial the obsessive thoughts may appear, they are seemingly functional to the

individual (Bemis, 1983; Casper, 1983; Garfinkel & Garner, 1982; Solyom, Thomas, Freeman & Miles, 1983). If the thoughts are functional, then it is possible to assume that they are personally relevant to the individual and may reflect underlying constructs or characteristics common to eating disordered individuals that are operational in the onset and perpetuation of the anorexia, bulimia or compulsive overeating.

One of the major goals of therapy is helping the individual recognize and change their irrational beliefs and distorted cognitions. To accomplish this, cognitive restructuring has been advocated (Fairburn, 1984; Garfinkel & Garner, 1982; Hatsukami, 1985). At the same time, Garfinkel and Garner (1982) note that there have been few attempts to either systematically investigate the cognitive characteristics or their role in the development or maintenance of the disorders.

The objective measurement of attitudes and behaviors of those with eating disorders is a relatively new field of research (Garner, Olmsted, Bohr & Garfinkel, 1982). The highly irrational, obsessive food thoughts are often described by eating disordered individuals as fantasies. In a therapeutic situation, the fantasies may prove to be a rich and fertile ground for gathering information. However, they are often ignored (Beck, 1970). An objective tool to investigate the food fantasies of eating disordered individuals may prove to be useful in therapy and research.

Statement of the Problem

The primary goal of this study is to develop and initially validate an instrument which investigates and assesses the content and occurrence of the highly irrational food and /or eating related thoughts -- food fantasies --- that an individual with an eating disorder may experience. The instrument will relate the content, theme and patterns of food and/or eating fantasies to one of seven factors that have been identified as personality or clinical characteristics of individuals with an eating disorder, or are indicators of the psychopathology of the disorders. The seven factors hypothesized as relevant for this research are: fear, anxiety, revulsion, pleasure, gender, animation and control.

Objectives

The major objectives associated with this research include the following:

1. To develop an instrument which will assess the content and occurrence of food fantasies and facilitate focusing on and exploringthe food fantasies in individual or group therapeutic settings.
2. To develop a tool useful in gathering information about food fantasies for research purposes.

3. To validate the instrument by administering it to a sample of approximately thirty (30) individuals who are currently in treatment for anorexia, bulimia, bulimia nervosa or compulsive overeating.
4. To conduct a factor analysis to:
   a. determine if the fantasies as written on the instrument represent or reflect the factors they have been related to by the DELPHI Panel; and
   b. determine if the food/eating fantasies can be grouped by common traits.
5. To identify activities to further the knowledge and research of food fantasies, and eating disorders in general.

Significance of the Study

All people think about food; hungry people think about it a lot. Starving people are possessed with food thoughts to the extent of having vivid dreams about it when asleep (Keys, Brozek, Henschel, Mickelson & Taylor, 1950). The preoccupation with thoughts of food and eating associated with naturally occurring or experimentally induced starvation is characteristic of anorexia, bulimia, bulimia nervosa and compulsive overeating, as are certain food-related behaviors (Bruch, 1973,1978; Crisp, 1980, 1983; Gandour, 1984; Russell, 1979). Eating disorders are becoming increasingly prevalent among adolescents and young adults, particularly among women (Crowther, Post & Zaynor, 1985; Eckert, 1985, Mitchell & Pyle, 1985). To better understand the nature of the disorders and those who are afflicted with them, attempts to objectively measure various

aspects of the eating disorders have been instigated. Although the use of objective tests in assessing or diagnosing eating disorders is relatively new, several objective measures of the cognitive and/or behavioral constructs common to anorexia and/or bulimia have been developed. Two versions of the Eating Attitudes Test (the EAT-40 (Garner & Garfinkel, 1979) and EAT-26 (Garner, Olmsted, Bohr & Garfinkel, 1982)), assess characteristic symptoms, attitudes and behaviors of anorexics. The Eating Disorder Inventory (EDI) (Garner, Olmsted & Polivy, 1982, 1983) explores the behavioral, attitudinal and psychological constructs relevant to anorexia. The Goldberg Anorectic Attitude Scale (GAAS) (Goldberg, Halmi, Casper, Eckert & Davis, 1977; Golberg, Halmi, Eckert, Casper, Davis & Roper, 1980; Halmi, Goldberg, Casper, Eckert & Davis, 1979) addresses only the attitudes of anorexics. The Slade Short Anorexic Behaviour Scale (Slade, 1973) deals only with overt behaviors of anorexics. The latter two are relevant to only hospitalized anorexics.

Many on the cognitive items on the tests (EDI, GAAS, EAT-40 and EAT-26) are examples of the types of thought distortions common to eating disorders; however, they do not consider food fantasies, i.e., the often spontaneous, highly irrational thoughts. Food fantasies sometimes are presented in the literature as examples of obsessive, chaotic food thoughts, but they appear to be included as a curiosity or to heighten reader interest. However, beyond describing such thoughts, there appears to be a lack of research concerning the content, nature and processes of the fantasies. Understanding the role the fantasies play in the disorders may be crucial. Beck (1970) indicates that individuals may believe their fantasies, be motivated by them and base their overt behavior on them. Hatsukami (1985) notes that irrational, maladaptive thoughts may serve as cues or predispose

an individual to engage in disordered eating practices. The need for research about fantasies and how they operate in eating disordered individuals becomes more pressing when considering that many of these who have recovered complain that they are still troubled by persistent, irrational thoughts of food (Agras & Kraemer, 1984; Bruch, 1973; Crisp, 1980; Roth, 1982; Schwartz & Thompson, 1981).

One major problem facing the researcher or therapist is how to gather information about the covert fantasies, especially from a subject or client who is ashamed of or scared by the thoughts and may be reluctant to report or discuss them. No systematic method has been developed by which to explore, assess or objectively measure food fantasies for research or therapeutic use. Therefore, a tool that would facilitate research and therapeutic investigation and understanding of the food fantasies of eating disordered individuals could provide the initial step in meeting this need.

The Food Fantasies Questionnaire would extend the range of cognitive distortions in an effort to understand the clinical importance of the persistant food thoughts, fantasies and their content. This would facilitate further understanding of the function of the preoccupation with food in eating disorders and the role the fantasy-thoughts play in their onset, maintenance and amoelioration.

Need for the Study

Cognitive disturbances including body image distortion and a preoccupation with food and/or eating have long been associated with starvation states, eating disorders and dieting (Bruch, 1973, 1978;

Keys, Brozek, Henschel, Mickelson & Taylor, 1950; Crisp, 1980, 1983; Garfinkel & Kaplan, 1985; Gandour, 1984; Orbach, 1986). Cognitive distortions commonly found in eating disordered individuals have been described by Garner, Garfinkel and Bemis (1982, p. 16). These include:

1. Dichotomous reasoning; things are only perceived in terms of absolute; right or wrong, black or white.

Example: "If I gain any weight at all, I'll just keep right on getting fatter and fatter."

2. Superstitious thinking; errors in cause and effect relationships.

Example: "Fried foods turn into bulges on my hips."

3. Personalization, self-reference; egocentric thought.

Example: "Everyone in the grocery store watches to see what kind and how much food I buy."

4. Magnification; overestimating undesirable outcomes.

Example: "If my weight goes up at all, I simply can't cope with anything."

5. Selective abstraction; conclusions based on isolated or contradictory terms.

Example: "The only way I can control my life is by not eating."

6. Overgeneralization; applying the same rules to dissimilar instances.

Example: "I used to eat hamburgers, but I was as fat as a pig, so now I don't eat any meat at all."

recognize and identify irrational cognitions, evaluate and change them (Bruch, 1973; Fairburn, 1984; Gandour, 1984; Garner, Garfinkel & Bemis, 1982). Many of the therapies suggest cognitive restructuring as a treatment modality as well as other techniques concerning thoughts and affective states in relation to eating behavior (Fairburn, 1984; Garner, et al., 1982; Mahoney & Mahoney, 1978; Neuman & Halvorson, 1983). However, these have tended to focus on the cognitive reasoning errors, faulty assumptions or beliefs the individual has consciously adopted. Bandura (1978) feels that erroneous beliefs initiate responses that do not allow the individual to be in touch with current environmental conditions, i.e., reality, which may correct their false assumptions. In extreme cases of cognitive distortion, he states: "...behavior is so powerfully controlled by bizarre contingencies that neither the beliefs nor the accompanying actions are much affected even by extremely punishing environmental consequences" (Bandura, 1978, p. 346).

Relatively little attention has been given to the highly subjective, more personal fantasy-thoughts often spontaneously and involuntarily experienced by the individual. When fantasies are described in the literature, it is usually for illustrative purposes; a "case's" fantasy is reported as an example of their cognitive disturbance, their preoccuaption with food or the obsessive nature of their thoughts. First person accounts by recovered individuals sometimes appear, as do narratives written in the form of stream-of-consciousness of a hypothetical but typical eating disordered individual (Bruch, 1978; Ciseaux, 1980; Crisp, 1980; Kinoy, 1984; Liu, 1979; Macleod, 1982; Roth, 1982, 1984; Snyder & Levy, 1984). Herman and Polivy allege that the "subjective components of behavior [e.g., compulsions to eat, fear of fatness] seem

[to researchers] inadequate to the task or general explanation" (1980, p. 208).

The often overlooked or ignored daydreams, mental meanderings or fantasies of a client may be fertile ground to explore regarding the nature of the eating disorder and how it is manifested in them. However, few of the current treatment approaches for eating disorders suggest asking the client about their fantasies as a therapeutic technique. This issue was addressed by Aaron T. Beck (1970) in the "Role of Fantasies in Psychotherapy and Psychopathy". Beck feels that fantasies are underutilized in therapy. He notes that induced fantasies are employed in Wolpe's (1956) systematic desensitization, a method that is often practiced in the treatment of phobia and anxiety. It has also been used in the treatment of anorexia and bulimia (Bemis, 1983; Hallsten, 1965; Schnurer, Rubin and Roy, 1973). Beck categorizes anorexics as individuals suffering from an anxiety, depressive or phobic disorder, the populations of which he has worked with the most with (Beck and Emez, 1979). During treatment, Beck (1970) found that while induced fantasies can be used in a variety of ways, the client's own fantasies may be productive to explore. He feels that the client's "spontaneous fantasies may provide the therapist with a rich material for understanding the specific nature of the problems and for utilizing this understanding to overcome them" (1970, p. 12). Beck notes that many clients aren't aware of their fantasies or how often they experience them; even those who are aware of them don't tell their therapist about their fantasies. He states that exploring the fantasies can promote therapeutic change.

Beck made several points that are pertinent to all types of

eating disorders:

1. Many fantasies are autonomous; they appear without the client calling them up or even wanting to experience them. Once the fantasy begins, the client may not be able to turn it off. Often they appear without any apparent external stimulus.

2. Some concepts and fantasy content have been associated with specific psychological problems. Individuals with eating disorders are preoccupied with persistant, obsessive food thoughts (Abraham & Beumont, 1979; Bruch,1973, 1978; Russell, 1979).

3. Fantasies are frequently a gross distortion of reality. Body image distortion (the overestimation of actual body size and/or shape) may be found in the normal population, particularily among women (Thompsen, 1986; Wooley & Wooley, 1982). However, feeling fat, even when grossly underweight, is almost always present in any eating disordered individual and it is one of the diagnostic criteria for anorexia nervosa and bulimia nervosa (Bruch, 1973, 1978; Crisp, 1980; DSM III, 1980; Freeman, 1985; Gandour, 1984; Huon, 1986; Russell, 1979).

4. The clients may be motivated by their fantasies. Often, thinking about food will precipitate an episode of binge eating (Mitchell & Pyle, 1985)

5. Clients believe that their fantasies are true, often quite strongly, and their "affective response and overt behavior may be more congruent with the content of the fantasy than with objective reality" (Beck, 1970, p. 14). This is concurrence with the Bandura's (1978) findings. Eating disordered individuals perceive themselves as fat, and exhibit a variety of dieting behaviors (limiting food intake, especially carbohydrates and fats; abuse laxatives and/or diuretics; engage in strenuous exercise; self-induce vomiting). Their feeling of self-worth may become solely dependent on their weight, and the

day's mood is set by the numbers on the scale (Garner, Garfinkel & Bemis, 1982; Squires, 1983).

In developing their "multidimensional psychotherapy" for treatment of anorexia nervosa, Garner, Garfinkel and Bemis (1982) based the cognitive methods component on the cognitive-behavioral principles underlying the treatment described by Beck and his associates for use in depressive and phobic disorders. There is disagreement as to whether eating disorders are a type of phobic disorder (Bemis, 1983; Crisp, 1983, 1984; Russell, 1979). However, depression is frequently found (Eckert, Goldberg, Halmi & Casper, 1982; Levy & Dixon, 1985; Pope & Hudson, 1984).

In light of the apparent therapeutic value in recognizing and exploring the food fantasies experienced by eating disordered individuals, the need for further research in this area is evident.

Purpose of the Study

The Food Fantasies Questionnaire was developed to gather information and measure the often overlooked fantasies an eating disordered individual may be experiencing. It includes the commonly found cognitive distortions of superstitious thinking, dichotomous reasoning and selective abstraction, but extends into the realm of more irrational thoughts, with items asking about "voices" that may talk about food or eating, the way food "acts" around the individual, how it "feels" to or on them, etc. It was primarily designed to be used in an individual or group psychotherapeutic setting to further

understand the highly irrational cognitions that may typify the preoccupation with food, but it is also amenable for research purposes. It is a tool which explores and assesses both the qualitative content and the quantitative frequency of occurence of the eating cognitions. Each item on the test is designed to measure one of seven personality or clinical characteristics common to eating disorders. The responses individuals give to the items indicate how frequently they experience the fantasy, or one very similar to the one described. Responding to the items may heighten their awareness of their food thoughts and allow them to feel that their fantasies are not uncommon. Reviewing the responses with the client will allow the therapist greater understanding of the client's internal reality. The subscores of the factor-grouped items indicate which factor or factors are pertinent to the respondent.

The questionnaire is an attempt to provide a non-threatening method by which the individual's food fantasies may be given validity and introduced into or brought out in therapy. It is a vehicle through which a person may express their food thoughts, which they may have been ashamed of or afraid to discuss with others. Observing the way in which the fantasies fall into their related categories may yield insight in any thought processes, patterns and/or content themes that predominate or underlie the thoughts of the client. In discussions focusing on the content and factors of the fantasies, both the therapist and the client may learn more about the nature of the client's particular problem; for example, what the client fantasizes about, how the fantasies begin or are triggered, where they originated from (i.e. experiences in childhood, with the opposite sex, etc. (Beck, 1970; Orbach, 1986)). The influence the fantasies may have on the client's behavior is another area the Food Fantasies Questionnaire opens to

exploration. How the client uses the fantasies or possibly feels "used" or controlled by them could provide clues for deciding upon appropriate cognitive and other therapeutic interventions. Recognizing, confronting and/or challenging faulty reasoning and/or inconsistencies between the thoughts and reality has been advocated (Bruch,1978; Fairburn, 1984; Garner, Garfinkel & Bemis, 1982; Neuman & Halvorson, 1983). The Food Fantasies Questionnaire may help in recognizing cognitive distortions when they appear in the form of fantasies. Bruch (1978) feels that individuals with eating disorders not only need help in defining and relabelling faulty thinking and illogical beliefs, they "need help and encouragement" (p.388) in order to do so.

It is important to note that this approach is noninterpretive. Having the therapist "interpret" the client's thought for their unconscious meanings in a traditional psychoanalytic manner may be construed by the individual as being told how they think and/or feel. This is counterproductive to helping the individual develop their self-awareness and ability to recognize what their own thoughts and feelings are (Bruch, 1973, 1978). The Food Fantasies Questionnaire was not designed to be used to interpret or analyse a person's fantasies. It was developed as a tool to be used in therapy and/or research to provide a basis for awareness and exploration of the nature and content of the client's more persistent food thoughts. Although the questionnaire lists common fantasies and feelings which have been related to factors characteristic to eating disorders, the items are meant to be suggestions by which the client gains insight into their fantasies; what they mean to them, how they are related to them and their own experiences. Mahoney and Mahoney (1976) suggest that irrational thoughts are personal and unique to each

individual; therefore, the impact that the food thoughts have on overt (eating) behavior should be assessed and evaluated by the client as to whether it is relevant to their experiences. If a "control" fantasy is preventing an anorexic from binging and purging, perhaps it would be construed as being appropriate until other, more rational ways of managing the desire to binge and purge were developed.

The Food Fantasies Questionnaire does not purport to "tell" clients whether they are "out of control" or "afraid of heterosexual relationships"; use of it in that manner would be inappropriate. The purpose of the instrument is to gather data concerning the preoccupation with food for therapeutic or research purposes.

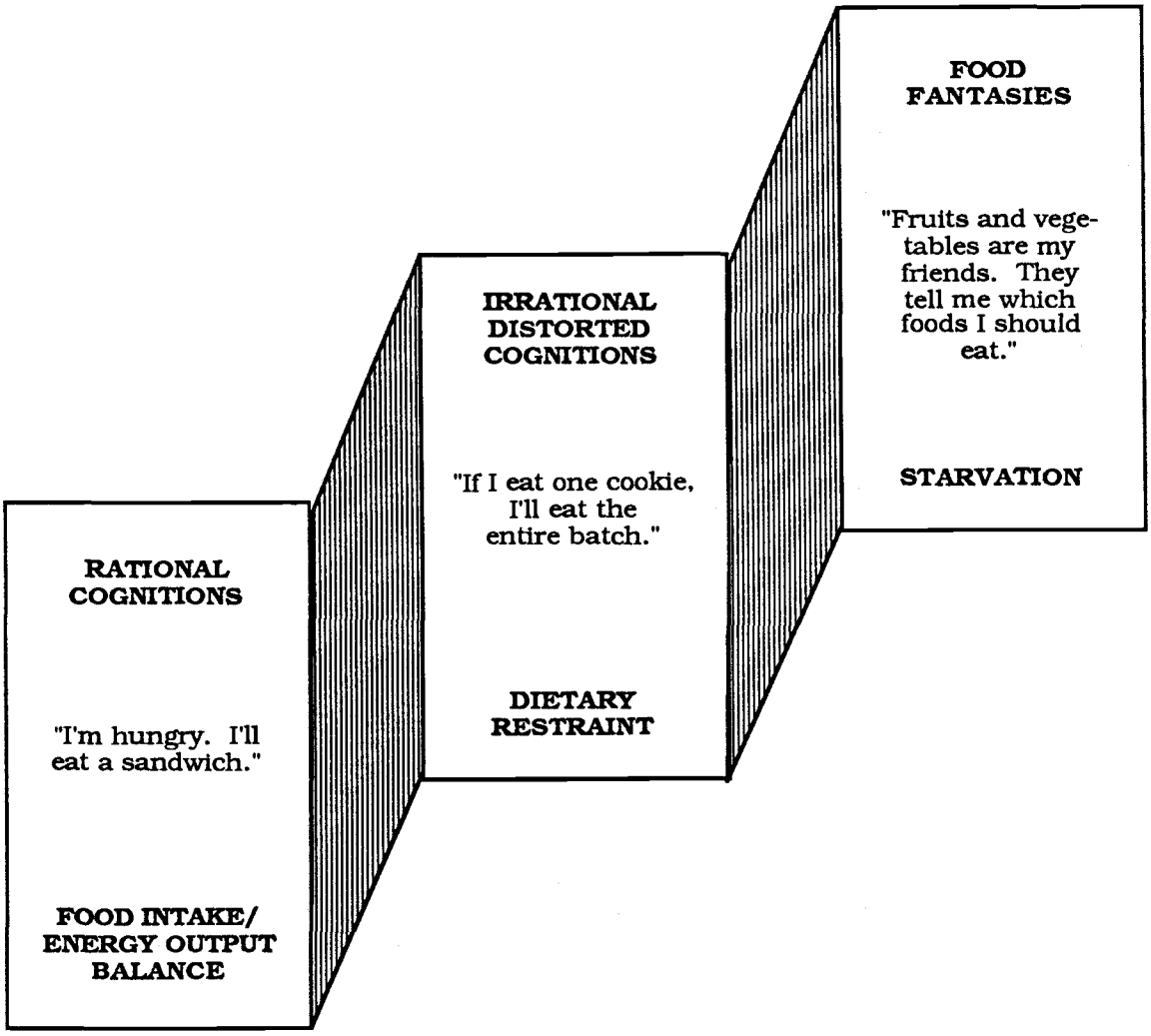
Conclusion

Garner and Kaplan (1985) have gathered evidence which suggests that the effects of starvation may cause eating disorders, especially anorexia nervosa, to be self-perpetuating or even make it worse. Starvation-related symptoms which may be due to physiological abnormalities include intense hunger, bulimic episodes and a preoccupation with food and/or eating thoughts, even to the point of experiencing dreams about food when asleep. Others have indicated that the preoccupation or obsessive food thoughts serve to perpetuate bulimia and compulsive overeating as well as anorexia (Hatsukami, 1985; Hunt & Rosen, 1981; Johnson & Larson, 1982; Rose & Leitenberg, 1982). Determining the role the fantasy-thoughts play in the onset and/or maintenance may be crucial to recovery.

Figure 1:
Three Dimensions of Food Cognitions

A conceptual model

Conceptually, there are 3 dimensions or domains of food cognitions:



Any individual may experience thoughts or hold beliefs at any point in the plane. However, greater degrees of dietary restraint and/or starvation tend to increase the intensity and magnification of distorted cognitions.

Definition of Terms

Certain terms have been used extensively in this study. In order to facilitate a clear understanding of these terms, they are defined as follows:

1. **Anorexia Nervosa:** A syndrome that is characterized by the diagnostic criteria set by the DSM III of the American Psychiatric Association (1980):

DSM-III Diagnostic Criteria for Anorexia Nervosa

A. Intense fear of becoming obese, which does not diminish as weight loss progresses.

B. Disturbance of body image, e.g., claiming to "feel fat" even when emaciated.

C. Weight loss of at least 25% of original body weight or, if under 18 years of age, weight loss from original body weight plus projected weight gain expected from growth charts may be combined to make the 25%.

D. Refusal to maintain body weight over a minimal normal weight for age and height.

E. No known physical illness that would account for the weight loss.

Feighner, et al. (1972) set diagnostic criteria based primarily on family and follow-up studies which is often used. However, the requirement that the age of onset must be below 25 years of age makes it less amenable to this study.

Feighner Diagnostic Criteria for Anorexia Nervosa

A. Age of onset prior to 25

B. Anorexia with accompanying loss of at least 25% of original body weight

C. Distorted, implacable attitude toward eating, food, or weight that overrides hunger, admonitions, reassurance, and threats, e.g.:

Denial of illness with failure to recognize nutritional needs

Apparent enjoyment in losing weight with overt manifestation that food refusal is a pleasurable indulgence

Desired body image of extreme thinness with overt evidence that it is rewarding to the patient to achieve and maintain this state

Unusual hoarding or handling of food

D. No other known psychiatric disorder with particular reference to primary affective disorders, schizophrenia, obsessive -compulsive, and phobic neurosis (although it may appear phobic or obsessional, food refusal alone is assumed not to be sufficient to qualify for obsessive - compulsive or phobic disorder)

E. At least two of the following manifestations:

Amenorrhea

Lanugo

Bradycardia (persistant resting pulse of 60 or less)

Periods of overactivity

Episodes of bulimia

Vomiting (may be self-induced)

2. Anorectic; anorexic: An individual afflicted with anorexia nervosa.

3. Binge; Binge Eating: An episode of rapid uncontrolled eating in which a large amount of food is eaten in a short period of time. The foods ingested are typically items that can be quickly and easily eaten (and purged, if self-induced vomiting is practiced). Usually the binge foods are high in calories, and they are often desired foods the individual has denied themselves and won't eat except when binging. The individual may be aware the behavior is abnormal, and/or be afraid they cannot stop eating by themselves. The episodes are done secretly and result in negative emotional reactions such as guilt, depressed mood and self- deprecating thoughts. Binge eating, which has been used interchangably with compulsive overeating, is found in non-restrictor anorexics and obese individuals. An "eating disorder" binge is quantitatively and affectly different than a "normal" binge (i.e. overeating on a holiday).

4. Bulimia: A syndrome that is characterized by the diagnostic criteria set by the DSM III of the American Psychiatric Association (1980).

DSM-III Diagnostic Criteria for Bulimia

A. Recurrent episodes of binge eating (rapid consumption of a large amount of food in a discrete period of time, usually less than two hours).

B. At least three of the following:

(1) consumption of high-caloric, easily ingested food during a binge

(2) inconspicuous eating during a binge
(3) termination of such eating episodes by abdominal pain, sleep, social interruption, or self-induced vomiting
(4) repeated atttepts to lose weight by severely restrictive diets, self-induced vomiting, or use of cathartics or diuretics
(5) frequent weight fluctuations greater than ten pounds due to alternating binges and fasts.

C. Awareness that the eating pattern is abnormal and fear of not being able to stop eating voluntarily.

D. Depressed mood and self-deprecating thoughts following eating binges.

E. The bulimic episodes are not due to Anorexia Nervosa or any known physical disorder.

As weight control behaviors (purging, dieting) need not be present to meet the diagnostic criteria, complusive overeating is subsumed in this definition (Fairburn and Garner, 1980).

5. Bulimia Nervosa: A syndrome described by Russell (1979) and that meets the criteria set forth by him.

Russell (1979) Diagnostic Criteria for Bulimia Nervosa

1. The patient suffers for powerful and intractable to overeat;
2. They seek to avoid the "fattening" effects of food by inducing vomiting or abusing purgatives or both;
3. They have a morbid fear of becoming fat.

As it is used here, the term "bulimia nervosa" and the above criteria also describe the similar disorders that have been called the "binge-purge" syndrome and bulimarexia (Boskind-Lodan and White, 1983).

6. Bulimic: An individual afflicted with bulimia or bulimia nervosa.

7. Common factor: Statistical representations of some task or some trait which two or more items in the questionnaire have in common (Cattell, 1952).

8. Common variance: The sharing of variance by two or more elements. In such a sharing, the elements are correlated and therefore have traits in common.

9. Compulsive overeater: An individual afflicted with a type of bulimia who tends not to purge by self-induced vomiting. Frequently the individual is overweight.

10. Compulsive overeating: The manifestation of bulimia where binges are not necessarily terminated by purging nor are other weight control practices followed. The term seems to be more socially acceptable and popular than bulimia with certain groups.

11. Eating disorder: A constellation of problematic or dysfunctional food or eating attitudes and/or behaviors related to psychological concerns; misuse of food or eating for psychological reasons (Bruch, 1973); used to refer to anorexia nervosa, bulimia nervosa, bulimia, and compulsive overeating.

13. Expert: An individual who displays knowledge, skill or has experience in a specialized area; knowledgeable individual.

14. Factor analysis: A statistical method which consists of:

1. "A large number of tests which measure some aspects of the general trait and will represent a wide range of elements that might enter into the trait;

2. "Evaluating intercorrelations among these tests to find those which tend to measure the same element or factor;

3. "Deducing what this trait measures in common and giving it a name" (Gunderson, 1971).

15. Factor loading: Correlation of any particular fantasy with the other fantasies being extracted in the same factor (Cattell, 1952).

16. Fantasy: A highly affective and/or subjective cognitive distortion; thoughts or perceptions of reality that may seem very irrational in nature and/or content and which the individual may or may not be aware of; includes and extends beyond positive or negative cognitions, dichotomous and/or magical thinking; personal thoughts that may appear (in the mind) without being called up or consciously formed by the individual, they are often spontaneous; may be autonomous and/or once started, difficult to stop. Although the individual may feel they are "bad" or "strange", and may not talk about them, the fantasies are believed and tend to motivate overt behaviors.

17. Mental Health practitioners, professionals, therapists: Individuals in the mental health care field who are directly involved with providing individual or group therapy and counseling. Theoretical orientation and educational background may differ, but all have advanced degrees dealing with psychology which prepared them to work effectively with people experiencing psychological distress.

Occupational titles of those directly involved in this research include: psychiatrist (M.D.), clinical and counseling psychologist (PhD.), social worker (MSW), counselor (MA, MS, EdM.), psychiatric nurse practitioner (RN, MS).

18. R-mode: A factor analytic technique which examines the relationship of every fantasy with every other fantasy and provides for a clustering of common fantasies.

19. Reliability: The consistency of an instrument; whether it is accurate measure of the test's content (Theodorson and Theodorson, 1969).

20. Restrained eater: An individual who chronically diets to control their weight. Through cognitive control, they deprive themselves the calories necessary to meet their body's needs: i.e. they are biologically underweight. They tend to be preoccupied with food thoughts and over-respond to external food cues (Herman and Mack, 1975). Although the concept was first identified in obese individuals, anorexics and bulimics are also considered restrained eaters.

21. Set Point: The body weight needed to maintain normal bodily functions. Human set points vary considerably; some obese individuals may eat the same or less than those of normal weight and maintain their high weight. The weight required by the body may not coincide with what the individual wants it to be. If not, they usually wish to weigh less. The set point is believed to be set by the hypothalamus, and when caloric intake is restricted, it will defend the weight level by increasing the efficiency of food utilization. Basal metabolism slows down. To stay below set point, the individual must

substantially lower their daily caloric intake; when they begin to eat the same amount that they did prior to weight loss, they will rapidly regain their lost weight and will need fewer calories than before to maintain the body's set point. This theory has been extended to explain why most people who lose weight by dieting regain it (Keesey, 1980).

22. Specific factor: A statistical representation of some ability or trait (fantasy) which only one item contains (Cattell, 1952).

23. Spurious fantasy: A fantasy with a factor loading of less than +/- 0.50. It is tentatively identified as clustering with the factor in which its highest factor loading occurred, even though its loading is less than +/- 0.50.

24. Validity: The relation between what an instrument is designed to measure and what it actually measures; whether it measures the content it purports to measure (Theodorson and Theodorson, 1969).

Chapter II

RATIONALE -- REVIEW OF THE LITERATURE

The central concept of this study is that individuals with eating disorders appear to think and fantasize about food and/or eating differently than individuals without eating disorders. How anorexic, bulimic or compulsive overeaters respond to the fantasies may influence the enactment of abnormal eating behaviors or be instrumental in the development and/or maintenance of the disorder. To further understand the nature and role of these irrational, subjective cognitions, the goal of this research is to develop an instrument to objectively measure and evaluate food fantasies. The literature relevant to this may be divided into two major categories:

1. Thoughts, Feelings, and Fantasies: Subjective cognitive processes in eating disorders.
2. The Use of Objective Measurement in Eating Disorders.

1. Thoughts, Feelings and Fantasies: Subjective cognitive processes in eating disorders:

Much of the research on eating disorders has been concerned with incidence, clinical features, symptoms, overt behaviors, etiological factors and starvation-based physiological changes or abnormalities. Research concerning the effects of starvation indicates that the perceptual, affective and cognitive processes are also altered (Keys, et al., 1950). Many of the subjective facets of the cognitions the individual experiences (e.g. feelings, fears, compulsions, motivations, fantasies) have often been ignored or overlooked. To understand the

development and maintenance of anorexia or bulimia on an individual level, these personally - relevant cognitions need to be recognized and explored (Bemis, 1983; Herman & Polivy, 1980).

Several studies concerning the effects that starvation and dieting have on thoughts, feelings, and behaviors are pertinant to this study. Five areas will be reviewed:

a.) Food thoughts
b.) Interoceptive awareness
c.) Body perception
d.) Internal-external responsiveness
e.) Restrained eating

a.) Food Thoughts

It has been well documented that a preoccupation with food and/or food fantasies predominate the thoughts of individuals who are starving in natural or experimental situations (Keys, et al., 1950). Garfinkel and Kaplan (1985) suggest that the effects of starvation, caused by severe dietary restriction or bulimic behaviors, cause anorexia to be self-perpetuating. In starvation or semi-starvation (dietary restricted) states, food takes on special significance; eating behavior and food handling practices become increasingly bizarre and food thoughts become more irrational (Abraham & Beumont, 1982; Bruch, 1978; Keys et al., 1950).

Starvation and chronic dieting have a similar effect on anorexics as well on compulsive overeaters and bulimics, who may often drastically restrict food or fast, and/or purge to counteract the

caloric effects of binges. All are intensely preoccupied with food and eating, sometimes to the point where they cannot think of anything else. Concentration is impaired; dreams of food and eating may be experienced (Abraham & Beumont, 1982; Bruch, 1978; Crisp, 1983; Gandour, 1984; Garfinkel & Garner, 1983; Russell, 1979). Food and eating become the objects of fantasies, some of which are self-initiated, but many appear autonomously and repetitively (Neuman & Halvorson, 1983; Solyom, Thomas, Freeman & Miles, 1983). To the observer, and sometimes to the individual, the thoughts are absurd, wrong in content and seemingly trivial (Solyom, 1983). The problem is that the irrational cognitions and fantasies are believed, and they serve to motivate the individual's eating behaviors (Bemis, 1983). Eventually the obsessive food thoughts affect the emotional and social functioning of the individual (Bruch, 1978; Russell, 1979).

In discussing treatment for anorexia, Bruch (1978, p. 11) concludes:

"...that the effect on psychological functioning of low food intake is to a large extent responsible for the drawn-out course of the illness, sustaining and making recognition and resolution of the precipitating psychological issues difficult, if not impossible."

Fairburn (1984), a proponent of cognitive restructuring as a valuable therapeutic procedure, states:

"There is a mounting body of opinion that cognitive factors are of fundamental importance in the maintenance of anorexia nervosa, binge eating and the bulimic syndromes." (p. 240)

Polivy, Herman, Olmsted and Jazwinski (1984) feel that starvation, food preoccupation and attempts to cognitively control

food intake interact to create eating struggles for the individuals. They theorize that dieting and/or starvation cause a physiological imbalance and psychological deprivation, of which obsessive and irrational food thoughts are a part. These interact to create a potential for binge eating.

Garner, Garfinkel and Bemis (1982) feel that the distorted thoughts and ideas caused by starvation maintain the disorders. They agree with Bruch and Fairburn that a major psychotherapeutic goal is to help the individual learn to identify, evaluate, change or correct their irrational thoughts and beliefs (Garner, et al., 1982). However, all psychological orientations concur that meaningful psychotherapy cannot be accomplished while the individual is starving.

b.) Interoceptive Awareness

Eating disordered individuals lack interoceptive awareness and have little or no confidence in recognizing and accurately identifying hunger, satiety or emotions (Garfinkel, Muldofsky, Garner, Stancer & Coscina, 1978). They are often unable to appropriately recognize hunger, nor can they differentiate physiological (food) hunger from psychological "hunger" precipitated by non-food related uncomfortable physical or emotional states (Bruch, 1962, 1973). Disordered eaters may be "hungry", but they aren't sure what they are hungry for: food, love, acceptance, approval, self-esteem, etc., or whatever it is that they lack (Orbach, 1986; Roth, 1982).

Anorexics and bulimics often have disturbances in perceiving satiety. They feel "bloated" or "stuffed" after eating even a small amount of food, or they may not recognize when they are full and

possibly not quit eating until they are in pain (Abraham & Beumont, 1982; Eckert, 1985). When a sample of 32 male and female respondents were questioned about what precipitated binge eating episodes, 84% indicated eating anything at all, and 78% cited thinking of food; 66% did not list hunger as a binge trigger. Other binge precipitants cited included tension, 91%; being alone, 78%; craving specific foods, 78%; going home, 72%; feeling bored and lonely, 59%; and dating, 25% (Abraham & Beumont, 1982).

Eating disordered individuals may fail to develop the normal aversion to the sweet taste of sucrose after repeatedly tasting it (Garfinkel, Muldofsky, Garner, Stancer & Coscina, 1978). Pleasantness of sweet taste is related to the biological and nutritional needs of the individual. It has been demonstrated that sweet things taste especially good when the individual has been deprived of food, as when dieting (Cabanac & Duclaux, 1970). This may be related to the tendency for sweets and carbohydrates to be considered "forbidden" or "bad"; for these foods are the preferred choices when binge eating (Abraham & Beumont, 1982; Garfinkel, et al., 1978). Helping the individual accurately identify internal cues and emotions is often a goal of therapy. Self monitoring is often utilized, wherein the individual keeps a journal of the type and amount of food eaten, perceived hunger and attendant emotional state (Fairburn, 1984; Hatsukami, 1985).

It has been suggested that deficits in interoceptive awareness are related to body image distortion, feelings of ineffectiveness and not being in control, all which are characteristic of eating disordered individuals (Bruch, 1973, 1978; Garfinkel, et al.,1978; Mitchell & Pyle, 1985; Russell, 1979). It may also be related to eating in

response to external food cues and restrained eating, two other phenomenon found in eating disordered individuals (Nisbett, 1972; Polivy, Herman, Olmsted & Jazwinski, 1984; Rodin, 1978).

c.) Body Perception:

How an individual perceives themselves, what they think or believe they look like and how they feel about their body shape or appearance is another relevant subjective aspect of cognitive functioning. Body dissatisfaction is the most common cognitive factor that results in a decision to diet; and all eating disorders start with a diet (Bruch, 1973, 1978; Polivy, Herman, Olmsted & Jazwinski, 1984). Body image distortion, low desired body weight and feeling fat even when emaciated are significant characteristics of eating disordered individuals (Fairburn & Garner, 1986). However, these perceptions are often found within the general population. Many individuals, primarily women, whether eating disordered or not, report that they "feel fat" regardless of their actual weight (Wooley & Wooley, 1984b) Among non-disordered college women of normal weight, Striegel-Moore, McAvay and Rodin (1986) found that feeling fat was associated with chronic dieting, intense urges to eat, eating when experiencing negative emotions, social pressure to be thin and binging. The women felt a lack of control over food; eating or overeating in response to external cues or possibly erratic internal ones. The data suggest that the women may have felt fat because they were often hungry, a condition possibly related to their frequent dieting, and therefore were preoccupied with food.

Feeling fat was also significantly related to perfectionism,

social comparision with other women regarding body weight and the degree to which failures adversely affected how they felt about their body. The adverse feeling toward their body they experienced in response to failure extended past the weight-related domains. When the women experienced failure in any aspect of their lives they immediately had negative thoughts about their bodies. These findings led Striegel-Moore and colleagues to hypothesize that women who perceive themselves as fat hold self-schemas that revolve around eating, weight and appearance. Having a strong cognitive schema for body weight would lead them to process all self-relevant information with their weight foremost in mind and their self-evaluations following any "failure" would include an evaluation of their weight and body. Although testing with eating disordered individuals is called for, they suggested (p. 945):

"If the self schemas of binge eaters and women who feel fat, for example, revolve around weight, eating and appearance, then, any stimulus related to these domains would become automatically self-relevant and would be processed within the context of the self-schema....Thus the very way they process and extract information from their world would reinforce and perpetuate their preoccupation with body weight and eating...."

A correlary to this, based on the Piagetian framework may be Bruch's (1977) contention that eating disordered individuals are egocentric and process at the levels of preconceptual and concrete operations. They tend to view things dichotomously and interpret external events in a personalized manner (Garfinkel & Garner, 1983).

Outside of feeling fat and dissatisfied with one's body, many of

the other psychological and behavioral variables related to these perceptions found in the weight preoccupied women are also characterisctic of eating disorders; perfectionism, chronic dieting, intense urges to eat, disinhibited eating, eating to external and negative emotional cues, binging and a perceived lack of control over food and/or eating (Striegel - Moore, McAvay & Rodin, 1986). Low self-esteem and self-deprecating thoughts are also common (Abraham & Beumont, 1982; Bemis, 1983; Bruch, 1978; Roth, 1984; Russell, 1979). If it is found that eating disordered individuals do have a strong cognitive self schema that is centered on their weight, it might provide insight into the nature of their obscessive food thoughts. Also, as cultural pressure to be thin and negative remarks about one's weight can precipitate eating disorders, understanding how the individual thinks and feels in response to these may be valuable in therapy Bruch, 1978; Neuman & Halvorson, 1983; Orbach, 1986).

d.) Internal-External Responsiveness:

The Externality theory was formulated by Schachter and his colleagues in the late 1960's to account for the finding that obese individual's eating and overeating behaviors were influenced by the sight and taste of food, the passage of time and the amount of palatable food cues immediately present (Schachter, Goldman & Gordon, 1968). It appeared that these individuals were highly, at times uncontrollably responsive to external food cues. Their original hypothesis proposed that overweight people ate primarily in response to external stimuli and were insensitive to internal, physiological cues (hunger), whereas normal weight individuals ate in response to internal cues. Rodin (1980, 1981) feels external responsiveness may be an inborn trait or a learned behavior. Nisbett (1972) suggests that

food deprivation, dieting, leads an individual to be responsive to external food cues. He related this to the hypothalamus' drive to maintain the body's set point.

Subsequent research has indicated that Schachter's dichotomous external-internal distinction was too simple to explain the differences between different weight groups. One criticism of the internal-external hypothesis was that it ignored the individual's cognitive capability to regulate their behavior in response to either internal or environmental food cues (Peele, 1982). However, the theory has generated much research, some of which is relevant to anorexia and the bulimic syndromes (Rodin, 1980, 1981).

One finding which ran counter to the internal-external model was that many people regardless of their weight, ate in response to external stimuli, such as the sight of tempting, well-prepared food, a food's delectable taste, or its fragrant, tantalizing aroma. (Rodin, 1980). People's external responsiveness has been capitalized on by the media. Food and restaurant advertisers, recipe layouts for cookbooks and magazines are often painstakingly "built" by food stylists. Their goal is to create an image of the featured food (even diet food) that is visually appealing, almost sensual (Orbach, 1986; Seaman, 1986). It was also found that externally responsive individuals may or may not be insensitive to internal food cues.

However, several findings lend support to the externality hypothesis. It appears that any individual who is responsive to environmental food cues may overeat because of phsyiological processes that cognitive restraint can't always override. Environmental food stimuli are arousing and may motivate an

individual's eating behavior, which suggests a neurochemical link. Additionally, environmental food cues effect the metabolic or digestive processes of externally responsive individuals (Rodin, 1980). These mechanisms are sensitive to changes in weight, which could account for the increase in appetite following food restriction (Wooley & Wooley, 1983). For one thing, there is an increase in salivation, which is the first internal response of the digestive system (Rodin, 1981). Dieters, restrained eaters, have been found to salivate more when seeing and smelling appealing, palatable food (Polivy, Herman, Olmsted & Jazwinski, 1984). Also, insulin secretion is increased which may induce appetite, as insulin is involved in promoting ingestion of more calories to balance the hormonal and metabolic output (Johnson & Wildman, 1983; Rodin, 1980, 1981). It has been found that when externally responsive individuals were exposed to the smell, sight and sound of a grilling steak, their insulin secretion increased (Rodin, 1979, 1981). In some externally responsive eaters and overeaters, salivatory output and insulin levels were increased simply by thinking about food and imagining its taste (Johnson & Wildman, 1983; Wooley & Wooley, 1973), Johnson and Wildman (1983, p. 1027) postulate:

"...insulin secretion, whether activated by external or covert food cues, may provide a powerful impetus for eating that is partially responsible for the binge eating reported by obese and bulimic persons."

This may have implications for eating disordered individuals, who are commonly hypersensitive to external food cues while being insensitive to internal ones (Herman & Polivy, 1980; Rodin, 1980). Outside of insulin secretion, other physiological and digestive

mechanisms that are activated or aggravated by starvation appear to increase appetite which may cause and/or intensify the typical preoccupation with food (Garfinkel & Kaplan, 1985). In eating disordered individuals, the dieting and starvation based food precoccupation manifests itself partly through a heightened responsiveness to external food cues (Casper, 1983).

Thus, externally responsive anorexics, bulimics and compulsive overeaters, are caught in a double bind; they are both preoccupied with food and physiologically hungry. The sight, smell or thought of the food they have denied themselves or are attempting to restrain themselves from eating may become impossible to ignore, leading to binging, or cause anorexics to redouble their resolve and efforts (Bruch, 1978; Herman & Polivy, 1980). (Supermarkets are seen as places of "temptation" Russell, 1979).) Also, to counteract the external responsiveness, attempts to control the urge to eat what is seen and/or thought about may lead to irrational food thoughts or negative self-evaluations (Casper, 1983; Garfinkel & Garner, 1983: Mitchell & Pyle, 1985). Thus the eating disorder is perpetuated (Garfinkel & Garner, 1983).

e.) Restrained eating:

In research undertaken to extend the externality hypothesis to dieters and non-dieters of normal weight, Herman and Mack (1975) noted a phenomenon that seemed to be related to dieting behavior and concern about weight. They conceptualized this as "restrained eating". "Restrained" eaters (Herman & Mack, 1975) are individuals who expend considerable cognitive effort to control their food intake to lose weight or maintain a desired low one. The

restrainers' habitual dieting does not provide enough calories to meet their body's needs, making them hungry, biologically underweight, perhaps even starving, while being above the normal weight for age and height, or appearing culturally overweight (Stunkard, 1981). The more they try to lose weight or fail to meet their body's energy needs, the more cognitive restraint they practice (Bjorvell, Rossner & Stunkard,1986). Restrained eaters, or dieters, tend to be externally responsive and salivate more than do non-restrained eaters when looking at and smelling attractive, appealling food; however, they do not eat more. This suggests that in experimental situations at least, cognitve factors may override physiological correlates of chronic dieting. The concept of conscious cognitive control of eating subsumes the internal-external model. This indicates that some individuals are generally able to practice restraint when exposed to external food cues, whereas others cannot do so (Peele, 1982). This in turn is related to binge eating and obesity (Polivy, Herman, Olmsted & Jazwinski, 1984).

As with any individual experiencing starvation, restrained eaters tend to be preoccupied with thoughts of food. The more they try to suppress their eating, the more they desire and notice food. To combat their hunger, they may consciously develop obsessive-like food thoughts geared at controlling themselves (Hunt & Rosen, 1981). The thoughts and explanations they devise may "...be little more than self-deluding fantasies" (Herman & Polivy, 1980, p. 220).

When hunger, emotional arousal or external cues break through the cognitive control, overeating or binging occurs (Herman & Polivy, 1980). This "counter-regulation", continuing to eat after a dietary break, is seen as a function of disinhibition; the suspension of

restraint, or the elimination of inhibition. Once restraint eaters feel they've broken their diet (eating one piece of candy), they feel there is no reason for restraint; i.e., they've already "blown" their diet, so they might as well go all out and "blow it big". In the face of immediate gratification, they forget the long term implications of binge eating. Purging, guilt, shame and/or self-degratory thoughts usually follow (Herman & Mack, 1980).

It has been noted that bulimic's binge eating resembles the food consumption pattterns of obese restrainers (Leon, Carroll, Chernyk & Finn,1985). When investigating restraint in eating disordered individuals, it was found that anorexics and bulimics form subgroups classified as "super-restrained" eaters, with bulimics being more "super-restrained" than anorexics (Herman & Polivy, 1980). Having eaten something "fattening" or "forbidden" is frequently reported by eating disordered individuals as a trigger to binging (Mitchell & Pyle, 1985) Alcohol creates a disinhibitory state, and binges are often initiated by drinking and/or going to parties (Abraham & Beumont, 1982; Herman & Polivy, 1980).

Bulimic's binges may be a secondary psychological phenomenon resulting from their stringent dieting (Fairburn, 1984). However, Polivy, Herman, Olmsted and Jazwinski (1984) purpose that in most instances, dietary restraint is necessary and sufficient to explain binge eating episodes. It appears that the food preoccupation caused by dietary restriction and the rational or irrational cognitve efforts to control internal and external urges to eat may interact in a manner that leads to increased dieting and/or binging.

Concluding Remarks

It appears that self-perception, internal-external awareness and responsiveness, physiological functioning and cognitive processes are all implicated in eating disorders. Some of these are the effects of starvation, dieting and/or binging and purging; or it is possible that perceptual deficits, physiological abnormalities, personality variables (psychological make-up) and/or life events foster within a vulnerable individual the beliefs and behaviors that lead to an eating disorder and subesequent starvation. The cause and effect relation within the cycle is not truly understood. For whatever precipitating reason(s), an individual who may be predisposed by cultural, familial, physiological or psychological factors for acquiring an eating disorder begins to diet, usually to heighten self-worth and achieve a sense of control. However, "something takes over" (Garfinkel & Kaplan, 1985, p. 652) and control is lost to the dieting and starvation.

2. The Use of Objective Measurement in Eating Disorders

The second body of literature pertains to the use of objective measurement of symptoms, behaviors and/or psychcophysiological features of eating disorders. It is divided into three parts:

a.) Objective measures developed specifically to assess eating disorders.

b.) Other psychological measures used alone or in conjunction with eating disorder instruments.

c.) Methodological problems of the tests devised to assess eating disorders.

a.) Objective Measures Developed Specifically to Assess Eating Disorders.

The field of objective measurement of the symptoms, psycholphysiological features, attitudes, behaviors and psychological traits common to eating disorders is relatively new. The first tests assessed anorexia and they were developed for use with anorexics, but not bulimics. Tools specifically evaluating bulimic tendencies appeared later. Four of the anorexia based measures, the Goldberg Anorectic Attitude Scale (GAAS) (Goldberg, Halmi, Casper, Eckert & Davis, 1977; Goldberg, Halmi, Eckert, Casper, Davis & Roper, 1980; Halmi, Goldberg, Casper, Eckert & Davis, 1979), the Anorectic Behaviour Scale (Slade, 1973), the Eating Disorder Inventory (EDI) (Garner, Olmsted & Polivy, 1983) and two versions of the Eating Attitudes Test (EAT-40 (Garner & Garfinkel, 1979) and the EAT-26 (Garner, Olmsted, Bohr & Garfinkel, 1982)) appear frequently in the research literature. The EAT-26 was based on a factor analysis of the EAT-40. These tend to be tools to evaluate, assess or identify behaviors and/or attitudes. They have been used in prevalence studies to identify at-risk individuals or diagnose those with eating disorders. The GAAS, EDI, EAT-26 and EAT-40 are self-report paper and pencil instruments utilizing a Likert scale.

Slade's scale in based on nurses' response, "yes, no or ?", as to whether they had observed the behavior in question. It was designed to evaluate anorexic patients in hospital settings. The items for the Slade were developed from discussions with senior nurses who had experience dealing with hospitalized anorexic's behaviors. It measures three categories of behavior:

1. Resistance to eating
2. Methods of disposing food
3. Over-activity

The GAAS was also developed for in-hospital use, and has been used to indicate the relationship of pretreatment characteristics with outcome and weight gain in anorexia. The first factor analysis of the GAAS was done with a sample of 44 inpatients and extracted eight factors:

1. Denial of illness
2. Loss of appetite
3. Interpersonal control
4. Thin body ideal
5. Hypothermia
6. Hyperactivity
7. Psychosexual immaturity
8. Independence seeking

A third factor anaylsis of the GAAS, performed on a sample of 105 inpatients, revealed 15 factors, eleven of which seem to have utility as prognostic indicators or showed significant change over time as weight gain was accomplished:

1. Staff exploits
2. Fear of fat
3. Parents
4. Denial of illness
5. Hunger
6. Hypothermia
7. Bloated
8. Self care

9. Effort for achievement
10. Food sickens me
11. My problem--mental or physical?
12. Helpful authority
13. Physical problems
14. Hobby cooking
15. Heterosexual disinterest

The items for the GAAS were based on the hypothesized attitudinal dimensions that the developers considered the most characterisric of anorexia.

The EDI and the EAT seem to appear most often in recent literature (Berland, Thompson & Linton, 1986). The have been used with various eating disordered and normal populations in a variety of studies, including cross-cultural ones (Hooper & Garner, 1986; Steinhausen, 1985). They both consider bulimic behavior within anorexia, which differentiates restrictor anorexics from non-restrictors, who binge and purge.

The EAT-40 measures symptoms frequently observed in anorexia. The symptoms grouped together onto seven factors (Garner, et al., 1979):

1. Food preoccupation
2. Body image for thinness
3. Vomiting and laxative abuse
4. Dieting
5. Slow eating
6. Clandestine eating
7. Perceived social pressure to gain weight

The items for the EAT-40 were generated from a survey of the clinical literature.

The EAT-26 (Garner, et al., 1982) is an abbreviated form of the EAT-40, created by extracting the smallest number of factors statistically justified. The three factors the EAT-26 assesses are:

1. Dieting
2. Bulimia and food preoccupation
3. Oral control

The EAT-26 is significantly correlated to the EAT-40 which suggests that it serves as a reliable and economic instrument that can be substituted for the EAT-40 (Garner, et al., 1982; Berland, Thompson & Linton, 1986). Although the EAT was based on and developed for use with anorexics, it has been used to asses non-anorexic bulimics.

The EDI (Garner, et al., 1983) is purported to have been devised for use with both anorexics and bulimics. It has eight subscales; the items for which were intuitively derived by qualified clinicians concerning behavioral, attitudinal and psychological constructs relevant primarily to anorexia, but also to bulimia (Eberly & Eberly, 1985). The first three subscales measure behavior and symptoms; the remaining five measure psychological factors:

1. Drive for thinness
2. Bulimia
3. Body dissatisfaction
4. Ineffectiveness
5. Perfectionism
6. Interpersonal distrust

7. Interoceptive awareness
8. Maturity fears

Some of the items on the EDI, GAAS, EAT-40 and EAT-26 tap into the thoughts and feelings of eating disordered individuals. However, they do not appear to be exploring the more subjective, personal, sometimes highly irrational and often secret thoughts, feelings or fantasies; nor do they appear to have been developed for or used to assess them.

A review of the literature concerning the bulimic syndromes was done by Fairburn (1984). He emphasized that beyond the EDI, less attention has been given to the objective evaluation of the bulimic's attitudes toward food, eating, body shape and weight than to that of the anorexics. Many of the studies are concerned with describing and/or assessing bulimic behaviors such as binging and purging, while fewer attempts have been made to define and/or assess personality correlates or related psychopathology (Hawkins & Clement, 1980; Halmi, Falk & Schwartz, 1981; Katzman & Wolchik, 1984; Squires & Kagan, 1986).

Gandour (1984) reviewed the self-report questionnaires that have been developed to assess bulimic behaviors and symptoms. Three of the tests were designed primarily to assess binge eating episodes; but they address other issues as well:

1. The Binge Scale (Hawkins & Clement, 1980) also yields descriptive characteristics of the binges.
2. The Compulsive Eating Scale (Dunn & Ondercin, 1981) deals with weight control and how emotional states are related to eating.

3. The Binge Eating Scale (Gormally, Black, Daston & Rardin, 1982) discriminates among individuals as to whether they experience severe, moderate or no binge-eating problem.

Unrealistically high diet self-standards are the focus of the Cognitive Factors Scale (Gormally, Black, Daston & Rardin, 1982). Developmental and dieting history plus behavioral symptoms are addressed by the Binge Eating Questionnaire (Halmi, Falk & Schwartz, 1981). The Binging-Purging Questionnaire (Coffman, 1984) assesses binging and purging behaviors and feelings, thoughts or experiences related to the episode. According to Gandour (1984), the instruments may be useful in research or treatment; however, they have not been widely used and they lack data concerning reliability and validity. She reports that the EAT has been used, but feels that the validity of using the anorexia-based test with bulimics needs to be established.

The Restraint Scale (Herman & Polivy, 1980) has also been used, as dietary restraint and binge-eating have been found to be positively correlated. The scale was originally developed for evaluating dieting behaviors and weight concerns of obese and normal individuals. It seems to measure the desire to restrain eating, but not necessarily the continued success at restraint (dieting). Questions have been raised about its predictive and construct validity (Stunkard & Messick, 1985).

A new test, the Restraint Eating Inventory (EI) (Stunkard & Messick, 1985) has been developed. It was derived from two conceptually similar inventories: the Latent Obesity Questionnaire (Pudel, 1978), a German tool, and the Restraint Scale (Herman & Polivy, 1980). The EI measures three dimensions of eating behavior:

1. Cognitive restraint of eating
2. Disinhibition
3. Hunger

It appears that the EI may be useful in work with individuals who binge eat. Berland, Thompson and Linton (1986) report that the scores on the EAT-26 correlate with the scores and subscales of the EAT-40, the EDI and the EI, which suggests concurrent validity.

The obsessive nature of eating disordered individuals and their persistant food thoughts has led some to assert that the disorders may be seen as obsessive-compulsive syndromes (Solyom, Thomas, Freeman & Miles, 1983). Squires and Kagan, (1986) created a Compulsiveness Inventory based on the Leyton Obsessional Scale (Cooper, 1970). Three subscales were extracted:

1. Indecision and Double-checking
2. Order and Regularity
3. Detail and Perfectionism

Several of the bulimia-based inventories try to go beyond quantifying bulimic behaviors and attempt to elucidate information regarding the individuals thoughts, feelings and emotions. However, as in the case of the anorexia tests, they do not appear to investigate highly irrational cognitions or food-related fantasies.

b.) Other Psychological Measures Used in Conjunction with Eating Disorder Instruments:

In attempts to support hypotheses, establish relationships or assess various aspects of psychological functioning, other standard

and/or projective tests have been used.

Bruch (1973,1978) has proposed that eating disordered individuals manifest certain ego deficits or perceptual/conceptual psychological disturbances that relate to their sense of identity and self-directed autonomy. These involve disturbances in body image, interoceptive awareness, and most importantly, an overall sense of ineffectiveness that pervades all thoughts and actions. Individuals may feel that they have no control over their lives, eating or hunger; or they may feel that the only thing in their life they can control is the amount and type of food they eat. To assess these issues, various measures of self or impulse control, locus of control and autonomy have been employed: a modified versions of Rotter's (1966) Locus of Control Scale (Garner, Garfinkel, Stancer & Moldofsky, 1976); the Block (!965) Ego Control Scale ; the Rosenbaum (1980) Self-Control Schedule (Leon & Rosenthal, 1984); Witkin's (1962) Embedded Figures Test (McLaughlin, Karp & Herzog, 1985); and the Nowicki-Strickland (1973) Locus of Control Scale (Strober, 1982). The results seem to vary according to the way "control" was defined for the study (i.e., as a feeling or a behavior) or what type or aspect of control was being investigated.

In efforts to further understand the psychological functioning or personality variables of the eating disordered individuals, other measures have occasionally been employed including the following: the MacAndrews Addiction Scale (Squires & Kagan, 1986); the MMPI, the Rorshach, the TAT and the BEM Sex Role Inventory (Cantelon, Leichner & Harper, 1986; Garner, Garfinkel & Bemis, 1982; Sitnick & Katz, 1984; Wallach & Lowenkopf, 1984).

c.) Methodological Problems of theTests Devised to Assess Eating Disorders.

Objective measurement of the symptoms, behaviors, attitudes or psychological constructs specific to eating disorders is a relatively new field, but interest in it is rapidly gaining (Garner, Olmsted, Bohr & Garfinkel, 1982). However, there tends to be some problems in the research methodology and statistical testing of these instruments which effects their reliability and validity, and may lead to poor data. Inadequate normative sample sizes, poorly matched control groups and/or the use of tests based on anorexic constructs when evaluating bulimia are concerns. For example, in the review of the EDI (Garner, Olmsted & Polivy, 1983), Eberly and Eberly (1985) point out that no bulimics who were not anorexic were used in the validation samples, although the test is purported by the authors to be useful in evaluating both disorders. Although the reader may be cautioned about the results of the validation tests because of insufficient subjects in the norm groups or state that further research is required to determine validity and/or reliability, the problem remains that the performance of any contrast tests or a factor analysis utilizing inadequate samples undermines the significance of the test results (Garner, Olmsted, Bohr & Garfinkel, 1982; Garner, Olmsted & Polivy, 1983). Most of the factor analysis done on the eating disorder instruments were performed with far fewer subjects than is recommended. Periodically, an instrument will be written for and used in research without properly establishing its reliability or validity (Fairburn, 1984). Yet the results and conclusions drawn from the questionnable data generated by the instrument may be published, cited and/or used by

others.

Methodological concerns have also been raised concerning the data gathering procedures and the samples of anorexics and bulimics studied. In the study of anorexia, one confounding variable is that individuals who meet the diagnostic criteria used in the research (usually the DSM III (1980) or Feighner, Robins, Guze, Woodruff, Winojur and Munoz (1972)) is a relatively small percentage of the population. Surveys of student populations yield prevalence rates which vary from 1% to 4% (Pope, Hudson, Yurgelun-Todd & Hudson, 1984). While the true incidence of clincial cases of anorexia is unknown, it is considered to be growing among both males and females (Eckert, 1985). Futhermore, the number of individuals who represent undiagnosed or sub-clinical cases (i.e., exhibit anorexic-type behaviors) is also increasing (Gibbs, 1986).

Those who are affiliated with an institution tend to use their own patients and/or clients. For example the GAAS (Goldberg, Halmi, Eckert, Casper, Davis & Roper, 1980) and the Slade (Slade, 1972) were devised and tested with hospitalized anorexics who were patients of the researchers. The EDI(Garner, et al., 1983) and the EAT-40 (Garner & Garfinkel, 1979) and EAT-26 (Garner, Olmsted, Bohr & Garfinkel, 1982) were normed using anorexics (restrictors and bulimic subgroups) who were in consecutive consultation with the authors at a psychiatric institute. This samples only clinically diagnosed cases, which may or may not represent the entire population of those with eating disorders. Anorexics characteristically deny their illness and are often resistant to therapy (Garner, Garfinkel & Bemis, 1982). It is possible that the eating disorder tests were normed on individuals who were brought to treatment, possibly

against their will, or those who recognized and/or acknowledged their problem and sought help. Fairburn (1984), notes that the validation studies were performed with heterogeneous patient groups who had much variation in treatment exposure, and suggests that it is likely that attitudes change during treatment and the changes may be a function of the type of treatment used. He also questions the manner in which the constructs measured were decided upon and the items with which to evaluate them were written, pointing out that often they were not derived from a systematic analysis of the beliefs common to anorexia. While males represent only 5% of the anorexic population(DSM III, 1980), only females were sampled in any of the four tests initial validation studies.

Research on bulimia has also been confounded by methodological problems and inconsistencies. The diverse sampling procedures and research methodology utilized may undermine the validity of the results and limit making generalizations when comparing or combining studies (Gandour, 1984). For example, the reported prevalence rates for bulimia range from 5.3% to 19% (and higher) for women and from 1.1% to 5% for men, with a belief that there is a far greater incidence of subclinical and/or undetected cases of the bulimic syndrome and bulimia nervosa (Gandour, 1984; Pope, Hudson, Yurgelun-Todd & Hudson, 1984). It has been pointed out by Gandour (1984) and Fairburn (1984) that in studies of non-hospitalized bulimics, the samples have usually been composed of young, white, female university students. However, they offer evidence which suggests that the majority of those with bulimia or bulimia nervosa are in their twenty's and not students.

The sample selection procedures and lack of uniformity in

and control over the testing environment may have allowed for response bias or other error variance. Subjects have been recruited through advertisements in newspapers and magazines, asked to fill out questionnaires in suburban shopping malls, at family planning clinics or at student health centers. Questionnaires have been sent through interoffice mail or left in areas where they would be available for those who wished to participate (Gray & Ford, 1985; Mitchell & Pyle, 1985).

Other methodological concerns include the lack of consistency in the diagnostic criteria, the degree to which the criteria was applied, absence of a control group, poor, inappropriate or no statistical analysis, cultural differences, use of extreme populations in the sample or control groups and overreliance on self-report instruments (Fairburn, 1984; Gandour, 1984; Gray & Ford, 1985).

Concluding Remarks

Although anorexia nervosa was first described in 1689, (Bhanji & Newton, 1985), the objective measurement of behaviors and/or attitudes of anorexia and the bulimic syndromes appears to be a very recent development. As more work is done with larger and more diverse samples, it is anticipated that many of the methological problems addressed will be met. Correlations between tests, refinements on existing instruments and the development of new ones should provide more reliable and valid data, which will provide valuable insight and information concerning the disorders and the individuals afflicted with them.

Conclusion of the Rationale

It seems that an eating disorder affects the entire individual; their physiological, psychological and social functioning, their perception, feelings, thoughts and fantasies. Herman and Polivy (1980, p. 211) wonder:

"So what factors, we must ask, are responsible for sustaining weight suppression, and allowing--even encouraging -- such an outcome in the face of powerful physiological and sensory forces?"

It could be that the starvation-related preoccuaption with food leads to the distorted cognitions and irrational beliefs which are characteristic of eating disorders. As the starvation state worsens, the obsessive food thoughts become more irrational, subjective and distorted, i.e., fantasies. Examination of the content or nature of the fantasy in relation to factors that are characteristic of/to eating disorders and the degree/frequency that they are experienced by an individual may offer clues as to the underlying etiology or psychopatholgy of the disorder. Fairburn (1984, p. 240) notes that:

"...most studies have failed to examine the clinical significance of their findings, either in terms of the subjects' perceptions of their eating habits or in terms of the potential implications for clinical resources."

Therefore, a questionnaire that could be used as a tool to assess the fantasies and investigate their relationship to the disorder seems justified.

Chapter III

METHODOLOGY AND STATISTICAL DESIGN OF THE STUDY

The goal of this study was to develop an instrument which would relate irrational food cognitions (fantasies) to personality, psychophysiological or psychopathological characteristics (factors) common to eating disordered individuals. The intent was to create a tool for use in therapy to assess and explore food fantasies, but could also be used to gather information for research purposes. From an initial item pool of 110 statements, 42 items describing food fantasies were selected for inclusion and judged as representative of one of seven hypothesized factors by a DELPHI review panel of mental health practitioners. The Food Fantasies Questionnaire was then administered by therapists to individuals in treatment for anorexia, bulimia, bulimia nervosa or compulsive overeating. The final instrument appears in Appendix A.

Preparation of the Instrument

Factor Selection

To select the factors and prepare the questionnaire, a survey of the literature was done utilizing the OSU Library data bases (LIRS) for Psychological Abstracts, Dissertation Abstracts, ERIC, SSCI and Mental Measurements. Research was done at the Good Samaritan Hospital Library for specialized and technical resources. Bibliographies of related recent research were gathered. Copies of questionnaires used

in other studies were obtained to check for overlap and information concerning construction, statistical analysis, validation studies, norming procedures, and use or purpose of such tools. In reviewing the literature concerning objective measurement of eating disorders, it was noted that many of the questionnaires and tests used in researching the problem were developed by pre-selecting relevant concepts or attributes that seemed likely to be revealed by factor analysis. Seven factors that might influence or be implicated in the content of food fantasies were hypothesized. The factors were selected based on clinical descriptions of psychophysiological, psychopathological and personality charateristics common to eating disorders that have been well-documented in the literature and have been presented and/or studied by researchers pre-eminant in the field. (Boskind-Lodahl, 1976; Bruch, 1973, 1978; Crisp, 1980, 1984; Eckert, 1985; Fairburn, 1984: Feighner, 1972; Gandour, 1984; Garfinkel & Garner, 1982, 1983; Garfinkel, Garner & Bemis, 1982; Garfinkel & Kaplan, 1985; Goldberg, Halmi, Eckert, Casper, Davis & Roper, 1981; Mitchell & Pyle, 1985; Minuchin, 1978; Orbach, 1986; Russell, 1979; Selvani, 1974; Slade, 1973). The factors, their research definitions, the concepts involved, the items on the final instrument that are purported to reflect them, and paraphrased examples of related food fantasies are listed below:

Gender: Any reference or inference of or to male or female attributes or influences in regard to food(s) and/or eating.
Items purported to reflect gender are: 7, 9, 24, 31, 33, 39.

Many theories have been suggested regarding the role of sexuality, role and sex conflicts, maturity, familial patterns and social interaction. Some eating disordered individuals may equate eating

with oral impregnation; they may fear or desire pregnancy. Both overidentification with and rejection of the female role and/or feminine traits have been found. Often, eating disordered individuals fear puberty and/or maturation. The attendant physical and hormonal changes and the implications they may have cause a regression to childhood so as to avoid psychosexual maturity and adult responsibility. They may reject or dislike of all or parts of their body. Frequently, they lose interest in the opposite sex and/or are fearful of interactions with or rejection by members of it. In other words, the eating disorder may be protection against rejection. Some may fear their sex drive, or worry about the effect the female body shape has on males. At the same time, many are attempting to meet society's thin standard of bodily attractiveness, i.e., look appealing to the opposite sex. Women who enter competitive professional fields may reject the female shape so as to appear/be perceived as competent. They may have been raised in a family that was dysfunctional, non-communicative or enmeshed. A symbiotic mother-daughter relationship is sometimes found, and/or one parent is passive and the other dominant. Frequently, negative references by a same or opposite sex significant other regarding weight and/or figure have been directed at the individual who develops anorexia or bulimia. The parents may be quite concerned with looking and acting feminine, "good" and/or proper.

Examples of gender-related fantasies:

"My mother is <u>so</u> inconsiderate of my goals--she keeps trying to slip pats of butter on my green beans!"

"If only I'd lose some weight, then I wouldn't have all these problems with the other sex."

"I can't eat steak and potatoes--they're 'male' food. I have to stick to salads and 'girl' foods, especially when I'm eating in public."

"My dad says that I'll never get married if I'm too fat!"

Pleasure: Any reference or inference of or to enjoyment, sensuousness, enticement, fun or relaxation regarding food(s) and/or eating. Items purported to reflect pleasure are: 1, 6, 13, 17, 29, 37.

Pleasure has been associated with many of the cognitive, affective and behavioral components of eating disorders and it may serve as a postive reinforcement which perpetuates the problem. Some individuals assert that starvation is pleasant, intoxicating and/or stimulating. Their hunger "high" may be perceived as a spiritual or aesthetic experience, or that their mind is transcending their body. Starvation may be a positive indication that weight is being lost and eating is under control.

Thinness is considered a virtue, something of value. Self-control, self-denial, weight loss and/or thinness are important sources of gratification, self-respect and/or pride. The individuals thin shape, low weight and/or the disorder itself is a source of identity, specialness, control and/or power. Their thinness is a source of recognition. The individual, even an emaciated anorexic, is envied and admired by others for their self-control and/or thin appearance.

Eating disordered behaviors and the food preoccupation provide a predictable, safe retreat, with the possiblity of relief from tension and anxiety. They serve as a companion when lonely. The disorder may be used to blank out negative emotions or thoughts, or become a way of coping with them. Binge-eating may be seen as a way of nurturing, rewarding or caring for one's self, or feeding one's emotional hungers.

Food and eating may be perceived as a sensual experience. Individuals may plan what foods to eat on a binge or fantasize about what they would eat if no weight gain would occur. They may dream about the taste of desired food(s). Some individuals may savor each bite when they are eating. Those with bulimic tendencies may experience elation in the discovery of self-induced vomiting. Purging may be seen as the "ideal" weight control strategy, a way to be able to indulge in eating any of the highly desired or craved foods that are usually forbidden, yet not gain weight. Also, purging brings relief from stomach pain and guilt or shame caused by binging; purging is a way to atone for the "sin" of eating and/or binging.

Examples of pleasure related fantasies:

"First I'll eat the truffles--one by one--licking the filling out and leaving the yummy chocolate coating 'till last. Then I'll start on the ice cream--maybe pralines and cream--letting it slide down my throat..."

"Food is my best friend in all the world. It never asks me any questions, or tells me I'm a failure."

"The thinner I am, the better I am and feel about myself."

"Everyone at school is jealous of my ability to keep my weight down and my trim figure. Too bad they haven't discovered my secret diet aid that lets me pig out whenever I want to and never gain an ounce!"

Animation: Any reference or inference of or to animal attributes, food being 'alive', showing movement, having physical feartures of an animal, human or the representation such as a cartoon figure; speech or indicating a life and/or will of its own regarding food(s) and/or eating. Items purported to reflect animation are: 5, 10, 23, 26, 36, 40.

The term animation was selected to cover some of the cognitive and perceptual distortions and the general level or type of cognitve processing the individual operates at. It deals with how the individual sees and interprets themselves, their environment, and the people, things and events in it. Animation is also concerned with child-like characteristics, as starvation may cause a regression of the mental processes to an earlier stage of development. Animated thoughts may possibly be influenced by the use of cartoons and animals in food advertising and/or the slang use of food items to describe women or parts of their body. A number of animation related concepts have been presented in the literature. Some eating disordered individuals exhibit deficits in cognitive development, and/or be functioning at the preconceptual or concrete operational level. However, it is not known whether this is because of the eating disorder or is a predisposing factor to developing one. They may have difficulty in isolating the variables from complex problems and coordinating abstract thoughts. Their logical reasoning skills may regress, especially when dealing with emotional or conflict-laden content such as their eating behavior or weight. Cognitive disturbances or distortions are common. The thoughts of an eating disordered individual may be egocentric. They often engage in dichotomous or superstitious thinking, or they tend to view things in extremes. They personalize external events and issues, and make cause and effect errors. Frequently they hold concrete, narrow-minded, rigid concepts of sexuality and morality.

They may believe in the absolute authority of adults and parents. High parental expectations for performance, obediance and compliance are common, and the child or adolescent feels that they must obey and conform. As a child, the individual often is not allowed

to make decisions as to hunger and other emotions, thereby failing to learn how to differentiate bodily sensations. The mother may be unable to tolerate her child's adolescent independence and separation. Her child may stays a child to prevent the loss of mother's love. The individual strives to be a "good" or perfect child and attempts to avoid adult and parental censorship. Some would like to stay a child with a prepubescent body, or they may equate having or developing adult female physical attributes with being fat. Other individuals seem to develop as eating disorder to avoid adolescent and adult female responsibilities and decisions. Their child-like interpretations of life events may be exhibited during treatment for their eating disorder. The drawings they make in art therapy are often child-like, and they frequently draw themselves with a childish figure, or as a baby or an animal.

An individual with an eating disorder may have thoughts which are animistic. Food may be perceived as having a life of its own. Food may have movement, or change shape before their eyes. They may believe that it can control them or that it has magical power over them. A common perception is that the food moves to certain parts of their body and turns into fat, or that they can feel where the food lodges itself on their body. Some say that food(s) feels like a foreign substance in them. Cognitive disturbances and irrational thoughts are evident in the belief that some foods are "good", whereas others are "bad", forbidden" and/or "evil". Eating disordered individuals may avoid animal products and become vegetarians. This is usually motivated by a desire to avoid the fat contained in the animal food group.

Foods may talk, tempt or taunt them. Hunger and the fear of fat

are "beastly" obsessions. An internal voice, sometimes called a "monster" or "dictator" may direct their eating and dieting behaviors.

Examples of animation related fantasies are:

"My hunger's name is Norman--he makes me eat like I was some kind of animal."

"The supermarket is so scary! All the food dances before me, teasing me to eat it, even though it knows I can't have it."

"Avocado sandwiches. That's all I can hear when I'm upset and I know the food monster will just scream louder and louder until I eat at least one."

"My mom says that I don't love her if I don't eat all the fattening desserts and snacks she works so hard to prepare. I'd rather die than do anything to hurt her, so I eat them, even though that means I must triple the number of miles I run or find a place to purge."

"I see overweight people and I can feel myself swelling up, as if I was absorbing their fat."

Revulsion: Any reference or inference of or to disgust, contamination, uncleaniness or avoidance because of these in regardence to food(s) and/or eating.

Items purported to measure revulsion are: 3, 11, 19, 22, 28, 41.

Eating disordered individuals are often revolted by their behavior, appearance and/or weight. They frequently view overweight people negatively, even if they are overwight themselves. Bulimics are often ashamed of their problem, whereas anorexics may be proud of their dieting ability and feel disdain for "weak" individuals who can't control their eating. They are revolted at the thought of what food or eating may do to their figures and/or dislike feeling full. Some may feel they don't need to eat, whereas others may feel disdain for the

human "need" for food and may avoid eating so they won't gain the weight and fat they despise, dread and/or fear.

They may avoid certain foods on the grounds that they are "unhealthy", contaminated or make them ill. Some individuals may refuse to eat certain foods or keep them down. Frequently they spurn or denounce "junk" food and/or classify it as "bad" or "forbidden", however, they may secretly crave it and eat it on a binge.

Eating disordered individuals tend to be secretive about their eating habits, thoughts and feelings. Many don't like to be seen eating, and may "pick" at food when eating in public. Some individuals may refuse to eat what others have prepared because it may be "sabotaged", e.g., contain hidden calories. When they succumb to their hunger, they are filled with self-hatred and disgust.

Low self-esteem is prevalent. Binging, or at times even "normal" eating makes them feel fat, out of control, lazy, selfish and/or like a pig. Negative self-evaluations, self-hatred and disgust are used to maintain dietary control and/or are particularily evident after eating, binging and/or purging. A binge-purge episode is usually followed by guilt and shame. They usually feel disgusted when observing the mess they made when binge eating and purging.

Self-portraits drawn in art therapy reflect their self-revulsion, depicting themselves in a distorted shape, with grotesque or animalistic features. They may be revolted by the adult female bodily attributes and/or menstration and prefer to maintain a child's figure. Some think that members of the opposite sex are silly, feel that sex is overrated and/or preganacy would be/feel unbearable.

Denial of their illness and resistance to therapy are relevant to revulsion. They have been known to call even a normal weight therapist fat, or feel that they can't relate to or trust them, because they believe the theraptist wouldn't or couldn't understand them. Even when severly ill, anorexics or bulimics may deny their problem and insist that nothing is wrong with their eating habits--other people are the problem because they are overly concerned, jealous of their figure/control and/or just want them to get fat.

Examples of revulsion related fantasies are:

"The kitchen looked like a pig had routed through it--the cupboards were all open, empty food cartons and packages were everywhere, melting ice cream was oozing down the refrigerator door, a half-eaten jar of honey lay shattered on the floor and cooky crumbs were everywhere! It makes me feel terrible to think that I was the pig that made the mess."

"You lousy shrinks are all alike! You're just like my parents! You say you only want to "help me get better"! HA! You don't care about me, you just want me to eat and get fat like you guys are! No way! I'd rather die than look like you!"

" I can't imagine anyone actually <u>eating</u> "junk" food--it's all sugar, chemicals and disgusting additives. Unfortunately, I love the taste of it, but I can only allow myself to eat it when I plan on throwing it up."

"After a binge, I hate myself. To atone for my greed and wastefulness, and to undo the damage I've done to my body, I know what I must do next."

"I have to be so careful when I'm buying for a binge--I would be so ashamed if the people at the deli, the bakery and the fast food places knew that all the food I say I'm buying for my family is actually

for me!"

Fear: Any reference or inference of or to panic, terror, or frightful avoidance, withdrawal or approach to food(s) and/or eating. Items purported to reflect fear are: 8, 15, 18, 30, 32, 38.

Individuals with eating disorders are afraid. They have a morbid fear of becoming or being fat and/or gaining weight. Their drive for thinness is reflected in their obsessive dieting and weight concerns. They worry about the effect food has on their body's shape. They are often afraid of certain foods and/or food groups, or any food at all. Eating may be a terrifying experience, especially when eating the foods they like and/or desire, or ones that are considered "forbidden". Eating "forbidden" and/or highly craved for food(s) is a common binge precipitant. Sometimes the act of eating itself will trigger a binge. They are afraid of being and/or appearing out of control around food or when they are eating. A common fear is that once they start eating, they won't be able to stop. Bulimics may be terrified of eating if they know they won't be able or allowed to purge. As a result of their fears, social situations, especially those involving eating, may be avoided. Also, most eating disordered individuals are afraid of being "found out".

Many who seek treatment are afraid that they are unable to voluntarily stop the disorder and/or its behaviors. Some become concerned about what the disorder is doing to their body, health and/or social functioning. They fear the control the disorder has over their lives, feeling as if an internal tyrant or dictator, who must be obeyed, governs their thoughts and behaviors. Bulimics often feel that a demonic monster takes possession of them when binging. Some are afraid of the obsessive food thoughts, while others may fear they are

losing their sanity.

Many base their self-esteem and self-concept on how much they weigh and most believe that if they could only lose weight or become slim, they'd be happier and their lives would be much better.

Overweight, non-purging bulimics, and/or compulsive overeaters, even while wanting to be slender, may be afraid to be thin. If they lost weight, there would no longer be any reason why their lives weren't happy and problem-free. Some are afraid to allow themselves any pleasure, feeling they don't deserve it. Many are afraid of free time, being alone and/or lonely; empty time may be filled with obsessive food thoughts or be "binge-time".

They are afraid of themselves, their internal drives, impulses and sensations, including hunger; and/or accepting themselves as they are or the natural shape and build of their body. The disorder itself, with its obsessive thoughts of food, dieting and weight, along with its many secretative behaviors may serve to protect the individual from feared emotions, impulses and/or situations. It may be a safe substitute or a coping mechanism. They may be afraid to leave the security of youth for adolescence or adulthood. The fear of their own sexuality is common, as is the fear of their sex drive and relationships with or rejection by members of the opposite sex. The fear of rejection make self-revelation frightening, as does the fear of criticism and withdrawal or loss of love. Being assertive, expressing negative emotions or saying "unacceptable" things are feared and may be avoided by stuffing the mouth with food and/or clamping it shut.

These fears often impede therapy and may render it a terrifying

and/or avoided experience for the individual. It is not unusal for the fear of becoming fat to persist after recovery.

Whether or not bulimia and particularily anorexia are phobic disorders is a debated issue. Although their avoidance behaviors may suggest a "weight phobia", anorexics, unlike most phobics, do not want to be relieved of their food and weight fears. To anorexics, these fears tend to be functional, even welcomed, because the threat they pose assists them in maintaining control over their hunger and eating behavior.

Examples of fear related fantasies are:

"I feel like I'm a big disappointment to my parents--I can't seem to do anything good enough for them. If only I were thinner, I'm sure they would be proud of me and love me."

"I get so scared after work--the food monster starts in on me the second I begin to drive home. If I don't stop to get the binge food he tells me to, he just screams louder! I'm scared not to obey him--he says such horrible things. I'm afraid of him and the power he has over me."

"Holidays are terrifying--everyone brings mounds of rich, gooey, delicious, fattening food to work and to our family get togethers. I"m so afraid that I'll lose control, start to eat and not be able to stop."

"I"m afraid that if I don't keep myself thin, people will see what an ugly, terrible, slovenly, lazy, disgusting pig I really am."

"It's so scary to eat at a friends or in a restaurant. Lots of times it's hard to find a private place to purge."

Anxiety: Any reference or inference of or to tension, terror, or frightful avoidance, withdrawal or approach to food(s) and/or eating.

Items purported to reflect anxiety are: 4, 12, 21, 25, 27, 35.

Anxiety is commonly experienced by individuals with an eating disorder. Dieting, and the starvation it may cause, creates stress. Some will complain about it, but often it is not evident and may be denied. The primary source of their anxiety is the possibility of gaining weight, and it extends to any situation where control over maintaining their low weight and/or dieting behaviors may be threatened or lost. It is closely related to "fear" as the anxiety operates when they are in or avoiding a feared situation, food, feeling or emotion. Some individuals don't want to be relieved of their anxiety, because, like fear, it is functional, as it aids in controlling their food intake. The anxiety fosters many of the self-destructive and often irrational or bizarre dietary behaviors eating disordered individuals engage in. Exercise appears to alleviate tension, but it is also used as a method by which to burn calories and thereby reduce weight gain anxiety. Some individuals are obsessed with exercising or become hyperactive. The excessive exercise, self-induced vomiting, laxative and/or diuretic abuse, severe caloric restriction and/or fasting all have the same goal: losing weight and/or staying at a low weight. As therapy often involves weight gain, the individual may be resistant to treatment. Therefore, the anxiety must be recognized and dealt with in a understanding and supportative manner to prevent the anxiety from causing more self-defeating dietary activities or frightening the individual from treatment.

Strenuous dieting and/or binge eating may be a way to cope with anxiety or a reaction to a stressful situation or event. Along with purging, they are attempts to gain control over what's happening to them. Binging relieves the tension created by the stress; dieting,

purging and/or strenuous exercising assuages worries about gaining weight. The act of eating tends to be calming and soothing, a way of nurturing oneself, and binge eating is often used for this purpose. The obsession with weight and the compulsive behaviors also serve to remove the individual from the stress or pain occurring in their life; as long as their actions and thoughts are preoccupied with food and/or eating, they can't experience the negative, painful feelings or emotions.

Anxiety may be experienced in a number of ways and situations. Individuals are nervous around food, especially feared or desired food, and in situations where food is offered or where they are expected to eat. They worry about losing dietary control. Tension is high before a binge, is alleviated by the binge eating and returns prior to purging. Individuals are highly anxious if their binge is interrupted of if they are prevented from purging, exercising and/or dieting. It is upsetting to many to discuss their eating habits; they may worry about what others think about the way they eat or that they will be "discovered". They are often perfectionists, and are anxious to please others. They may be concerned with conforming to social standards and/or living up to others expectations. They may be field dependent and outer-directed. Some appear to be anxious concerning matters of independence, being assertive and/or their family environment and respond by turning to their eating disorder.

Examples of anxiety related fantasies are:

"I've got to quit stealing food from the dorm kitchen! I get so tense, sneaking around and hiding when anyone comes close. I'm so worried that someone will catch me!"

"Dinner time is so stressful, I hate to go home. Mother keeps pestering me about eating more and absolutely piles food on my plate,

which makes me far too upset to even be civil."

"I was so upset last night. My hands were shaking so badly as I tried to allow them to take only small, "safe" portions from the buffet that I was sure someone would notice. I was so stressed out that I had to come home and binge."

"There was no way I could get out of eating the birthday cake my freinds baked for me, and I wanted to eat it--it tasted so good and it was for me! But now I'm upset about all the extra calories and I'm worried that I'm losing my ability to control my hunger."

"I hope the pizza he orders is pepperoni--I hate it so it's easy not to overeat. I'm worried about the pound I gained last week. It's right on my already fat stomach, sticking out like a growth or something. I hope that he doesn't notice that I'm not as thin as I should be."

Control: Any reference or inference of or to internal or external authority, submission to and/or fear of authority figure(s) or concepts, lack of ability to stop or govern own thoughts and/or

actions of helplessness regarding food(s) and/or eating.
Items purported to reflect control are: 2, 14, 16, 20, 34, 42.

Issues regarding control figure significantly in eating disorders and play a part in all the other hypothesized factors. Individuals feel powerless, ineffective and externally controlled. They tend to be outer- directed and field dependent. They are susceptible to influence by external expectation such as society's thin body standard, and are sensitive to others comments about their physical appearance. Restricting anorexics display rigid self-control, whereas bulimics and compulsive overeaters have impaired internal scanning, poor self and

impluse control, and may engage in others behaviors that are related to this, such as substance abuse or stealing. All tend to lack interoceptive awareness and/or a sense of control or ownership of their bodies and its sensations. Often, they feel they have no control over or in their lives. They lack a sense of identity and do not function as a self-directed, autonomous individual.

Certain parenting practices may foster this feeling. The child may have been raised to fulfill the parents' needs without learning how to discriminate or control bodily sensations. Without an internal guidance system , the bodily changes and sexual urges of puberty may make them feel that they are out of control. Their childhood response of overcompliance and passivity may give way to a feeling of being used and/or incompetent; that they don't own their lives or bodies.

Eating disorders may be conceptualized as an individual's attempt to establish their identity and to gain control over their life and body. The individual begins to diet to achieve a sense of self-control and self-esteem. Their ability to control their eating may represent a defense against their feelings of ineffectiveness. For most everyone, and especially for eating disordered individuals, weight loss is a gratifiying experience. Society has equated being thin with being in control and successful in all areas of one's life. Anorexics and purging or low weight bulimics are admired and envied by others for their ability to control their weight. They have found something of their own at which they can excel; something they can control; something to build an identity on. However, when dietary control is lost, they may feel helpless, guilty and/or ashamed. The difficulty compulsive overeaters may experience with maintaining or losing weight affects their sense of ineffectivness. It appears that the more

individuals attempt to and/or restrain their eating, the more preoccupied with food they become. This may be in relation to the individual's nutritional status. Starvation, semi-starvation or dieting increase hunger, which engenders impaired concentration and cognitive distortions which may affect the individual's sense of self-control. They fear that once they start eating, they will lose control and not be able to stop voluntarily. At some point, the disorder seems to take over. Individuals may feel as if their thoughts and behaviors are under the control or direction of an internal voice, dictator or monster that is not a part of them. Some eating disordered individuals will express that they feel controlled by their eating habits.

Control is also implicated in other concepts or areas. Many are controlled by external food cues. Failures in any life area may be dealt with by exerting dietary control to bolster self-esteem and self-concept. To block out negative feelings or pain, failures may be responded to by binging; however, the individuals sense of effectiveness is adversely affected. A low body weight "controls" the maturation process by delaying the onset of puberty. It prevents the start of menstration or causes a cessation of it. At the body weight of a child, the weight gain that is associated with the "fat" female body parts is also avoided. The disorders may be seen as processes by which to forestall having to cope with adolescent and/or adult conflicts, roles, responsibilities, feelings and/or sexuality.

Examples of control related fantasies are:

"No way are they going to run my life anymore! I'm sick and tired of being told what I should be and how I feel. They may think they own me, but they can never control how much or what I eat! Only I control that, and I'll get just as thin as I want to!"

"The food just plays havoc with me at the supermarket. First, all the donuts call out to me, and then the cookies just seem to jump into my cart. I know I can't fight it anymore if they get me next to the freezers--the ice cream and the frozen cheesecakes turn me into a robot. They control my hands as I grab them one after another."

"I never knew what true self-respect was all about until I reached 85 pounds. Not only can I control my eating, everyone else seems to be jealous of me--they just go on and on about how thin I am!"

"I want so badly to be thin, and I really don't want to eat, but at the same time, I do. I feel driven to eat, like I have to or else! It all makes me feel so awful about myself--what's wrong with me? Sometimes I just feel like giving up on myself--I'm hopeless and helpless."

"Dieting is getting harder each day. I must be super careful now to avoid anything that threatens my control. I have to look good--it's the only way I'm ever going to get ahead in my job or have a successful social life."

Validity

The validity of an instrument indicates how well the test items reflect the content they purport to measure. Initially, the Food Fantasies Questionnaire was given content validity utilizing a process similar to the DELPHI Technique. Factor analysis gives an indication of construct validity, revealing the clusters of related factors and the

items that measure the same or common trait (Courtney, 1982; Nunnally, 1970).

The DELPHI Technique

The DELPHI Technique is a non-empirical measure of content validity appropriate for social science research. This technique has been found to fit the needs and requirements of research in the educational field (Courtney, 1982; Lambrecht, 1986; Soukup, 1984). The Rand Corporation developed it in the 1940's to provide a systematic process to garner expert opinion based on the input of a panel of reviewers. The review panel members are individuals knowledgeable in their field who make informed, intuitive judgements concerning the appropriateness of the items being considered for inclusion on the instrument being devised. Reviewers are frequently asked to rate or rank items based on acceptance of the item's content. Between five and ten reviewers have been suggested as an adequate panel size (Linstone and Turoff, 1975). Soliciting input from a team of experts follows the assumption that group opinion is superior to individual opinion (Martino, 1972). The DELPHI is attractive in that it is a communication procedure that allows the individuals to reach consensus of opinion without meeting as a group, thereby avoiding many of the problems which often hinder groups that meet face to face. The technique typically employs mailed paper and pencil questionnaires for rating the items and controlled feedback from the research project director. Based on the reviewer's ratings, the project director makes revisions in the instrument, and if consensus has not been reached, submits the revised items on a new rating form. This process is repeated until the members concur in their

judgements.

DELPHI Technique as Used in Developing the Food Fantasies Questionnaire

In developing the Food Fantasies Questionnaire, one goal was to identify common personality or psychophysiological characteristics for use as factors; another was to find what food fantasies tend to be more frequently experienced by eating disordered individuals. Based upon research, seven factors were proposed or hypothesized, and 110 items describing common food fantasies were generated. Following that, the fantasy-items needed to be evaluated to determine which factor each one best represented and then written in concise, non-threatening statements which would be amenable to Likert-type responses. As the instrument was not meant to be a diagnostic tool, an attempt was made to word all items in a generic way so that it would be revelant to bulimics, anorexics and compulsive overeaters. Optional plurals (ex: food(s)) and the term "and/or" were used to make the items open to the respondent's fantasy experiences. There were no items written which were intended to discriminate between the disorders based on positively or negatively keyed items or scores.

Seeking expert opinion by asking professionals who were knowledgeable about eating disorders and had experience in treating them seemed appropriate; therefore, a process similar to the DELPHI Technique was utilized. The review panel was asked to decide which factor (if any) each item reflected and to indicate which items should be omitted, i.e., if they seemed irrelevant, inappropriate, extremely rare or were otherwise unsuitable. It was anticipated that this would give the instrument more precision in its fantasy descriptions

regarding factor content, intensity and/or vividness. As both the items and factors were based on research regarding the personality characteristics and clinical descriptions of individuals with eating disorders and their fantasy-thought patterns, item selection was more of a categorizing, matching concern, not one of content acceptance or relative weight. This was a modification of the traditional DELPHI Technique rating or accepting functions as the desire was for the best description (wording) of the fantasy in relation to the factor it best seemed to represent. It was hoped that by combining the research-documented characteristics with the initiutive judgement of a heterogeneous panel of experts, the concern voiced by Fairburn (1984) regarding a systematic analysis of beliefs will have been met.

Panel Selection

A panel of ten reviewers who had demonstrated expertise in treating individuals with eating disorders or who had personal experience with an eating problem were selected. Nine of the reviewers were regional mental health practitioners who had been recommended by physicians and psychologists. Two panel members were individuals who had recovered from an eating disorder; one was an ex-bulimic; the other had been an anorexic. Two other psychologists and three psychiatrists were asked to participate but declined because of lack of time. The resultant panel formed a heterogenous group whose professional backgrounds included the fields of clinical and counseling psychology, counselor, psychiatric nurse practitioner and social worker. Thus, the reviewers represented various treatment modalities, orientations and had diverse clinical experiences and clientele. The mixture of

backgrounds served to limit possible theoretical bias. However, the lack of a doctor of psychiatry as a reviewer was regrettable. A list of the review panel members is given in Appendix B.

Coding Process: Assigning the Items to Factor Categories

The Food Fantasies Coding Form containing the 110 items was developed (Appendix C). The factor definitions and brief instructions for assigning the items to the factors were attached (Appendix D). A cover letter requesting participation in coding the items contained more detailed instructions and a brief description of the research project being undertaken (Appendix E). The coding form was mailed or given to the panel members along with a postage-paid return envelope. Follow-up telephone or personal contact was made if the form was not returned within two weeks.

Turn-around time for return of the coding form was longer than anticipated, complicated by summer vacations, job responsibilities and other conflicts. However, interest was very high among the reviewers, and many kept copies.

Each item was assigned to a factor or omitted based on how the majority of the panel members coded it. Two members reviewed the questionnaire and made general comments concerning some of the items but did not actually code the items. Based on the consensus of agreement among the remaining nine reviewers, 42 items were selected; six items representing each one of the seven factors. As the consistency and agreement among the reviewers was high, it was not deemed necessary to submit a revised coding form to the panel.

Following the suggestions made by verbal discussions with two panel members, margin notes made by the coders and comments of the two non-coders, six of the items were rewritten or modified. However, in each case the item's content or factor category was not changed. Most all of the changes consisted of temporal references such as "sometimes", "frequently", etc., being deleted, as the six-point Likert-type response scale of the final instrument was built around how often the respondent experienced the fantasy-item ("Rarely" ranging up to "Quite Often"). The fantasy questions and the factors to which they have assigned to appear in Table 1.

Table 1. Food Fantasy Questions: Items by Factors

FACTOR: **ANIMATION**

Item Number	Fantasy Item
5.	Some food(s) remind me of animals.
10.	When I'm in a supermarket or restaurant, certain foods may call or beckon to me.
23.	Some food(s) talk or shout to me.
26.	Certain foods turn immediatley to body fat on me.
36.	When or after I eat I can feel the food moving to certain parts of my body.
40.	Some food(s) laugh at me.

Table 1. Continued

FACTOR: **FEAR**

Item Number	Fantasy Item
8.	The thought of eating scares me.
15.	I'm afraid to eat certain foods.
18.	It's scary to think about certain foods.
30.	Thinking about what I'm going to or might eat makes me feel scared.
32.	Certain thoughts of food or eating panics me.
38.	I think food or thoughts of food are almost like an enemy.

FACTOR: **ANXIETY**

Item Number	Fantasy Item
4.	I worry about how I would handle eating at a social or business function.
12.	Thinking about food upsets me.
21.	Thinking about I'm going to eat or may eat makes me tense.
25.	Some food(s) make me feel hurt or sad because of the memories they are associated with.
27.	Thinking about food makes me nervous.
35.	I worry what other people would say about the way I am about eating and/or food.

Table 1. Continued

Factor: **Revulsion**

Item Number	Fantasy Item
3.	I think there's things put in some foods that make them bad or unhealthy.
11.	I think fat people look greasy or disgusting.
19.	When I see fat people, I think about how it looks.
22.	I think eating can be disgusting.
28.	I think feeling full is awful.
41.	I feel "greasy" if I touch, taste, or eat fried, oily, or fatty foods.

FACTOR: **PLEASURE**

Item Number	Fantasy Item
1.	I like to think about food or eating food.
6.	I love dreaming about food, or all the things I'd eat if I could eat whatever I wanted to.
13.	Some foods are "good".
17.	Some foods make me feel good because of the memories they are associated with.
29.	I feel that food(s) or eating is my best friend.
37.	Thinking of food eases my mind.

Table 1 continued

FACTOR: **GENDER**

Item Number	Fantasy Item
7.	I remember certain food(s), celebrations or rituals from my childhood.
9.	I think there's a certain way I should look and/or eat to be appealing to the opposite sex.
24.	I think I should eat only certain "acceptable" foods when I am out with a date.
31.	The voice I may hear telling me when or what I should or should not eat sounds masculine.
33.	I imagine whay my mother or father would say if they saw how I am about food and/or eating.
39.	The voice that I may hear telling me when or what I should or should not eat sounds feminine.

FACTOR: **CONTROL**

Item Number	Fantasy Item
2.	I find myself thinking about food or eating without consciously trying to.
14.	I try not to think about food or eating.
16.	I hear a 'voice' in my head that talks to me about what to eat, when, andhow much to eat.

Table 1 continued

Item Number	Fantasy Item
20.	Certain foods are okay for others to eat but I shouldn't or won't eat them.
34.	I imagine myself eating and not being able to stop.
42.	Food or eating thoughts crowd out all other thoughts.

The Final Instrument

The questionnaire was developed primarily to be utilized in a therapeutic situation and secondarily for research purposes, to explore and assess an individual's food fantasies. Therefore, it needed to be a relatively short instrument that was easy to administer, respond to and score while comprising an economically brief period of time (Appendix A). To enhance readability and to provide ample room for ease in responding and scoring, a four page format was employed. The items were not grouped by factor, but were more or less ordered from common, even normal fantasies, to more frightening bizarre and/or threatening irrational cognitions more typical of starvation and eating disorders.

The instrument first asked for relevant demographic, diagnostic and therapeutic setting data, and provided instructions for responding. The numerals one through six, which represented the six points on the Likert-type scale on which it was based were presented opposite each item. From the six possible choices, the

respondent judged how frequently they experienced the fantasy (or one very similar to it) which was described in each item. Responses were made directly on the test by circling the numeral representing their judgement. The value of the numeral circled was also considered the item's score. A space for respondent's comments was provided on the bottom and back of the last page. An Informed Consent Form which had been approved by Oregon State University's Human Subjects Committee, plus an informal introduction to the concept of food fantasies were drawn up to be distributed to the respondent along with the questionnaire (Appendices F and G).

For the therapist's use, a three page information packet was compiled. The packet was introduced as the Food Fantasies Questionnaire and included the factor descriptions, an overview of the research project and potential uses of the questionnaire (Appendix H). Separate pages provided instructions for administration and scoring (Appendix I). A scoring key was created to provide a way to quickly record and tabulate the responses to arrive at the factor subscores and the total score (Appendix J). Tne total score purports to assess the amount of time the individual is preoccupied with food thoughts. The factor subscores are assumed to indicate any predominant thought contents or themes; the higher the subscore, the more relevant the issues relating to or underlying the factor are to the individual. The key could be utilized by either the therapist of the respondent.

As a field test, the instrument and scoring key were administered to the women and men in an upper division level sociology research methods class. For this group, it was determined that ten (10) minutes was adequate for responding to the questionnaire, and less than five (5) minutes was required for self-

scoring. It is recognized that this field test is limited and inadequate in scope. The results of if cannot be generalized to other populations. No changes were made on the instrument based on the field test.

Collection of Data

Mental health practitoners who specialized or were experienced in treating individuals with eating disorders were contacted. The questionnaire was mailed or personally delivered to nine therapists who agreed to offer it to their clients, providing it was therapeutically appropriate for the client. Two of the participating therapists had served as DELPHI panel members, the remainding five were professional colleagues who they recommended. A list of the participating therapists appears in Appendix K. Each questionnaire was accompanied by an Informed Consent form, an informal introduction to the concept of Food Fantasies and a Scoring Key. Also, each therapist received the Food Fantasies Introduction packet and the Insructions for Administration and Scoring. It was ascertained that the diagnosis made by the therapists followed the criteria set by the DSM III (1980) for anorexia nervosa and bulimia, and the criteria set by Russell (1979) for bulimia nervosa. Following the directions given on the instruction sheet, the questionnaire was administrated to the individuals who voluntarily choose to respond to the instrument by their therapist during their appointment or meeting. For financial reasons, some respondents filled out the questionnaire at their therapy site immediately before or after their session while under the supervision of the group leader or the office receptionist, who knew and followed the instructions for administration. This method of

sampling did not allow for direct control during data collection. The decision to rely on therapists to administer the test was due to the sensitive nature of the problem being studied and the personality characteristics of the population being sampled. Eating disordered individuals may lack ego strength (Bruch, 1983; 78). This may cause them to be overly senstive to the possibility of threat that a "strange" experimenter may represent, which may influence or bias their responses (Wingate and Christie, 1978). Perhaps more important is the need to maintain a trusting, confidential therapeutic relationship (Garner, Garfinkel and Bemis, 1982; Levenkron, 1982) All the participating therapists understood the need to maintain sampling consistency and agreed to adhere to the administration instructions.

The questionnaires were either mailed back or personally picked up. Personal or telephone follow-up was used as needed. An interval of no more than two weeks was requested. Data was collected over an eight week period. During that time, 52 valid questionnaires were gathered. The data from them was then transferred unto computer scan sheets in preparation for the statistical analysis.

Factor Analysis - Construct Validity:

Factor analysis is essentially a procedure for identifying clusters of related variables or factors (Nunnally, 1970). It may be utilized to indicate construct validity by determining relationships between one construct (element) and other constructs (Courtney, 1982). It also indicates the internal structure of the instrument (Nunnally, 1970).

The 42 items of the Food Fantasies Questionnaire were selected from an initial pool of 110 items and assigned to one of seven hypothesized factors based on the intuitive judgement of the DELPHI panel. Factor analysis was used to ascertain the factors around which the fantasies actually clustered. This indicated which items tended to measure the same factor (Courtney, 1982). The clusters of fantasies were identified utilizing the R-mode with factor loadings of +.44 or higher being considered as the criterion for inclusion of a fantasy as a member of a factor.

The mathmatical model for factor analysis is keyed to three kinds of variances which are present for all data. The model consists of the following:

$$V_t = V_{co} + V_{sp} + V_e$$

Where, V_t is the total variance.

V_{co} is the variance that two or more measures share in common.

V_{sp} is the variance which is specific to each individual measure.

V_e is the variance attributed to error.

The R-technique orders fantasies according to cluster membership. This type of analysis examines the relationship of every fantasy with every other fantasy and provides for a clustering of common food fantasies an individual may experience.

Factor loadings of +.44 or higher were recorded as being clustered within a factor. Hence, a 42-fantasy intercorrelation matrix,

based upon data collected from 52 respondents, was generated. Fantasies were clustered in a manner that accounted for the largest percentage of common factor variance using the varimax rotation method of control.

Selection of the Sample

The sample was comprised of 52 individuals who met the diagnostic criteria required by this study for anorexia nervosa, bulimia, bulimia nervosa or compulsive overeating, and were currently in out-patient individual and/or group treatment for their eating disorder with one of the participating therapists.

There are some potential strengths in this sampling and data collection procedure which may inhibit some of the research or sample bias concerns that have been raised (Fairburn, 1984; Gandour, 1984).

1. The sample was drawn from more than one treatment facility or practitioner, and encompassed three geographic areas: Corvallis, Eugene and Portland, Oregon.

2. The respondents were being treated in a variety of therapeutic modalities/methods by practitioners of various theoretical orientations.

3. The respondents were in group and/or private therapy, or both.

4. The respondents were those who were interested in exploring the various facets of themselves in relationship to their eating disorder.

5. The respondents were out-patients. Hospitialized individuals

may be extremely malnurished or suffering from other serious complications which may cause them to be unable to respond appropriately to a paper and pencil self-report inventory requiring decisions of this nature.

Age, duration of illness and other differences within a heterogeneous sample may be considered confounding variables, especially when constructing diagnostic tests. However, a diverse sample was wanted for this research as the intent was to create a tool that would be suitable or appropriate for use with the different subgroups of eating disorders, while at the same time, being individually relevant. This follows the assumption that eating disorders are multidetermined (Garfinfinkel & Garner, 1982, 1983) and are manifested idiosyncratically.

Size of the Sample

As previously indicated, 52 females were included in the sample group. The sample size of n=52 exceeded the power level of .80 when the effect size is set at .35 and the level of significance is .05 (Cohen, 1969). This criteria is recognized as being adequate for contrast anaysis (Courtney, 1984).

The minimum sample size for factor analysis is based on the number of items on the instrument. A rule-of-thumb determinant suggests ten (10) respondents per item to wash-out error variance in the factor analysis process. This makes the existing clusters more valid and substantial (Courtney, 1984).

It is recognized that the sample size is inadequate for the factor analysis procedure. However, this is the preliminary validation of the instrument. The results of the factor analysis of the questionnaire on even a small sample will serve to provide an initial and/or tentative indication and/or support for its validity (Garner & Garfinkel, 1978, 1982; Nunnally, 1970). As noted in the review of the literature, (see Chapter II), statistical testing using less than the optimal number of subjects has plagued reseach on eating disorders and is a frequently criticised concern (Eberly & Eberly, 1985; Fairburn, 1984; Gandour, 1984). The availability and accessability of willing or cooperative sample subjects who meet the set diagnostic criteria has been a confounding variable even in studies done in hospitals and clinics (Fairburn, 1984).

The Dependent Variable:

The dependent variable for this study was the score judgementally assigned by the respondents which best indicated how frequently they experienced the same or very similar fantasy described by each item. The score (values) were based on the following six (6) point Likert-type scale:

1. Rarely
2. Infrequently
3. Sometimes
4. Often
5. Frequently
6. Quite Often

The score is assumed to be of the interval scale type. Each item was

independently scored; therefore, there were 42 dependent variables considered in this study.

Reliability:

An estimate of the internal consistency reliability of the score assigned by the respondents indicating the frequency or extent to which they experienced the food fantasies was determined by using a method described by Hoyt and Stunkard (1952). This method, using analyses of variance, provided a straight-forward solution to the problem of estimating the reliability coefficient for unrestricted scoring items (Courtney, 1982). Therefore, it was appropriate for use with the Likert-scale scores.

The responses for all of the 42 items (fantasies) which appeared on the instrument were included in this test, utilizing a total of 52 respondents' scores. Therefore, there was one matrix, with 52 respondents, 42 items and one (1) response per cell. Schematically, the matrix is shown as follows:

	Respondents					
Fantasy Items	1	2	3	j	52	Total
1	Y_{11}	Y_{12}	Y_{13}	Y_{1j}	$Y_{1\ 52}$	$Y_{1\cdot}$
2	Y_{21}	Y_{22}	Y_{23}	Y_{2j}	$Y_{2\ 52}$	$Y_{2\cdot}$
3	Y_{31}	Y_{32}	Y_{33}	Y_{3j}	$Y_{3\ 52}$	$Y_{3\cdot}$
.						
.						
.						
i	Y_{i1}	Y_{i2}	Y_{i3}	Y_{ij}	$Y_{i\ 52}$	$Y_{i\cdot}$
.						
.						
.						
k	Y_{k1}	Y_{k2}	Y_{k3}	Y_{kj}	$Y_{k\ 52}$	$Y_{k\cdot}$
TOTAL	$Y_{\cdot 1}$	$Y_{\cdot 2}$	$Y_{\cdot 3}$	$Y_{\cdot j}$	$Y_{\cdot\ 52}$	$Y_{\cdot\cdot}$

Each Y_{ij} represents the score judgementally assigned by the j^{th} respondent to the i^{th} item. The total sum of square is given by:

$$\sum_{i=1}^{K}\sum_{j=1}^{52} Y_{ij}^2 = \frac{\sum_{i=1}^{K}\sum_{j=1}^{52} Y_{ij}^2}{52\,K}$$

The sum of squares for respondents is obtained by:

$$\sum_{j=1}^{52} \frac{(Y_{.j})^2}{K} - \frac{(Y_{..})^2}{52K}$$

The sum of squares for fantasy items is obtained by:

$$\sum_{j=1}^{K} \frac{(Y_{i.})^2}{52} - \frac{(Y_{..})^2}{52K}$$

The residual sum of squares is obtained by subtraction:

$$\Sigma \text{ residuals} = \text{total} - \Sigma \text{ respondents} - \Sigma \text{ items}$$

The estimate of reliability is obtained by:

$$\frac{\text{Mean Square Respondents - Mean Square Residual}}{\text{Mean Square Respondents}}$$

The Reliability coefficiant layout

Source of Variation	df	SS	MS	r
Fantasies	41	A	A/41	
Respondents	51	B	B/51	$\frac{(B/51) - (C/2091)}{(B/51)}$
Residual	2091	C	C/2091	
TOTAL	2183			

Chapter IV

RESULTS AND DISCUSSION

The findings of this research were the results of statistical analysis done on the responses made to the items on the Food Fantasies Questionnaire. Internal consistency reliability of the data collection instrument was reflected by analysis of variance. Factor analysis was utilized to establish the clusters of fantasies.

Reliability of the Instrument

The Hoyt-Stunkard (1952) analysis of variance procedure was utilized to provide an assessment of the internal consistency reliability of the instrument, which employed a six-point Likert-type scale. The mathematical model and a description of the procedure appears in Chapter III. The computed reliability coeffecient for the questionnaire appears in Table 2.

Table 2. The Reliability Coefficient for the Instrument

Source of Variation	Degrees of Freedom	Mean .Square	r
Fantasies	41	27.356	
Respondents	51	32.750	0.941
Residual	2091	1.928	
Total	2183		

The following guidelines were used to assess the degree of reliability obtained:

.95 to .99	very high, rarely found
.90 to .94	high
.80 to .89	fairly high, adequate for individual measurement
.70 to .79	rather low, adequate for group measurement but not very satisfactory for individual measures
below .70	low, entirely inadequate for individual measurement, although useful for group averages and school survey (Harris, 1986, p. 23)

The computed reliability coeffecient of +.941 falls in the top of the high range. This is a respectable r considering the number of items on the test and it is comparable to or greater than the reliability coeffecients for many of the currently used eating disorder tests. Therefore, the following conclusions regrarding the reliability of the questionnaire were drawn:

1) the instrument is homogeneous;
2) the respondents (n=52) were consistent in providing scaled responses on the levels for the 42 items on the questionnaire.

Sample

The sample was comprised of 52 females who met one of the eating disorder diagnostic criteria used for this study. The size of the

sample exceeded the .80 power level at the .05 level of significance with the effect size equal to .30 (Cohen, 1969). All respondents were currently in out-patient individual and/or group treatment with one of the participating therapists. The therapists were in private practice or affilated with a university. The mean age of the sample was 26.5 years, with the youngest respondent being 19. This supports Fairburn's (1984) contention that eating disorders are also a problem for non-student, post-adolescents, even if their disorder developed during their teenage years, which tends to be the most vulnerable age (Pyle, Halvorson, Neuman, & Mitchell, 1986).

Table 3 indicates the eating disorder subgroups within the sample:

TABLE 3 Sample Subgroups

DISORDER	NUMBER
ANOREXIA NERVOSA	9
BULIMIA	24
COMPULSIVE OVEREATING	13
BULIMIA NERVOSA	6
TOTAL	52

The lack of males subjects and the greater number of bulimics in regard to the rest of the sample is consistent with reports

previously reviewed concerning the prevalence of the disorders (see Chapter II). Additionally, the bulimics may find their symptoms more distressing and be more likely to seek treatment (Neuman & Halvorson, 1983).

Although the sample respondents had met the set diagnostic criteria and were in therapy for an eating disorder, their weights were assessed to ascertain that the sample was a valid representation of the female eating disordered population. The weight and height characteristics are presented in Table 4 through Table 6.

TABLE 4. Height Characteristics (Inches)

DISORDER	$\bar{X}$ HEIGHT	SD	MINIMUM HEIGHT	MAXIMUM HEIGHT	N
ANOREXIA NERVOSA	66.56	3.54			9
BULIMIA	65.38	2.20			24
COMPULSIVE OVEREATING	65.46	2.55			13
BULIMIA NERVOSA	65.50	2.26			6
TOTAL	65.62	2.51	60.00	72.00	52

TABLE 5. Weight Characteristics (POUNDS) of Sample (N=52)

DISORDER	$\bar{X}$ WEIGHT	SD	MINIMUM LOW WEIGHT	X LOW WEIGHT	MAXIMUM HIGH WEIGHT	$\bar{X}$ HIGH WEIGHT
WEIGHT POUNDS	139.54	39.35	85.00	115.808	280.00	159.56
QUETELET BODY MASS INDEX	22.15		13.49	18.38	44.44	25.33

Table 6. Weight Characteristics (Pounds) of Subgroups

	$\bar{X}$ WEIGHT	SD	QUETELET BODY MASS INDEX	N
Anorexia Nervosa	113.11	21.60	17.95	9
Bulimia	137.42	38.01	22.60	24
Compulsive Overeating	163.69	43.10	26.85	13
Bulimia Nervosa	135.33	33.53	22.18	6

The Metropolitan Life Insurance Company Table (1959) is a commonly used index for determining an individual's ideal weight. Corrected for heel height and considering all three frame sizes, the range of weight for women over age 25 who are 5'5" to 5'6" is from 118 to 154 pounds, with a mid-point of 136 pounds. Comparing this to the mean weights of the subgroups indicates that the anorexics tended to be underweight, the compulsive overeaters tended to be overweight and the bulimics were of average weight.

The Quetelet Body Mass Index is a more individualized measure of weight category (Slade, Phil & Dewey, 1986; Van Itallie, 1985). The formula for the index is weight in kilos divided by height in meters squared. The usual interpretation of the index is as follows:

<15 = emaciation
15-19 = underweight
20-26 = normal weight
27-31 = overweight
>32 = severely overweight

The values obtained from the index calculations reflects results similar to those based on the Metropolitan Table. On the average, the anorexics were underweight but not emaciated, the bulimics were of normal weight and the compulsive overeaters bordered on being overweight. Inspection of individual weights revealed that at least one respondent was emaciated and at least one other was severely overweight (Quetelet low - 13.49; high - 44.44). The weights held by the sample subjects are consistent with the

reported weight characteristics common to the disorders. Therefore, the conclusion may be drawn that the sample is representative of the population of female eating disordered individuals.

Results of the Factor Analysis

Factor analysis was used to determine the clustering patterns of the 42 food fantasy items. The R-mode process was employed, which clustered the food fantasies according to the responses made by the subjects on the instrument's six-point scale. The factor loadings generated by the procedure express correlations between the fantasies and the extracted factors. This process allows for the identification of the clusters of fantasies. The results of the factor analysis should be viewed with caution, as it is recognized that the sample (n=52) was smaller that the recommended ten (10) subjects per item (Courtney, 1984; Garner & Garfinkel, 1979; Nunnally, 1970).

Seven psychological and clinical constructs common to eating disorders which may be reflected in an individuals food fantasies were hypothesized as factors in this study. The test was developed utilizing a modified DELPHI technique wherein each item was assigned to one of the seven factors based on the intuitive and informed judgment of the panel. One of the goals of this research was to determine if the fantasy items as presented on the questionnaire reflected the hypothesized factor they had been related to by the DELPHI Panel. A second goal was to determine if food fantasies could be grouped by

common traits. To investigate these, four factor analyses were performed. Inspection of the results of the initial analysis and those set for a three, five or seven factor solution indicated that while the items clustered in similar groups on all four analyses, the seven factor solution generated the best fit. The minimum factor loading for inclusion within a factor was set at + .44.

The results of the present seven factor analysis verified that 39 of the fantasy items met the criterion of having factor loadings which equaled or exceeded the +.44 level. Only three fantasies had loadings less than +.44; hence, they were classified as spurious. Thirty-four (34) of the items had loadings equal to or greater than +.50, and none had loadings of less than +.38. The criterion of + .44 was deemed acceptable as there was no factor in which there was a mixture on positive and negative loadings, and overlap of the items was minimal. None of the fantasies loaded equally on two or more factors (Courtney, 1984). Fruchter (1954) classified factor loadings at below .20 as insignificant; .20 to .30 as low; .30 to .50 as moderate; .50 to .70 as high; and at or above .70 as very high. Kerlinger (1979) states that factor loadings of .40 and above are considered large enough to warrant interpretation. Factor loadings equal to or above .40 have been used in the development of other eating disorder tests (Garner, Olmsted, Bohr, & Garfinkel, 1982).

The fantasy items were grouped together by their respective factors and examined to deduce what the items measured in common. The clusters were arbitrarily assigned factor titles, which are assumed to be indicative of the nature of the fantasies within each cluster. Of special interest was how closely the hypothesized fantasy groups matched the clusters generated by the factor anaylsis on two

dimensions:

1.) whether the items the DELPHI Panel felt belonged together or were related to the same factor were so grouped by the factor analysis; and

2.) whether the hypothesized cluster titles and definitions adequately described the nature of the generated factor groupings.

The seven factors and the hypothesized factors they subsumed or best represented are shown in Table 7.

Table 7. Relation of the Generated and Hypothesized Factors

Generated Factors		Hypothesized Factors
Factor I:	Control Fears and Anxieties	Control, Anxiety and Fears
Factor II:	Animation and Ambivalence	Animation
Factor III:	Gender and Social Acceptance	Gender
Factor IV:	Autonomous vs. Conscious Control of Food Thoughts	Pleasure and Control
Factor V:	Pleasure	Pleasure
Factor VI:	Animation - Childlike Reasoning	Animation
Factor VII:	Revulsion	Revulsion

The results of the factor analysis are shown in Tables 8 through 14. A discussion of what seems to be indicated by the clusters of items follows each factor. The discussions are based on the concepts previously presented (see Factor Selection, Chapter III). As there were no males included in the sample, the results may be considered relevant and/or valid only for females.

Factor I - Control Fears and Anxieties

The first factor accounted for 13 fantasy items. The factor loadings all exceeded +.44, and were generally quite high. The loadings ranged from a low of +.494 (Item 4) to a high of +.923 (Item 27). Item 16 loaded at +.428 and was considered spurious to the factor. The fantasy items, factor loadings and the hypothesized factors they were originally assigned to are shown in Table 8.

Table 8. Factor I - **Control Fears and Anxieties**

Item Number	Fantasy Statement	.Factor .Loading	Hypothesized Factor
4.	I worry about how I would handle eating at a social or business function.	.494	Anxiety
8.	The thought of eating scares me.	.874	Fear
12.	Thinking about food upsets me.	.740	Anxiety
14.	I try not to think about food or eating.	.641	Control
15.	I'm afraid to eat certain foods.	.767	Fear
18.	It's scary to think about certain foods.	.747	Fear
20.	Certain foods are okay for others to eat but I shouldn't or won't eat them.	.508	Control
21.	Thinking about what I'm going to eat or may eat makes me tense.	.887	Anxiety
27.	Thinking about food makes me nervous.	.923	Anxiety
28.	I think feeling full is awful.	.670	Revulsion
30.	Thinking about what I'm going to or might eat makes me feel scared.	.864	Fear
32.	Certain thoughts of food or eating food panics me.	.816	Fear
38.	I think food or thoughts of food are almost like an enemy.	.776	Fear
Spurious Fantasy			
16.	I hear a 'voice' in my head that talks to me about what to eat, when, and how much to eat.	.428	Control

Factor I accounted for 31.8 percent of the common variance in the analysis. These results are depicted in Table 15 and Figure 2.

Factor I contained the most items. It included all six of those which had been assigned to fear, four to anxiety and three to control. Therefore, it appears that fear and anxiety are related or that the items designated to represent Anxiety actually reflected the same trait as the items classified as Fear. It cannot be determined if fear causes the anxiety or vice versa. Inspection of the content of the items seems to indicate that control and fear (subsuming anxiety) are related to one another. The fear of being, feeling and/or appearing out of control, losing control; or being afraid of food, eating or being around food, all seem to be represented. The food fantasies may be feared if they are sources of temptation or physiologically increase appetite. Fantasies about highly desired but forbidden food, or of food that invariably trigger binges may create anxiety. There appears to be an underlying suggestion of conscious cognitive restraint, almost vigilance, against eating and/or overeating. Whether of not this reflects the fear of fat and/or gaining weight cannot be determined. Nor can it be determined if the fear of losing or being out of control is greater than the fear of fat. Additionally, it is not clear whether or not the fantasies appear autonomously (unbidden).

It has been proposed that eating disordered individuals feel ineffective, and that the disorders commonly develop from diets that are instigated to achieve a sense of control (Bruch, 1973, 1978; Garfinkel & Garner, 1982). The individual may feel that the only control they have in their life is the control over what they eat or

don't eat. If so, than being and/or feeling out of control would tend to be an anxiety-laden and/or feared experience which would be consciously guarded against by controlling (or trying to control) thoughts of food and/or eating. There seems to be no pleasure or solace in these fantasies; however, they may be functional to the individual. The fears and/or threats posed by the thoughts may help some individuals maintain control over their eating behavior (Bemis, 1983). Although spurious to the factor, Item 16 loaded close to the inclusion criteria (+.428). The "voice" it describes may reflect the internal "monster" that some individuals feel has or takes control over them (Bruch, 1973, 1978: Roth, 1982; Snyder & Levy, 1984).

Factor II - Animation and Ambivalence

The second factor produced nine fantasies, all of which loaded above the +.44 criterion level. Item 22 registered the only loading below +.50 (+.478); Item 31 had the highest loading (+.697). The results are shown in Table 9.

Table 9. Factor II - **Animation and Ambivalence**

Item Number	Fantasy Statement	.Factor .Loading	Hypothesized Factor
22.	I think eating can be disgusting.	.448	Revulsion
23.	Some food(s) talk or shout to me.	.557	Animation
25.	Some food(s) make me feel hurt or sad because of the memories they are associated with.	.664	Anxiety
29.	I feel that food(s) or eating is my best friend.	.631	Pleasure
31.	The voice that I may hear telling me when or what I should or should not eat sounds masculine.	.697	Gender
33.	I imagine what my mother or father would say if they saw how I am about food and/or eating.	.685	Gender
34.	I imagine myself eating and not being able to stop.	.586	Control
36.	When or after I eat I can feel the food moving to certain parts of my body.	.542	Animation
40.	Some food(s) laugh at me.	.672	Animation

Factor II accounted for 11.3 percent of the commmon variance. Results of the common factor variance are shown in Table 15 and Figure 2.

Factor II appears to be the most ambiguous of the seven generated factors. Items which had been assigned to all the hypothesized factors except for Fear loaded on it. Examination of the fantasies included in the cluster seems to reflect ambivalent feelings about food and/or eating; somewhat of a love/hate relationship with it. However, if Item 29 ("food(s) or eating is my best friend") is considered a negative experience, then the factor seems to be less representative of the "love" dimension. In any event, individuals with eating disorders are hungry, often starving. Many experience strong cravings to eat, especially those foods they consider fattening and deny themselves (Abraham & Beumont, 1982; Garfinkel & Garner, 1982; Russell, 1979). Factor II may reflect the ambivalent feelings of wanting to eat but not wanting to gain.

The fantasies are quite imaginative and/or irrational. There appears to be a suggestion that food and/or eating has been personalized, given a life and will of its own or has control over the individual (Boskind-Lodahl & White, 1978; Russell, 1979). They may or may not appear autonomously. It has been suggested that an eating disorder subsumes an individual's personality or becomes their identity (Bemis, 1983; Bruch, 1978; Orbach, 1986). Whether this is desired by the individual is not reflected by the Food Fantasies Questionnaire. Animation may also be suggested by the male "voice" that controls eating behavior.

Factor III - Gender and Social Acceptance

The third factor generated four fantasies with loadings well above +.44. They ranged from +.569 (Item 19) to +.784 (Item 24).

Item 39, with a loading of +.381, was included in the cluster as a spurious fantasy. These results are shown in Table 10.

Table 10. Factor III - **Gender and Social Acceptance**

Item Number	Fantasy Statement	Factor Loading	Hypothesized Factor
9.	I think there's a certain way I should look and/or eat to be appealing to the opposite sex.	.675	Gender
19.	When I see fat people, I think about how I look.	.570	Revulsion
24.	I think I should only eat certain "acceptable" foods when I'm out on a date.	.784	Gender
35.	I worry about what other people would say about the way I am about eating and/or food.	.780	Anxiety
Spurious Fantasy			
39.	The voice that I may hear telling me when or what I should or should not eat sounds feminine.	.381	Gender

Factor III generated 5.7 percent of the common factor variance, as shown in Table 15 and Figure 2.

Gender and appearance concerns seem to underlie the content of the fantasies in the third factor. The items in the factor may indicate an acceptance of the stereotypical female sex-typed behavior and/or role or that the individual is trying to comply with society's thin standard of attractiveness (Garner & Olmsted, 1979; Orbach, 1986). There appears to be a desire to look and act in a socially acceptable way, or to be perceived as "lady-like" or "feminine". Self-esteem, self-concept and/or perfectionism may be reflected in this desire.

Compliance to the thin body standard and female stereotype could be related to the feeling of being outer-directed (Bruch, 1973, 1978). It may be that being thin means being in control, both of which may than be equated with being a good, worthy person. While individuals may fear social rejection, it is not indicated that the individual is avoiding the opposite sex. The age of the women in the present sample group (mean age = 26.5 years; youngest = 18 years) precludes making any inferences regarding the avoidance of puberty and/or psychosexual maturity.

Factor IV - Autonomous versus Conscious Control of Food Thoughts

Factor IV produced four fantasies with loadings equal to or

above the +.44 criterion. The loadings ranged from +.445 (Item 2) to +.749 (Item 1). The two lowest had been assigned by the DELPHI Panel to the Control factor, and the highest two had been classified under Pleasure. The results for this factor are shown in Table 11.

Table 11. Factor IV - **Autonomous versus Conscious Control of Food Thoughts**

Item Number	Fantasy Statement	Factor Loading	Hypothesized Factor
1.	I like to think about food or eating food.	.749	Pleasure
2.	I find myself thinking about food or eating without consciously trying to.	.445	Control
6.	I love dreaming about food, or all the things I'd eat if I could eat whatever I wanted to.	.652	Pleasure
42.	Food or eating thoughts crowd out all other thoughts.	.547	Control

The fourth factor accounted for 5.6 percent of the common factor variance. This is depicted in Table 15 and Figure 2.

The content of the items that were included in the fourth factor did not give a clear indication whether or not the individual enjoys their food fantasies. Some fantasies seem to be pleasurable and under the conscious cognitive control of the individual, as some of the feared food thoughts represented in Factor I appeared to be. Other fantasies may appear autonomously, possibly occurring with a frequency and/or intensity which interfers with all other cognitive functioning. This type of fantasy may be suggestive of the obsessional nature of the preoccupation with food and/or eating (Solyom, Thomas, Freeman & Miles, 1983). The thoughts may be similiar to ruminations.

The individual may not be able to stop the food thoughts or they may choose not to stop them. This distinction cannot be clearly made. However, this distinction may serve to give somewhat of an indication of how the thoughts are used by or functional to an individual, or if the individual is used or controlled by their irrational cognitions. If the fantasies are functional, they may serve to strengthen dietary control (see Factor I) and/or block out negative experiences and/or emotions (see Factor V). On the other hand, dieting, hunger and starvation tend to increase or intensify the urge to eat and the preoccupation with food. The autonomous food thoughts may negatively affect the individual's dieting ability and/or sense of control. This may serve to reinforce feelings of ineffectiveness.

Factor V - Pleasure

The fifth factor generated two fantasies which loaded above +.70. Both fantasies had been assigned to the hypothesized Pleasure

factor by the DELPHI review panel. One spurious fantasy (Item 7), which loaded at +.423, had been placed in the Gender category. The results for Factor V are depicted in Table 12.

Table 12. Factor V - **Pleasure**

Item Number	Fantasy Statement	.Factor .Loading	Hypothesized Factor
17.	Some food make me feel good because of the memories they are associated with.	.779	Pleasure
37.	Thinking about food eases my mind.	.702	Pleasure
Spurious Fantasy			
7.	I remember certain food(s), celebrations or rituals from my childhood.	.423	Gender

As shown in Table 15 and Figure 2, Factor V accounted for 4.8 percent of the common factor variance.

There appears to be a different quality to the items included in this factor than those in Factor IV. The autonomous nature of some of the items in the fourth factor made it difficult to discern if the individual derived enjoyment from fantasizing about food. However, pleasure seems to prevail in Factor V. The items suggest good moods

or pleasant memories, perhaps from childhood. However, this cannot be interpreted as a desire to return to childhood and/or avoid psychosexual maturity.

For some individuals in three of the subgroups, the fantasies may provide a source of solace, but this was not the case for the anorexics. All of the anorexics in the sample indicated that thinking about food rarely eased their mind (i.e., responded (1) "Rarely" to Item 37). Perhaps pleasurable food thoughts aren't functional to them, as they do not appear to be related to maintaining dietary control. However, the fantasies may perform a different function to those who find solace in them. They may serve as a coping mechanism. It may be that the preoccupation with food and/or eating is a way of controlling incoming adverse stimuli, negative experiences, emotions or feelings of ineffectiveness. It may operate as a filter which only allows food thoughts to enter the individual's mind in times of stress, or when there is a threat to self-esteem or self-concept. Perhaps the pleasant food fantasies temporarily block out the real world, or maybe only the stressful, upsetting occurrences. It is possible that they may be used to counteract the affect of negative experiences.

Some individuals may create and/or engage in food fantasies as a form of entertainment, or as something to do to fill empty time. Even though food fantasies may be pleasurable to non-anorexic eating disordered individuals, it is interesting to note that they did not consider food and/or eating their "best friend" (Item 29 loaded on Factor II). Only 11 of the 52 sampled responded at "Often" (4) or above.

Factor VI - Animation and Childlike Reasoning

Factor VI accounted for four items which loaded above +.44. The loadings ranged for +.449 (Item 26) to +.674 (Item 13). The results are indicated in Table 13.

Table 13. Factor VI - **Animation - Childlike Reasoning**

Item Number	Fantasy Statement	.Factor .Loading	Hypothesized Factor
10.	When I'm in a supermarket or restuarant, certain foods may call or beckon to me.	.622	Animation
11.	I think fat people look greasy or disgusting.	.475	Revulsion
13.	Some food are "good".	.674	Pleasure
26.	Certain food turn immediately to body fat on me.	.449	Animation

As depicted in Table 15 and Figure 2, Factor VI generated 4.1 percent of the common factor variance.

The sixth factor seems to be related to Factor II, Animation and Ambivalence. The two factors accounted for five of the six hypothesized Amination fantasy items. The content of these items pertained to food having life and/or movement. The remaining item (Item 5), which related food(s) to animals, loaded on Factor VII, Revulsion. Thus, it appears that the hypothesized definition for the

factor does not adequately reflect what Animation seems to address. For one thing, the definition was too broad. No items on the final instrument pertained to food having the physical attributes of humans or animals, nor were there any references to cartoon figures. At the same time, it does not address the childlike logic and reasoning errrors that appear to be reflected in the animistic fantasies. It has been suggested that eating disordered individuals cognitively function at the preconceptual or concrete operational levels (Bruch, 1973, 1977). Animistic thought, such as food having life or "goodness", is characteristic to these levels, as is didactic, moralistic reasoning (Traver, 1982). A number of the fantasies which clustered on Factor II or Factor VI are suggestive of the faulty reasoning, irrational or distorted cognitions common to eating disorders (Garner, Garfinkel & Bemis, 1982).

The subgroup response patterns revealed that 17 of the 24 bulimic subjects classified some food(s) as good "Frequently" or "Quite Often" (a response of (5) or (6) to Item 13). Food turning immediately into body fat (Item 26) was assigned a (5) or (6) by six of the nine anorexics.

Factor VII - Revulsion

The seventh and final factor in the solution generated three fantasies which loaded from +.607 (Item 5) to +.631 (Item 41). The results appear in Table 14.

Table 14. Factor VII - **Revulsion**

Item Number	Fantasy Statement	.Factor .Loading	Hypothesized Factor
3.	I think there's things put in some foods that make them bad or unhealthy.	.624	Revulsion
5.	Some food(s) remind me of animals.	.607	Animation
41.	I feel "greasy" if I touch, taste, or eat fried, oily, or fatty foods.	.631	Revulsion

Table 15 and Figure 2 illustrate that Factor VII accounted for 3.6 percent of the common factor variance.

Factor VII seems to be fairly straight forward regarding what element they share in common. Revulsion appears to be implicated in each of the three fantasies included, two of which (Items 3 and 41) had been so designated by the DELPHI Panel. One of each of the remaining four hypothesized Revulsion fantasies loaded on all but factors V (Pleasure) and Factor IV (Autonomous versus Conscious Control of Food Thoughts). It is not indicated whether or not the fantasiess are autonomous. The individual may devise fantasies which are revolting to them to control their hunger or eating behavior, rather like self-induced aversion and/or negative imagery therapy.

Vegetarianism is commonly found in eating disordered individuals and Item 5 may reflect this (Crisp, 1980). Animal products may be avoided as they tend to have a higher fat content than vegetables. Item 41 may be related to this. Animal traits area often tied to eating behavior, i. e., one feels "as hungry as a 'bear' " or that they "eat like a 'pig' ". These feelings may be upsetting and/or revolting to an eating disordered individual as they may threaten dietary control or self-esteem. Many are revolted by their binging/purging behavior (Mitchell & Pyle, 1985). Some anorexics may distain their need to eat, appear to be bothered if they feel hunger and/or deny their hunger (Bruch, 1973).

Concluding Remarks

This study serves as the initial or preliminary validation of the Food Fantasies Questionnaire. The results of this first factor analysis are useful in verifying if the fantasies which were designated to each of the hypothesized factors correlated more highly with each other than with the other fantasy clusters. It provides an indication of how closely the fantasies devised to represent each factor actually related to it (Stunkard & Messick, 1985). Roughly half (27 out of 42, or 64 percent) of the fantasy items which were intended to reflect the same underlying factor showed positive communal factor loadings (Garner & Garfinkel, 1979). All fantasies designated as "Fear" and four of those as "Anxiety" clustered together on Factor I. Considering this apparent relationship between "Fear" and "Anxiety", the items encompassed in Factor I, and also those in Factors III, V and VII seem to be the most consistent with the fantasy-to-factor designations made by the DELPHI Panel. Therefore, the factor analysis results provide initial and tentative support for the content validity of several of the

fantasy areas assessed in the Food Fantasies Questionnaire.

The examination and interpretation of the fantasy items included in the generated factors suggest not only the main concept or common trait measured by the factors, but also which of the items appear to be the most and least representatve of the factor. Based on this examination, revision of the existing items and the generation of new ones which better reflect the common dimension of the factor and to heighten the distinctiveness between the factors may be made.

It is recognized that the results of the present study are subject to certain constraints which limit but not necessarily prohibit application or generalization to the total eating disordered population:

1.) The sample included only young adult females in outpatient treatment.

2.) The data collection instrument was a self-report questionnaire.

3.) The size of the sample was smaller than is recommended for the factor analysis procedure.

Common Factor Variance

Common variance is the sharing of variance by two or more fantasies. In such a sharing, the fantasies are correlated and therefore have some traits in common. Therefore, all the fantasies which cluster within a factor share some trait in common. The seven factor

solution accounted for 66.9 percent of common factor variance. This is shown in table 15.

Table 15. Percentage of Common Factor Variance - R-Mode Analysis

Factor Solution	Percentage (%)
1	31.8
2	11.3
3	5.7
4	5.6
5	4.8
6	4.1
7	3.6

The pattern of the common variance for the fantasies logically structured itself according to the factor analysis model, which supports the contention that the first generated factor should account for the largest percentage of common variance. The model's premise calls for each subsequent factor to generate less and less common factor variance (Courtney, 1984; SSPS, 1983). In accordance to the model, Factor I accounted for the majority of the common variance, 31.8 percent, and included 14 fantasies. The common variance shows a marked decrease between Factor I and Factor II, with Factor II accounting for 11.3 percent and encompassing nine fantasies. As each factor solution is added, less common variance is accounted for, with

Factors III and IV accounting for 5.7 and 5.6 percent, respectively. Factors V, VI and VII accounted for 4.8, 4.1 and 3.6 percent, respectively.

An illustration of the pattern of the seven factor solution is depicted graphically in Figure 2.

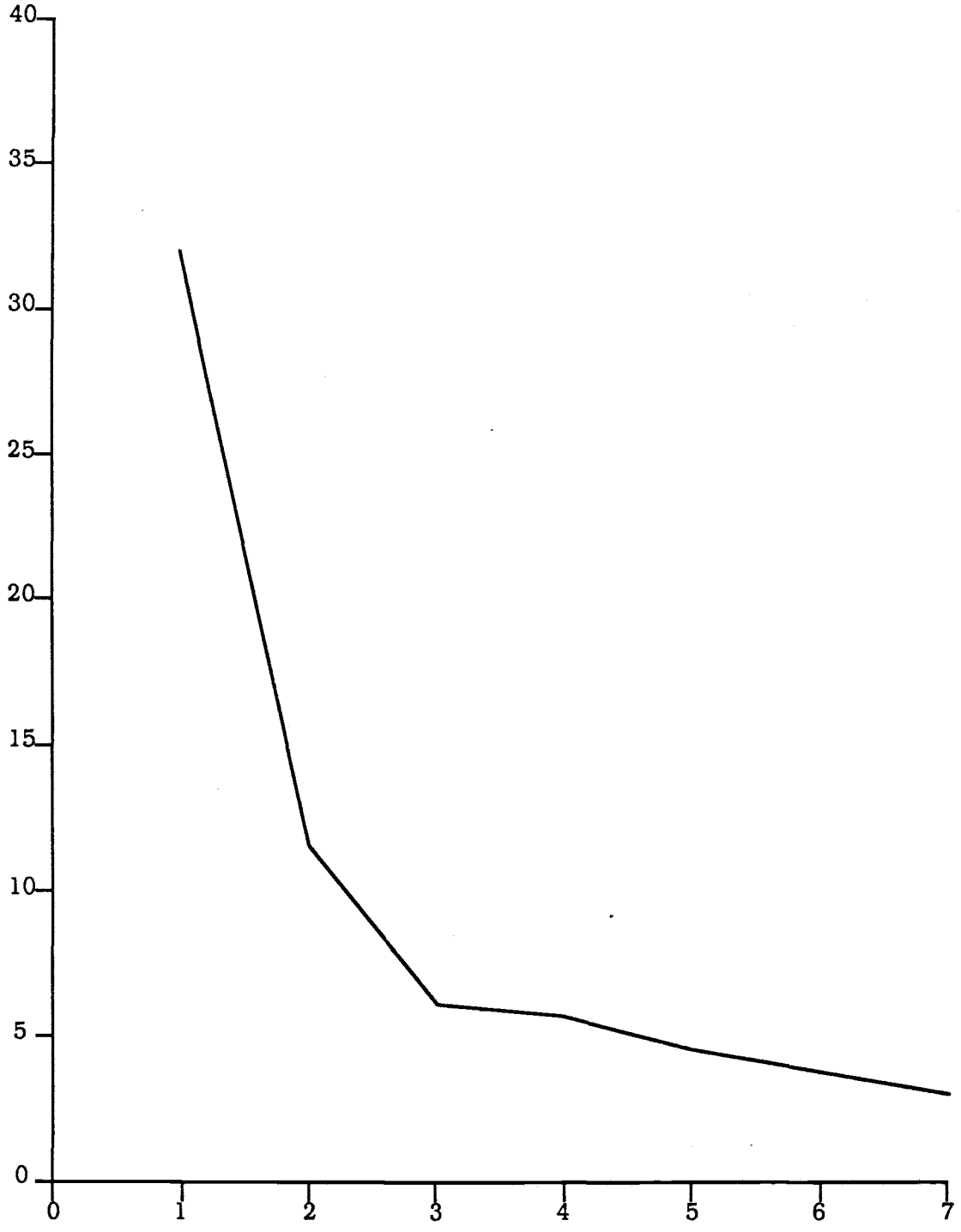


Figure 2. Common Factor Variance

Chapter V

SUMMARY AND CONCLUSIONS

Summary of the Study

The major focus of this study was to develop and initially validate an instrument to explore and asssess the occurrence and content of the highly irrational food cognitions (fantasies) common to eating disordered individuals in relation to underlying factors characteristic of the disorders. The function of the tool is to facilitate focusing on and exploring food and/or eating fantasies for therapuetic or research purposes. A second dimension of the validation study was to conduct a factor analysis to determine if food fantasies can be grouped by common traits; and, if so, to determine if the fantasies as written on the questionnaire reflected the factor they had been related to. A final aspect of the study was to identify activities to further the knowledge and research of eating disorders, especially food fantasies.

Seven (7) theoretically derived personality or psychopathological characteristics of eating disordered individuals were hypothesized as factors which may underlie and/or be related to the content or theme of the fantasies. The seven hypothesized factors were: fear, anxiety, revulsion, pleasure, gender, animation and control. To establish content validity, 110 items desdcribing food fantasies were evaluated by a review panel following a modified DELPHI procedure. Each of the 42 items selected for inclusion on the questionnaire was designated as representative of a factor based on the concensus of the DELPHI panel. Instructions for using, scoring

and administering the questionnaire were drawn up, as was an introduction to the concept of food fantasies and a scoring key. A field test with non-eating disordered individuals indicated the approximate amount of time needed for administering the questionnaire.

The instrument was administered by mental health practitioners experienced in the treatment of eating disorders to 52 young women in outpatient individual and/or group therapy for anorexia nervosa, bulimia, compulsive overeating or bulimia nervosa. A factor analysis based on the subject's responses was employed to indicate how the fantasies clustered. The seven factor solution generated four groupings similar to those of the hypothesized factors. The reliability of the questionnaire was ascertained by the analysis of variance procedure described by Hoyt-Stunkard (1952).

The Dependent Variable

The dependent variable for this study was a judgementally assigned scale score which indicated how frequently each respondent experienced the 42 fantasies described by the items. The Likert-type scale covered six intervals; the higher the point value, the greater the frequency of occurrence. The scale is as follows:

1. Rarely
2. Infrequently
3. Sometimes
4. Often
5. Frequently
6. Quite Often

Reliability of the Instrument

The reliability of the 42 item instrument was established using the Hoyt-Stunkard (1952) analysis of variance procedure. The computed reliability for the instrument was found to be +.9411, which provided a high consistency indicator for the data collection tool.

Results of the Factor Analysis

The R-mode of factor analysis was employed to identify the clusters of common food fantasies of eating disordered individuals. A seven factor solution generated the best fit for meeting the clustering process criteria and the needs of the research. The minimum factor loading necessary for inclusion of a fantasy in a cluster was set at +.44. All of the factors were positive. The analysis generated 39 fantasies which equaled or exceeded +.44. Three (3) fantasies which loaded above +.38 but below +.44 were considered spurious. The seven extracted factors of the fantasies were identified as follows:

Factor I Control Fears and Anxieties (14 fantasies including one (1) spurious fantasy)

Factor II Animation and Ambivalence (Nine (9) fantasies)

Factor III Gender and Social Acceptance (Five (5) fantasies including one (1) spurious fantasy)

Factor IV Autonomous versus Conscious Control of Food Thoughts (Four (4) fantasies)

Factor V Pleasure (Three (3) fantasies including one (1) spurious fantasy)

Factor VI Animation and Childlike Reasoning (Four (4) fantasies)

Factor VII Revulsion (Three (3) fantasies)

The ordering of each of the factors indicated the percentage of variance which was accounted for within the individual clusters. The seven factor solution accounted for 66.9 percent of the common factor variance. The majority of the common factor variance was accounted for by Factor I, which contributed 31.8 percent of the common variance. Each subsequent factor generated lesser amounts of common variance.

A number of hypotheses may be advanced regarding what factors or variables account for the remaining 33.1 percent of the common factor variance.

The Food Fantasies Questionnaire does not address all the personality or psychopathological characteristics of eating disordered individuals that were considered or may have been selected as the hypothesized factors. Other possible factor include: body image distortion, fear of fat, fear of maturation and adult sexual impulses and interactions, perfectionism, negative self-esteem or self-concept, depression, ineffectiveness or helplessness, interoceptive awareness, lack of coping or problem solving skills and compulsiveness. The

factors selected were theoretically and intuitively derived and seemed to be more global in scope than the others and thereby more amenable to the four eating disorders the questionnaire is intended for use with. Perhaps in attempting to subsume some of the other possible factors within the seven which were utilized, the factors became too broad or general. Indeed, some of these may actually have been measured or reflected by the fantasy-items.

The instrument is highly subjective and it attempts to assess a very individual, personal and idiosyncratic dimension. Much is dependent upon the respondent's interpretation of the fantasy, and some individuals may have more creative or imaginative thoughts than others. Also, it may be that people within the four eating disorder groups fantasize about food and eating in different ways. Other variables which may have influenced the factor analysis include whether the individual was in a group or private therapeutic setting when responding to the questionnaire, or if they were going to be sharing their responses with their group or therapist. Affective and physical states such as whether or not they were hungry, anxious, deprerssed, threatened, indifferent or happy may have influenced their responses.

Media and Cultural Factors:

One factor that wasn't included but which warrents attention is the role the media and society play in the proliferation of eating disorders. The media protrays a slimmer standard of bodily attractiveness for women than for men, and this standard is slimmer that it was in the past. Currently, there is a dual role women are expected to assume regarding food and eating. Women are constantly

being reminded of food, while they are not supposed to think about it lest they get hungry and eat too much. There is a clear but double message: eat, but be thin. To be an adequate, lovable wife and mother, women are expected to be the family nutritionalist and chef, preparing delicious man-pleasing meals and sweet treats their husbands and children will reward with hugs and praise. Single women cook elegant meals and tasty goodies for their boy friends to exhibit their worth and desirability as future partners. But they aren't allowed to eat the foods they cook. Married and single women are expected to stay slim and sexually attractive. Women may spend hours preparing the lavish feasts that accompany or are the sole reason for cultural, famial or social gatherings, where they may be urged to indulge, but critized if they appear to be eating too much.

Advertising supports and subverts the slim ideal. Television ads frequently create food fantasies. Food moves, talks and dances. Desserts are described as "passionate". Men relish ribs dripping with sauce. Happy children lavish love on their mothers for giving them cookies and candy. Marshmallows and cherries languish in a sea nestled among ice cream mountains and hot fudge rivers. Women are shown exercising and drinking diet colas. Tantalizing, sensual food ads share female-oriented magazine space with ads for diet foods, beverages and reducing aids. Articles reinforce the double message. Collections of recipes for fattening foods appear alongside features regarding dieting, exercises to reduce or correct figure flaws, beauty make-overs or how to otherwise improve one's appearance and shape. Highly advertised diet franchises promising glorious results are located next to fast food restaurants.

Women grow up expecting to diet (Orbach, 1986). But diets

don't always work, which prompted Wooley and Wooley (1984, p. 198-190) to state:

> "...cultural weight obsession is in large part responsible for the current epidemic of eating disorders. The development of these disorders is a perfectly predictable response to the social demand to maintain a body weight at which extreme hunger is to be expected....The truth is that bulimia is probably the most effective method of weight control available today, and it should not surprise us that intelligent, young women seize upon it."

Silverstein, Perdue, Peterson, Vogel and Fantini (1986, p. 915) conclude:

> "...eating disorders among women are not simply instances of individuals psychopathology. They are manifestations of a societal bias against women."

This raises an interesting question: if an eating disorder represents a "maturational crises" (Crisp, 1980), who can blame young women for not wanting to grow up and assume "adult female roles and responsibilities"? With today's standards, what does this entail, and how much in contingent upon their weight and appearance? Young girls are often asked "What do you want to be when you grow up?" The answer may be "Thin."

The Logic of Food Fantasies

Upon reflection, there appears to be a type or thread of logic that runs through the seemingly illogical or irrational thoughts, feelings and perceptions of eating disordered individuals. For some of

these people, it appears that their ultimate goal is achieving a positive and overt indication, to themselves and others, that they exist as separate, unique individuals who are in control of their lives and can achieve or maintain one of the most highly valued and coveted external symbols of control, success and worthiness that Western society has to offer women: a thin (and thereby attractive) body. Thusly, the manifestation of the disorder serves as a statement that they are in control, while internally, they may very well feel they have no control over their lives or themselves. The disorder may be seen as a sign that they are doing exactly what they have or are supposed to do in order to be judged favorably and accepted by others; attempting to make their body into the shape others have deemed as attractive.

If one views the fears, hopes and desires which underlie the eating disordered individuals irrational thoughts and fantasies in light of their overriding goal for control, autonomy, acceptance and respect, they become more understandable. These individuals may feel that if they can control their eating and weight, then they will be able to control other aspects of their lives and environment. They may feel they are acceptable or worthy only if or when they are thin. It is possible that such individuals come to feel the only way they can achieve their goal is by having an eating disorder, which is influenced by and interacts with the believed-in distorted perceptions and irrational thoughts that accompany starvation or the disorder itself. Normal or overweight bulimics and compulsive overeaters may experience these fantasies and feelings in much the same way as restricting anorexics; but they manifest their disorder differently.

Conclusions

Based in the analysis of the data obtained from the Food Fantasies Questionnaire, the following conclusions may be stated:

1. The frequency of occurrence of the food fantasies of eating disordered individuals may be objectively measured.
2. The combined use of *a priori* factor selection, the informed concensus of a DELPHI Panel and factor analysis shows promise as an appropriate method for use in the construction and initial validation of self-report objective measures of food fantasies.
3. Food fantasies fall into recognizable, interpretable factors (i.e., may be grouped by common traits).
4. Fear and Anxiety appear to address the same trait and are related to Control.
5. Food fantasies may be autonomous or under the conscious cognitive control of eating disordered individuals.
6. Both autonomous food fantasies and those created by the individual may often be considered functional. They may cause anxiety for some, or be useful in maintaining dietary control. For others, they may provide pleasure and/or solace.

Implications

The lack of adequate dietary nourishment causes cognitive disturbances, not only in starving people, but in eating disordered individuals as well. They share many of the same starvation-based cognitions and behaviors. Both experience obsessive food thoughts and are preoccupied with food and/or eating. However, eating disordered individuals have certain characteristic irrational beliefs

and distorted thoughts (such as the fear of fat) not commonly found in normal, non-disordered, starving individuals. While the cognitive disturbances experienced by both groups may be caused by starvation or malnourishment, what accounts for or causes the ones common only to anorexia and the bulimic syndromes? This question is critical as behavior and irrational thoughts are related (Bandura, 1978; Beck, 1970): the distorted cognitions or erroneous beliefs motivate and/or control the disordered eating behavior. The thoughts may be so compelling that they may precipitate actions that the individual does not want to do, is revolted by, depresses or upsets them and/or threatens their self-esteem.

Changing disordered eating practices and irrational beliefs and cognitions are necessary and important therapeutic goals. However, recovered individuals often continue to be troubled by persistant, irrational food thoughts. Following suggestions made by Beck (1970), exploring the food fantasies and irrational cognitions per se could be a vital and valuable component of therapy. However, the individual's fantasies are often overlooked as a potential source of information relevant to their problem. What underlies the distorted beliefs and food fantasies not common to normal starvation? Where do they come from? What role do the fantasies play in the disorder? What do they mean to the individual? Do they provide solace, pleasure? Do they maintain dietary and therefore weight control through fear or revulsion? How can they be introduced, explored and utilized in therapy?

Garner and Garfinkel (1982) stressed the need to continue the study of the irrational thought and beliefs of eating disordered individuals. To do so, food fantasies need to be addressed in training

and included in therapeutic paradigms. Based upon the review of the literature, the analysis of the data, and the information and conclusions derived from the analysis, the following implications have been proposed:

1. Courses specifically addressing eating disorders should be included in the curriculum of any program regardless of theoretical orientation, which prepares individuals to practice psychotherapy or counseling in any occupational role. Similar courses should also be implemented in the medical, dental and nursing school curricula. The course content should provide a broad overview of eating disorders; the identification of all the syndromes, the physiological, psychological and personality characteristics common to such individuals and treatment approaches.

2. Therapeutic models using the individual's autonomous and self-generated food fantasies should be developed. The use of therapist and self-guided positive and negative imagery, and systematic desensitization (Wolpe, 1956) should be encouraged.

3. The skills, techniques and tools needed to introduce, explore and utilize food fantasies in therapy should be identified. Workshops and seminars should be developed to train practicing and student therapists in these areas.

4. Objective measurement in eating disorders should become more involved in the assessment of the extremely irrational food cognitions and affective states, and their relationship to the individual's perceptions and behaviors.

5. The three dimension research design of *a priori* factor selection, DELPHI Panel classification of the items to these factors with subsequent verification by the factor analysis procedure should be encouraged as a method to reduce possible experimenter and/or orientation bias in the test construction. The statistical significance in establishing validity in this manner should be determined.

Potential Uses of the Food Fantasies Questionnaire

Cognitive disturbances and a preoccupation with food and/or eating have long been associated with starvation states, eating disorders and dieting. This relationship between nutritional status and cognitive functioning has been presented on a conceptual model encompassing three dimensions or levels. Many current therapies suggest cognitive restructuring as a treatment modality as well as techniques such as journals indicating thoughts and affective states in relation to eating behavior. However, these have tended to focus on level two, i.e., dichotomous reasoning, "magical" thinking, irrational or distorted beliefs, attitudes, or perceptions. Little attention has been given to level three, the highly irrational, subjective, idiosyncratic food fantasies experienced by the individual. Therefore, the questionnaire has many potential uses to facilitate either individual or group therapy, in addition to gathering data for research purposes. The autonomous and self-generated fantasies may be fertile ground to explore regarding the nature and etiology of the eating disorder and how it is manifested. Identifying trends or patterns of fantasies revolving around one or more of the factors may provide insight as to the individual's behavior. Additionally, the role the fantasies play in the onset and maintainance of the disorder may be investigated.

The questionnaire may be viewed as a non-threatening way to tap the often ashamed of or hidden fantasies. This issue is addressed in the respondent's "Food Fantasies" introduction sheet, the purpose of which is to serve as a "gentle" lead into the acknowledgement of their fantasies and to give them "permission" to have them. The manner of presentation of the questionnaire may be crucial, particularily with individuals with fragile egos, self-esteem, self-perception or self-concept problems. It might not be appropriate for extremely malnourished individuals, those showing high avoidance, resistance or denial behaviors, those demonstrating lack of internal or external trust, individuals who feel threatened by a perceived loss of control or those who have recovered sufficiently to cope with or no longer experience persistant food thoughts.

Some suggestions for utilizing the Food Fantasies Questionnaire are listed below:

1. The questionnaire could be used to help individuals focus on or become aware of their food thoughts. The response given could provide the therapist insight into the client's frame of reference and internal experiencing, thereby contributing to empathic understanding and facilitating the therapeutic relationship. In turn, this could be an invitation to share in a dialogue about their food related fantasies. In a group, it could serve as a starting point for member interaction and/or sharing of experiences.

2. The questionnaire could give the individual's fantasies validitiy. Individuals with eating disorders are often concerned with outer appearance, be it physical or behavioral; i.e., being, looking, or acting

"right". Seeing the food fantasies on paper may allow them to feel that they are not "crazy" for having the thoughts that they do, nor that they are alone in experiencing them. The questionnaire allows individuals to see that it is all right to experience food fantasies and discuss them without appearing "weird" or risking the therapist's rejection.

3. The questionnaire would allow both the therapist and the individual to get an idea of how much time the individual's thoughts are on food. The total score would be an indication of the amount of time devoted to fantasies about food. Whether they are somewhat obsessed with food and eating, totally preoccupied with it, or just at certain times, in specific situtations or places, or concerning particular foods or behaviors could all be discerned. How this related to the amount of time spent in non-food cognitions would be another point that could be explored. As there are no cut-off scores that indicate the severity or differentiate between levels of food preoccupation, the amount of time devoted to food thoughts and the relevance of them is a relative and subjective assessment which must be based on how the individual experiences or feels about them coupled with the therapist's knowledge of the individual.

Discovering how the individual feels about their food thoughts and the time spent on them may provide clues as to the role the fantasies play in the maintenance of their eating disorder. Are the fantasies welcomed or abhorred? Do they frighten or provide comfort? Is it felt that they interfere with daily functioning. What purpose do they serve, or how are they used? Do the food fantasies function as a form of self-reward or self-punishment? Are they used to keep the individual company or as something to fill their mind? How are the fantasies utilized in dictating what is or isn't eaten? How do they contribute to the individual's choice or avoidance of food(s)?

Perhaps the individual feels controlled by an internal "other" or "food monster". If so, what does the monster say, sound or look like? How do they experience their food fantasies? What appears in their mind: fast food signs; food advertisements; an image (tantalizing or revolting) of the acutal food; the act of themselves eating; the taste or texture of the food? Insight may be gained through the process of investigating these and similar questions.

4. Each of the questionnaire items reflects one of seven factors, with a varying number of items for each factor. The sum of the point value given each item divided by the number of items in each factor yields the seven subscale mean scores. Comparison of each subscale mean score in relation to the others will give an indication of the predominant underlying content, nature or themes of the individuals fantasies. It is assumed that the higher the subscale mean score, the more individually relevant the factor traits or characteristics are. For example, a high mean score in the factor "Control Fears and Anxieties" would indicate that the individual has some concerns about issues such as feeling out of control when around food, or being afraid to think about food. A low score on a factor could indicate that it isn't a relevant part of the their thought processes, or that the fantasies in it are not functional for the individual. As with all self-report tools of this nature, the items representing that factor may be too frightening or unacceptable to declare on paper. It is also possible that the individual may have fantasies not included on the questionnaire which may be representative of one or more of the seven factors. At times, the therapist's knowledge of the individual would facilitate a decision as to whether or not the individual's responses were consistent with their other expressed concerns and behaviors.

5. Once the fantasies and their associated factors are brought out and discussed in therapy, attention may then be given as to their role in the onset of the disorder and/or its continuation. Perhaps the individual scored highest in the "Control Fears and Anxieties" and "Gender and Social Acceptance" factors. The fantasies concerning these issues and the feelings attributed to and derived from them could be explored. Perhaps the individuals had been raised in a family where dieting or physical attractiveness were stressed. The control fantasies may be used as a focal point to investigate current feelings, fears or behaviors as they pertain to past environment.

From the information garnered throught dialogue(s) following administration of the questionnaire, therapeutic techniques and interventions may be decided upon. The disorders have been described as being multidetermined. The most productive method of therapy seems to be that which incorporates the orientation of the therapist and the needs of the individuals Food fantasies exist, and often persist after nutritional remediation and recovery. It is possible to help the individual to use them productively to overcome their disorder and maintain their recovery to normal weight and eating behaviors.

Recommendations for Further Study

On the basis of the review of the literature and from the results and conclusions of this study, the following suggestions are recommended for further study:

1. The present research study should be replicated with at least two new samples of a size that equals or exceeds the recommended

number (ten (10) respondents per item) for the factor analysis, to allow the salient and stable factors to emerge. This would also serve to wash-out error variance in the process, thereby making the existing clusters more valid and substantial. This research provided initial and tentative support for the construct validity of the tool; replication with the recommended number of respondents would more firmly establish it and render the questionnaire more amenable to correlation studies with other eating disorder assessment tools.

2. All replications should include males, as it is not known at this time whether the questionnaire is relevant to males. The number of male and female subjects should be proportionate to the prevalence rate for each of the four disorders. Subsequent statistical analysis should be performed to determine if and/or where differences exist between the males and females regarding the total and factor scores. If the questionnaire is not a unisex tool, separate forms for males and females should be devised.

3. Replicate the study with hospitalized individuals and conduct appropriate statistical procedures to determine any differences between inpatient and outpatient treatment and/or the assumed greater severity of physiological and/or psychological symptoms of those in hospitals.

4. Statistical tests should be conducted to discern any differences between the four eating disorder groups on the total Food Fantasies score and on each factor subscale of variance and, when indicated, Tukey's w method of multiple pairwise comparisons are recommended for this.

5. Determine the intrascale consistency of the seven hypothesized and seven generated factors subscales. Cronbach's alpha (α) is recommended for this further assessment of internal reliability and test homogeneity (Cronbach, 1951). Cronbach's technique, which yields a reliability coefficient, has been utilized in validation studies of several scaled eating disorder tests (Garner, Olmsted, Bohr & Garfinkel, 1982).

6. Administer the questionnaire to control groups comprised of normal non-dieters, normal dieters, obese individuals and those recovered from an eating disorder. Conduct appropriate contrast tests to discern the differences between and among the various groups and the eating disordered groups.

7. Perform correlation studies between the Food Fantasies Questionnaire and the EAT-40 (Garner & Garfinkel, 1979), the EAT-26 (Garner, Olmsted, Bohr & Garfinkel, 1982), the EDI (Garner, Olmsted & Polivy, 1983) and the EI (Stunkard & Messick, 1985). Positive and significant correlations with these and other similiar tests would demonstrate concurrent validity.

8. Administer the instrument as a structured interview. A comparison of the factor and total mean scores derived from the self-report and interview formats may indicate error variance due to response bias, such as under or over-reporting the frequency of fantasy occurrence.

9. Reword or replace the items (Items 7, 16 and 39) which appeared as spurious fantasies to make them more indicative of the factor they were related to. Devise a more appropriate or acceptable

name or way to describe the internal "voice" an individual may hear. Hearing a "voice" may be perceived as being psychotic.

10. Rewrite or replace items that appear ambiguous or have factor loadings below +.50 to make them more representative of the factor and to heighten the distinction between the factors.

11. Create separate factors of Ambivalence and Animation. Re-define Animation to better represent the child-like nature of the thoughts, logical reasoning errors or the general level of cognitive processing. Define Ambivalence and develop additional fantasy-items intended to reflect it.

12. Develop specific therapeutic techniques to introduce and utilize the Food Fantasies Questionnaire for inclusion in the therapist's instruction manual. These would involve additional suggested exploration or investigative questions, group exercises, homework assignments, and the use of various appropriate intervention strategies (systematic desensitization, thought stopping, guided fantasy, etc.).

13. Reformat the Food Fantasies Questionnaire as a booklet which may be closed, covering the responses and the individual's weight. Shorten the "Introduction to Food Fantasies" and make it the cover page.

BIBLIOGRAPHY

Abraham, S., & Beumont, P. (1982). How patients describe bulimia or binge eating. Psychological Medicine, 12, 625-635.

American Psychiatric Association. (1980). Diagnostic and statistical manual of mental disorders (3rd. ed.). Washington, DC: Author.

Argas, W.S., & Kraemer, H.C. (1983). The treatment of anorexia nervosa: Do different treatments have different outcomes. Psychiatric Annuals, 13(12), 928-935.

Atwood, M. (1969). The edible woman. Toronto: McClelland and Stewart.

Bandura, A. (1978). The self-system in reciprocal determinism. American Psychologist, 33, 344-358.

Beck, A. (1970). Role of fantasies in psychotherapy and psychopathology. Journal of Nervous and Mental Disesase, 150(1), 3-17.

Beck. A.T., & Emery, G. (1979). Cognitive Therapy of Anxiety and Phobic Disorders. Philadelphia: Center for Cognitive Therapy.

Bemis, K.M. (1983). A comparison of functional relationships in anorexia nervosa and phobia. In P.L.Darby, P.E. Garfinkel, D.M. Garner & D.V Coscina (Eds.), Anorexia nervosa: Recent developments in research: Vol. 3. Neurology and neurobiology (pp.403-415). New York: Alan R. Liss.

Berland, N. W., Thopson, J. K., & Linton, P. H. (1986). Correlation between the EAT-26, and the EAT-40, the eating disorders inventory, and the restrained eating inventory. International Journal of Eating Disorders, 5(3), 569-574.

Bhanji, S. & Newton, B. V. (1985). Richard Merton's account of "Nervous Consumption". International Journal of Eating Disorders, 4(4), 589-595.

Bjorvell, H., Rossner, S., & Stunkard, A. (1986). Obesity, weight loss and dietary restraint. International Journal of Eating Disorders, 5(4), 727-734.

Boskind-Lodahl, M. (1976). Cinderella's stepsisters: A feminist perspective on anorexia and bulimia. Signs: Journal of Women in Culture and Society, 2, 342-356.

Boskind-Lodahl, M., & White, W. (1978). The definition and treatment of bulimarexia in college women - a pilot study. Journal of American College Health Association, 27, 84-97.

Bruch, H. (1962) Perceptual and conceptual disturbances in anorexia nervosa. Psychosomatic Medicine, 24, 187-194.

Bruch, H. (1973). Eating disorders: Obesity, anorexia nervosa and the person within. New York: Basic Books.

Bruch, H. (1977). Psychological antecedents of anorexia nervosa. In R. A. Vigersky (Ed.), Anorexia nervosa (pp.1-10). New York: Raven Press.

Bruch, H. (1978). The golden cage: The enigma of anorexia nervosa. Cambridge: Harvard University Press.

Burton, H.J. (1983). A survey of research tasks required by secondary school counselors, state department of educational professionals, and college and university faculty in Oregon. Unpublished doctoral dissertation, Oregon State University: Corvallis, Oregon.

Cabanac, M. & Duclaux, R. (1970). Obesity: Absence of satiety aversion to sucrose. Science, 168, 496-497.

Cantelon, L.J., Leichner, P.P., & Harper, D.W. (1986). Sex-role conflict in women with eating disorders. International Journal of Eating Disorders, 5(2), 317-323.

Casper, R.C. (1983). Some provisional ideas concerning the psychologic structure in anorexia nervosa and bulimia. In P.L.Darby, P.E. Garfinkel, D.M. Garner & D.V Coscina (Eds.), Anorexia nervosa: Recent developments in research: Vol. 3. Neurology and neurobiology (pp.387-392). New York: Alan R.

Liss.

Cattell, R. B. (1952). Factor Analysis: an introduction and manual for the psychologist and social scientist. New York: Harper.

Ciseaux, A. (1979). Anorexia nervosa: A view from the mirror. American Journal of Nursing, 80, 1468-1470.

Coffman, D.A. (1984). A clinically derived treatment model for the binge-purge syndrome. In R. C. Hawkins, W. J. Fremouw, & P. F. Clement (Eds.), The Binge-Purge Syndrome: Diagnosis, Treatment, and Research (211-226) New York: Springer.

Cohen, J. (1969). Statistical power analysis for the behavioral sciences. New York: Academic Press.

Cooper, J. (1970). The Leyton obesessional inventory. Psycholoigcal Medicine, 1, 48-64.

Courtney, E.W. (1982). Techniques of research. Oregon State University, Corvallis: Division of Continuing Education.

Courtney, E.W. (!984). Analysis. Oregon State University, Corvallis: Division of Continuing Education.

Crisp, A.H. (1980). Anorexia nervosa: Let me be. London: Academic Press; New York: Grune and Stratton.

Crisp, A.H. (1983). Some aspects of the psychopathology of anorexia nervosa. In P.L.Darby, P.E. Garfinkel, D.M. Garner & D.V Coscina (Eds.), Anorexia nervosa: Recent developments in research: Vol. 3. Neurology and neurobiology (pp.15-28). New York: Alan R. Liss.

Crisp, A.H. (1984). The psychopathology of anorexia nervosa: Getting the "heat" out of the system. In A. J. Stunkard (Ed.), Eating and Its Disorders (pp.209-234). New York: Raven Press.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16(3), 297-334.

Crowther, J.H., Post, G., & Zaynor, L. (1985). The prevalence of bulimia and binge eating in adolescent girls. International

Journal of Eating Disorders, 4(1), 29-42.

Dunn, P.K., & Ondercin, P. (1981). Personality variables related to compulsive eating in college women. Journal of Clinical Psychology, 37(1), 43-49.

Eberly,C.C., & Eberly, B.W. (1985). A review of the eating disorder inventory. Journal of counseling and development, 64, 285.

Eckert, E.D. (1985). Characterisitics of anorexia nervosa. In J.E. Mitchell Ed.), Anorexia Nervosa and Bulimia: Diagnosis and Treatment (pp. 3-28). Minneapolis: University of Minnesota Press.

Eckert, E.D., Goldberg, S.C., Halmi, K.A., Casper, R.C., & Davis, J.N. (1982). Depression in anorexia nervosa. Psychological Medicine, 12, 115-122.

Fairburn, C.G. (1984). Bulimia: Its epidemiology and management. In A.J. Stunkard and E. Stellar (Eds.), Eating and Its Disorders (pp. 235-258). New York: Raven Press.

Fairburn, C.G., & Garner, D.M. (1986). The diagnosis of bulimia nervosa. International Journal of Eating Disorders, 5(3), 403-419. Frankenburg, F. R. (1984). Female therapists in the management of anorexia nervosa. International Journal of Eating Disorders, 3(4), 25-33.

Fruchter, B.A. (1954). Introduction to factor analysis. New York: Van Nostrand.

Feighner, J. P., Robins, E., Guze, S., Woodruff, R. A., Winokeer, G., & Munoz, R. (1972). Diagnostic criteria for use in psychiatric research. Archives of General Psychiatry, 26, 57-63.

Gandour, M. J. (1984). Bulimia: Clinical description, assessment, etiology, and treatment. International Journal of Eating Disorders, 3(3), 3-37.

Garfinkel, P.E. & Garner, D.M. (Eds.). (1982). Anorexia nervosa: A multidimensional perspective. New York: Brunner/Mazel.

Garfinkel, P.E. & Garner, D.M. (1983). The multidetermined nature

of anorexia nervosa. In P.L.Darby, P.E. Garfinkel, D.M. Garner & D.V. Coscina (Eds.), Anorexia nervosa: Recent developments in research: Vol. 3. Neurology and neurobiology (pp.3-14). New York: Alan R. Liss.

Garfinkel, P.E. & Kaplan, A.S. (1985). Starvation based perpetuating mechanisms in anorexia nervosa and bulimia. International Journal of Eating Disorders, 4(4), 651-665.

Garfinkel, P.E., Moldofsky, H., & Garner, D.M. (1979). The stability of perceptual disturbances in anorexia nervosa. Psychological Medicine, 9, 703-708.

Garfinkel, P.E., Moldofsky, H., & Garner, D.M., Stancer, H.C., & Coscina, D.V. (1978). Body awareness in anorexia nervosa: Distrubances in "body image" and "satiety". Psychosomatic Medicine, 40(6), 487-498.

Garner, D.M., & Garfinkel, P.E. (1979). The eating attitudes test: An index of the symptoms of anorexia nervosa. Psychological Medicine, 9, 273-279.

Garner, D.M., & Garfinkel, P.E. (1980). Cultural expectations of thinness in women. Psychological Reports, 9, 273-279.

Garner, D.M., Garfinkel, P.E., & Bemis, K.M. (1982) A multidimensional psychotherapy for anorexia nervosa. International Journal of Eating Disorders, 1(2), 3-46.

Garner, D.M., Garfinkel, P.E., & Olmsted, M.P. (1983). An overview of the sociocultural factors in the development of anorexia nervosa. In P.L.Darby, P.E. Garfinkel, D.M. Garner & D.V. Coscina (Eds.), Anorexia nervosa: Recent developments in research: Vol. 3. Neurology and neurobiology (pp.65-82). New York: Alan R. Liss.

Garner, D.M., Garfinkel, P.E., Stancer, H.C., & Moldofsky, H. (1976). Body image disturbances in anorexia nervosa and obesity. Psychological Medicine, 38,(5), 327-33.

Garner, D.M., & Olmsted, M.P. (1979). An overview of sociocultural factors in the development of anorexia nervosa. In P.L.Darby, P.E. Garfinkel, D.M. Garner & D.V. Coscina (Eds.). Anorexia nervosa: Recent developments in research: Vol. 3. Neurology

and neurobiology (pp.65-82). New York: Alan R. Liss.

Garner, D. M., Olmsted, M. P., Bohr, Y., & Garfinkel, P.E. (1982). The eating attitudes test: Psychometric features and clinical correlates. Psychological Medicine., 12, 871-878.

Garner, D. M., Olmsted, M. P., & Polivy, J. (1982). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. International Journal of Eating Disorders, 3, 15-34.

Garner, D. M., Olmsted, M. P., & Polivy, J. (1983). The eating disorder inventory: A measure of cognitive-behavioral dimensions of anorexia nervosa and bulimia. In P.L.Darby, P.E. Garfinkel, D.M. Garner & D.V. Coscina (Eds.). Anorexia nervosa: Recent developments in research: Vol. 3. Neurology and neurobiology (pp. 173-184). New York: Alan R. Liss.

Gibbs, R.E. (1986). Social factors in exaggerated eating behavior among high school students. International Journal of Eating Disorders, 5(6), 1103-1107.

Goldberg, S.C., Halmi, K.A., Casper, R., Eckert, E., & Davis, J.M. (1977). Pretreatment predictors of weight change in anorexia nervosa. In R.A. Vigersky (Ed.). Anorexia nervosa (pp. 31-41). New York: Raven Press.

Goldberg, S.C., Halmi, K.A., Eckert, E.D., Casper, R.C., Davis, J.M., & Roper, M. (1981). Attitudinal dimensions in anorexia nervosa. Journal of Psychiatric Research, 15, 239-251.

Gormally, J., Black, S., Daston, S., & Rardin, D. (1982). The assessment of binge eating severity among obese persons. Additictive Behaviors, 7, 47-55.

Gray, J.J., & Ford, K. (1985). The incidence of bulimia in a college sample. International Journal of Eating Disorders, 4(2), 201-210.

Greenfield, S. (1987, January 27). Baskin-Robbins scoops to conquer. Adweek, p. 3.

Gunderson, O. D. (1971). A factor analysis of professional education

Gunderson, O. D. (1971). A factor analysis of professional education competencies and community collelge instructors of trade and industrial education. Unpublished doctoral dissertation, Oregon State University: Corvallis, Oregon.

Halmi, R.A., Goldberg, S.C., Cassper, R.C., Eckert, E.D., & Davis, J.M. (1979). Pretreatment predictors of outcome in anorexia nervosa. British Journal of Psychiatry, 134, 71-78.

Halmi, K.A., Falk, J.R., & Schwartz, E. (1981). Binge-eating and vomiting: A survey of a college population. Psychological Medicine, 11, 697-706.

Haskew, P. & Adams, C. (1984). When Food is a Four-Letter Word. New York: Prentice-Hall.

Harris, M. L. (1968, December 9). Some methodological suggestions for construction of an objective measurement instrument. (Technical memo from the Wisconsin Research and Development Center, M-1962-2, rev.). Madison: Center for Cognitive Learning, University of Wisconsin.

Hatsukami, D. (1985). Behavioral treatment of anorexia nervosa and bulimia. In J.E. Mitchell (Ed.), Anorexia Nervosa and Bulimia: Diagnosis and Treatment (pp. 105-133). Minneapolis: University of Minnesota Press.

Hawkins, R.C., & Clement, P.F. (1980). Development and construct validation of a self-report measure of binge eating tendencies. Addictive Behaviors, 5, 219-226.

Herman, C.P., and Mack, D. D. (1975). Restrained and unrestrained eating. Journal of Personality, 43, 647-660.

Herman, C.P., & Polivy, J. (1980). Restrained eating. In A. J. Stunkard (Ed.), Obesity (pp. 144-165). Philadelphia: W. B. Saunders.

Hooker, D., & Convisser, E. (1983). Women's eating problems: An analysisof a coping mechanism. Personnel and Guidance Journal, 62(4), 236-239.

Hooper, M.S.H., & Garner, D.M. (1986). Application of the eating

Disorders, 5(1), 161-168.

Hoyt, C., & Stunkard, S.C. (1952). Estimation of test reliability for unrestricted item scoring methods. Educational and Psychological Measurement, 12, 756-758.

Hsu, L.K.G. (1983). The aetiology of anorexia nervosa. Psychological Medicine, 13, 231-237.

Huon, G.F., & Brown, L.B. (1986). Body images in anorexia nervosa and bulimia nervosa. International Journal of Eating Disorders, 5,(3), 421-439.

Hunt, D. A., & Rosen, J.C. (1981). Thoughts about food by obese and nonobese individuals. Cognitive Therapy and Research, 5,(3), 317-322.

Johnson, C., & Larson, R. (1982). Bulimia: An analysis of moods and behavior. Psychosomatic Medicine, 44,(4), 341-351.

Johnson, W.G., & Willdman, H.E. (1983). Influence of external and covert food stimuli on insulin secretion in obese and normal persons. Behavioral Neuroscience, 97(6), 1025-1028.

Kagan, D.M. & Squires, R.L. (1984a). Eating disorders among adolescents: Patterns and prevalence. Adolescence, 19(73), 15-29.

Kagan, D.M. & Squires, R.L. (1984b). Compulsive eating, dieting stress and hostility among college students. Journal of College Student Personnel, 25, 213-220.

Katzman, M.A., & Wolchik, S.A. (1984). Bulimia and binge eating in college women: A comparison of personality and behavioral characteristics. Journal of Consulting and Clinical Psychology, 52(3), 423-428.

Keesey, R. E. (1980). A set-point analysis of the regulation of body weight. In A. J. Stunkard (Ed.), Obesity (pp. 144-165). Philadelphia: W. B. Saunders.

Kelly, J.T., & Patten, S.E. (1985) Adolescent behaviors and attitudes toward weight and eating. In J.E. Mitchell (Ed.), Anorexia Nervosa and Bulimia: Diagnosis and Treatment (pp. 191-204).

Minneapolis: University of Minnesota Press.

Kenny, F.T., & Solyom, M.D. (1971). The treatment of compulsive vomiting through faradic disruption of mental images. Canadian Medical Association Journal, 105, 1071-1073.

Kerlinger, F. N. (1979). Behavioral Research: A Conceptual Approach. New York: Holt, Rinehart & Winston.

Keys, A., Brozek, J., Henschel, A., Mickelson, O., & Taylor, H.L. (1950). The Biology of Human Starvation. Minneapolis: University of Minnesota Press.

Kinoy, B. P. (1984). When will we laugh again? Living and dealing with anorexia nervosa and bulimia. New York: Columbia University Press.

Lambrecht, K. W. (1986). An analysis of the competencies of athletic club managers. Unpublished doctoral dissertation, Oregon State University: Corvallis, Oregon.

Leon, G.R., Carroll, K., Chernyk, B., & Finn, S. (1985). Binge eating and associated habit patterns within college student and identified bulimic populations. International Journal of Eating Disorders, 4(1), 43-57.

Leon, G. R., & Rosenthal, B. S. (1984). Prognostic indicators of success or relapse in weight reduction. International Journal of Eating Disorders, 3(4), 15-24.

Levenkron, S. (1982). Treating and overcoming anorexia nervosa. New York: Warner Books.

Levenkron, S. (1978). The Best Little Girl in the World. New York: Warner.

Levy, A. B., & Dixon, K. N. (1985). The relationship between anorexia nervosa and depression: A reevaluation. International Journal of Eating Disorders, 4(4), 389-405.

Linstone, H.A., & Turoff, M. (1975). The Delphi Method: Techniques and Applications. Massachuesetts: Addison-Wesley.

Liu, A. (1979). Solitaire. New York: Harper and Row.

Loro, A. D. (1984). Binge eating: A cognitive-behavioral treatment approach. In R. C. Hawkins, W. J. Fremouw, & P. F. Clement (Eds.), The Binge-Purge Syndrome: Diagnosis, Treatment, and Research (183-210) New York: Springer.

Macleod, S. (1982). The art of starvation: A story of anorexia and survival. New York: Schocken Books.

McLaughlin, E.F., Karp, S.A., & Herzog, D.B. (1985). Sense of ineffectiveness in women with eating disorders: A clinical study of anorexia nervosa and bulimia. International Journal of Eating Disorders, 4(4), 511-523.

Metropolitan Life Insurance Company (1959). New weight standards for men and women. Statistical Bulletin, 40, 1-4.

Minuchin, S., Rosman, B.L., & Baker, L. (1978). Psychosomatic Families: Anorexia Nervosa in Context. Cambridge, MA: Harvard University Press.

Mitchell, J. E., & Pyle, R. L. (1985). Characteristics of bulimia. In J.E. Mitchell (Ed.), Anorexia Nervosa and Bulimia: Diagnosis and Treatment (pp. 29-47). Minneapolis: University of Minnesota Press.

Morgan, R. (1980, February). Why women love/hate food. Ms, pp.43-44.

Nisbett, R.E. (1972). Hunger, obesity, and the ventromedial hypothalamus. Psychological Review, 79, 433-453.

Neuman, P. A., & Halvorson, P. A. (1983). Anorexia nervosa and bulimia: A handbook for counselors and therapists. New York: Van Nostrand Reinhold.

Nunnally, J.C. (1970). Introduction to psychological measurement. New York: McGraw Hill.

Orbach, S. (1986). Hunger strike: The anorectic's struggle as a metaphor for our age. New York: W. W. Norton.

Orbach, S. (1982). Fat is a feminist issue II: A program to conquer compulsive eating. New York: Berkley Books.

Orbach, S. (1978). Fat is a feminist issue: A self-help guide for compulsive eaters. New York: Berkley Books.

Peele, S. (1982). Why do some people eat until they become fat? American Psychologist, 37(1), 106.

Polivy, J., Herman, C.P., Olmsted, M.P., & Jazwinski, C. (1984). Restraint and binge eating. In R. C. Hawkins, W. J. Fremouw, & P. F. Clement (Eds.), The Binge-Purge Syndrome: Diagnosis, Treatment, and Research (pp. 104-122). New York: Springer.

Pope, H.G., Hudson, J.I., Yurgelun-Todd, D., & Hudson, M. (1984). Prevalence of anorexia nervosa and bulimia in three student populations. International Journal of Eating Disorders, 3(3), 45-57.

Pudel, V. E. (1978). Human feeding in the laboratory. In G. Bray (Ed.), Recent advances in obesity research: Vol. 2. (pp. 211-219). London: Newman.

Pyle, R. L., Halvorson, P. A., Neuman, P. A., & Mitchell, J. E. (1986). The increasing prevalence of bulimia in freshman college students. International Journal of Eating Disorders, 5(4), 631-647.

Pyle, R. L., Mitchell, J. E., & Eckert, E. D. (1986). The use of weight tables to categorize patients with eating dsorders. International Journal of Eating Disorders, 5(2), 377-383.

Rand, C. S. W., & Kuldau, J. M. (1986). Eating patterns in normal weight individuals: Bulimia, restrained eating, and the night eating syndrome. Internaional Journal of Eating Disorders, 5(1), 75-84.

Rodin, J. (1980). The externality theory today. In A. J. Stunkard (Ed.), Obesity (pp. 227-239). Philadelphia: W. B. Saunders.

Rodin, J. (1981). Current status of the internal-external hypothesis for obesity: What went wrong? American Psychologist, 36(4), 361-372.

Rosen, J., & Leitenberg, H. (1982). Bulimia nervosa: Treatment

with exposure and response prevention. Behavior Therapy, 13. 117-124.

Rosenbaum, M. (1980). A schedule for assessing self-control behaviors: Preliminary findings. Behavior Therapy, 11, 109-121.

Roth, G. (1982). Feeding the hungry heart: The experience of compulsive eating. Indianapolis/New York: Bobbs-Merrill.

Roth, G. (1984). Breaking free from compulsive overeating. Indianapolis: Bobbs-Merrill.

Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80(1), (Whole No. 609).

Russell, G. (1979). Bulimia nervosa: An ominous variant of anorexia nervosa. Psychological Medicine, 9, 429-448.

SSPS Inc. (1983). SSPS User's Guide. New York: McGraw-Hill.

Schachter, S., Goldman, R., & Gordon, A. (1968). Effects of fear, food deprivation and obesity on eating. Journal of Personality and Social Psychology, 10, 91-97.

Schlesier-Stropp, B. (1984). Bulimia: A review of the literature. Psychological Bulletin, 95(2), 247-257.

Schwartz, D.M., & Thompson, M.G. (1981). Do anorecitcs get well? Current research and future needs. American Journal of Psychiatry, 138(3), 319-323.

Schwartz, D.M., Thompson, M.G., and Johnson, C.L. (1983). Eating disorders and the culture. In P.L.Darby, P.E. Garfinkel, D.M. Garner & D.V. Coscina (Eds.). Anorexia nervosa: Recent developments in research: Vol. 3. Neurology and neurobiology (pp. 83-94). New York: Alan R. Liss.

Seaman, D. (1987, January 27). Food stylists reveal recipe for advertising success. Adweek, p. 39-42.

Selvini Palazzoli, M. (1974). Self-Starvation. London: Chaucer.

Silverstein, B., Perdue, L., Peterson, B., & Kelly, E. (1986). The role of the mass media in promoting a thin standard of bodily attractiveness for women. Sex Roles, 14(9/10), 519-532.

Silverstein, B., Perdue, L., Peterson, B., Vogel, L., & Fantini, D.A. (1986). Possible causes of the thin standard of bodily attractiveness for women. International Journal of Eating Disorders, 5(5), 907-916.

Silverstein, B., Peterson, B., & Perdue, L. (1986). Some correlates of the thin standard of bodily attractiveness for women. International Journal of Eating Disorders, 5(5), 895-905.

Sitnick, T., & Katz, J.L. (1984). Sex role identity and anorexia nervosa. International Journal of Eating Disorders, 3(3), 81-87.

Slade, P.D. (1973). A short anoexic behaviour scale. British Journal of Psychiatry, 122, 83-85.

Slade, P. D., Phil, M., & Dewey, M. E. (1986). Development and preliminary validation of SCANS: A screening instrument for identifying individuals at risk of developing anorexia and bulimia nervosa. International Journal of Eating Disorders, 5(3), 517-538.

Snyder, Ann. (1980). Goodby, Paper Doll. New York: Signet.

Snyder, F., & Levy, K.G. (1984, January). Slaying the food monster: Help for bulimics. USA Today, pp. 74-76.

Solyom, L., Thomas, C.D., Freeman, R.J., & Miles, J.E. (1983). Anorexia nervosa: Obsessive-compulsive disorder or phobia? A comparative study. In P.L.Darby, P.E. Garfinkel, D.M. Garner & D.V. Coscina (Eds.), Anorexia nervosa: Recent developments in research: Vol. 3. Neurology and neurobiology (pp.137-147). New York: Alan R. Liss.

Soukup, M. (1983). A survey of research tasks required by public school administrators and secondary and elementary teachers

in Oregon. Unpublished doctoral dissertation, Oregon State University: Corvallis, Oregon.

Squire, S. (1983). The Slender Balance. New York: G.P. Putnam's Sons.

Squires, R. L., & Kagan, D. M. (1986). Personality correlates of disordered eating. International Journal of Eating Disorders, 5(2), 363-369.

Steinhausen, H.C. (1985). Eating attitudes in adolescent anorexic patients. International Journal of Eating Disorders, 4(4), 489-498.

Streigel-Moore, R., McAvay, G., & Rodin, J. (1986). Psychological and behavioral correlates of feeling fat in women. International Journal of Eating Disorders, 5(5), 935-947.

Strober, M. (1982). Locus of control, psychopathology, and weight gain in juvenile anorexia nervosa. Journal of Abnormal Child Psychology, 10(1), 97-106.

Stunkard, A.J. (1980). The social enviroment and the control of obesity. In A. J. Stunkard (Ed.), Obesity (pp. 438-462). Philadelphia: W. B. Saunders.

Stunkard, A.J. (1981). "Restrained eating": What it is and a new scale to measure it. In Luigi A. Cioffi et al. (Eds.), The Body Weight Regulatory System: Normal and Disrurbed Mechanisms, (243-251). New York: Raven Press.

Stunkard, A. J., & Messick, S. (1985) The three-factor eating questionnaire to measure dietary restraint, disinhibition and hunger. Journal of Psychosmatic Research, 29(1), 71-83.

Theodorson, G.A., & Theodorson, A.G. (1969). Modern dictionary of sociology. New York: Thomas Y. Crowell.

Thompson, J.K. (1986, April). Larger than life. Psychology Today, pp. 38-44.

Travers, R. M. (1982). Essentials of Learning. New York: Macmillan.

Van Itallie, T. B. (1985). Health implications of overweight and obesity in the United States. Annals of Internal Medicine, 103(6 pt 2), 983-988.

Wallach, J.D., & Lowenkopf, E.L. (1984). Five bulimic Women: MMPI, Rorschach, and TAT characteristrics. International Journal of Eating Disorders, 3(4), 53-67.

Willis, J. (1982). Diet books sell well but... (U.S. Health and Human Services Publication No. (FDA) 82-1093). Rockville, Md.: Dept. of Health and Human Services.

Wingate, B.A., & Christie, M.J. (1977). Ego strength and body image in anorexia nervosa. Journal of Psychomatic Research, 22, 201-204.

Wolchik, S.A., Weiss, L., & Katzman, M.A. (1986). An empirically validated, short-term psychoeducational group treatment program for bulimia. International Journal of Eating Disorders, 5(1), 21-34.

Wooley, S.C. & Wooley, O.W. (1973). Salivation to the sight and thought of food: A new measure of appetite. Psychosomatic Medicine, 35,136.

Wooley, S.C. & Wooley, O.W. (1984a). Should obesity be treated at all? In A.J. Stunkard and E. Stellar (Eds.), Eating and Its Disorders (pp. 185-192). New York: Raven Press.

Wooley, S., & Wooley, W. (1984b, February). Feeling fat in a thin society. Glamour, 82(2), pp. 198-201.

Wolpe, J. (1954). Reciprocal inhibition as the main basis of psychtherapeutic effects. A.M.A. Archieves of Neurological Psychiatry, 72, 205-226.

APPENDICES

APPENDIX A:

FOOD FANTASIES QUESTIONNAIRE

Pending copyright, the final form of the Food Fantasies Questionnaire has been deleted from this document. Copies of the questionnaire may be obtained from the author.

APPENDIX B:

DELPHI PANEL MEMBERS:

1. Maria Beals, Ph.D.
2. Mariette Brouwers, Ph.D.
3. Carolyn Carter, R.N., M.N.
4. C. C. Naffziger, Ph.D.
5. Jean Rubels, Ph.D.
6. Cindy Tucker, M.S.W.
7. Birgitta von Schlumperger, Ph.D.
8. *
9. *

* Individuals who have recovered from an eating disorder and requested to remain anonymous.

NON-CODING REVIEWERS:

10. Sue Balint, R.N., M.N.
11. Raymond Sanders, Ph.D.

Food Fantasies Coding Form--Page 1

	Animation	Fear	Anxiety	Revulsion	Pleasure	Gender	Control	Omit
1. Thinking about food excites me.....	A	F	X	R	P	G	C	O
2. Some foods are "bad".....	A	F	X	R	P	G	C	O
3. Some foods are "good".....	A	F	X	R	P	G	C	O
4. The thought of eating scares me.....	A	F	X	R	P	G	C	O
5. The thought of eating makes me hungry.....	A	F	X	R	P	G	C	O
6. I think the need for food is overrated.....	A	F	X	R	P	G	C	O
7. I think eating is disgusting.....	A	F	X	R	P	G	C	O
8. Some foods are acceptable.....	A	F	X	R	P	G	C	O
9. "Diet" foods are the ones I crave.....	A	F	X	R	P	G	C	O
10. When I shop at the supermarket, sometimes some food(s) call out to me.....	A	F	X	R	P	G	C	O
11. When I shop at the supermarket, sometimes some food(s) taunt me.....	A	F	X	R	P	G	C	O
12. When I shop at the supermarket, sometimes some food(s) tease or lure me to buy them.....	A	F	X	R	P	G	C	O
13. Some food(s) talk to me.....	A	F	X	R	P	G	C	O
14. Some food(s) shout at me.....	A	F	X	R	P	G	C	O
15. Some food(s) laugh at me.....	A	F	X	R	P	G	C	O
16. I hate to see fat people.....	A	F	X	R	P	G	C	O
17. I hate to see fat people eat.....	A	F	X	R	P	G	C	O
18. Fat people loof greasy and/or disgusting.....	A	F	X	R	P	G	C	O
19. Somes food(s) remind me of animals.....	A	F	X	R	P	G	C	O
20. Certain food(s) are "male".....	A	F	X	R	P	G	C	O

Food Fantasies Coding Form--Page 2

	Animation	Fear	Anxiety	Revulsion	Pleasure	Gender	Control	Omit
21. Sometimes food dances before my eyes.....	A	F	X	R	P	G	C	O
22. I hear voices in my head that talk to me about food.....	A	F	X	R	P	G	C	O
23. I dream about owning a candy store.....	A	F	X	R	P	G	C	O
24. I dream about owning a bakery.....	A	F	X	R	P	G	C	O
25. I dream about owning a health food store.....	A	F	X	R	P	G	C	O
26. I dream about owning a restaurant.....	A	F	X	R	P	G	C	O
27. I dream about owning a supermarket.....	A	F	X	R	P	G	C	O
28. I love dreaming about food.....	A	F	X	R	P	G	C	O
29. I like to think about food.....	A	F	X	R	P	G	C	O
30. I hate dreaming about food.....	A	F	X	R	P	G	C	O
31. I don't like to think about food.....	A	F	X	R	P	G	C	O
32. I don't like to think about eating.....	A	F	X	R	P	G	C	O
33. I like to think about eating.....	A	F	X	R	P	G	C	O
34. Sometimes I hear voices in my mind that talk to me about food.....	A	F	X	R	P	G	C	O
35. The voices I may hear in my mind are male.....	A	F	X	R	P	G	C	O
36. The voices that I may hear in my mind about food are female.....	A	F	X	R	P	G	C	O
37. The voices that I may hear in my mind that tell me when to eat are male.....	A	F	X	R	P	G	C	O
38. The voices that I may hear in my mind that tell me when to eat are female.....	A	F	X	R	P	G	C	O
39. Sometimes I hear voices in my mind that tell me when to eat.....	A	F	X	R	P	G	C	O
40. Sometimes I may hear voices in my mind that t tell me what or what not to eat.....	A	F	X	R	P	G	C	O

Food Fantasies Coding Form--Page 3

	Ani-mation	Fear	Anxiety	Revul-sion	Plea-sure	Gender	Control	Omit
41. The voices that I may hear telling me what or what not to eat are male.....	A	F	X	R	P	G	C	O
42. The voices that I may hear telling me what or what not to eat are female.....	A	F	X	R	P	G	C	O
43. If I smell certain food(s) I want it(them)...	A	F	X	R	P	G	C	O
44. If I see certain food(s) I want it(them).....	A	F	X	R	P	G	C	O
45. If I think about certain food(s) I want it(them)	A	F	X	R	P	G	C	O
46. I like to imagine how good some food(s) will taste.....	A	F	X	R	P	G	C	O
47. Certain foods are okay for others to eat but not for me.....	A	F	X	R	P	G	C	O
48. Thining about food makes me feel fat or full.	A	F	X	R	P	G	C	O
49. Thinking of food eases my mind.....	A	F	X	R	P	G	C	O
50. I get relaxed whin I think about food.....	A	F	X	R	P	G	C	O
51. Thinking about food upsets me.....	A	F	X	R	P	G	C	O
52. Thinking about food makes me nervous.....	A	F	X	R	P	G	C	O
53. I'm afraid to eat some food(s).....	A	F	X	R	P	G	C	O
54. Sometimes it's scary to think about certain food(s).....	A	F	X	R	P	G	C	O
55. I wonder what my mother would say if she saw how I sometimes eat.....	A	F	X	R	P	G	C	O
56. I wonder what my father would say about how I eat at times.....	A	F	X	R	P	G	C	O
57. I wonder what my mother would say about what I eat at times.....	A	F	X	R	P	G	C	O
58. I wonder what my father would say about what I sometimes eat.....	A	F	X	R	P	G	C	O
59. Certain foods are my friends.....	A	F	X	R	P	G	C	O
60. Certain foods are my enemies.....	A	F	X	R	P	G	C	O

Food Fantasies Coding Form--Page 4

	Ani-mation	Fear	Anxiety	Revul-sion	Plea-sure	Gender	Control	Omit
61. I wonder what a boyfriend would say about the way I am about eating and/or food.....	A	F	X	R	P	G	C	O
62. I can smell certain food(s) in my mind.....	A	F	X	R	P	G	C	O
63. I can taste certain food(s) in my mind.....	A	F	X	R	P	G	C	O
64. I would rather think about food than eat.....	A	F	X	R	P	G	C	O
65. I wonder how I would handle eating on a date..	A	F	X	R	P	G	C	O
66. Once I think about a certain food, I have to eat it.....	A	F	X	R	P	G	C	O
67. Sometimes I imagine myself eating and not being able to stop.....	A	F	X	R	P	G	C	O
68. Sometimes food(s) tastes different (better or worse) than I imagine it will.....	A	F	X	R	P	G	C	O
69. Sometimes I feel "as hungry as a bear".....	A	F	X	R	P	G	C	O
70. At times, some food(s) (like steak) look like the animal, not food.....	A	F	X	R	P	G	C	O
71. At times, the food I'm thinking about will change shape.....	A	F	X	R	P	G	C	O
72. At times, food(s) that I think about appear to be alive, like on a TV ad.....	A	F	X	R	P	G	C	O
73. Sometimes food(s) I think about turn into animals.....	A	F	X	R	P	G	C	O
74. At times, the food I'm thinking about reminds me so much of someone that the food and person almost become one.....	A	F	X	R	P	G	C	O
75. It bothers me to think that some food(s) were once living plants or animals.....	A	F	X	R	P	G	C	O

Food Fantasies Coding Form--Page 5

	Ani-mation	Fear	Anxiety	Revul-sion	Plea-sure	Gender	Control	Omit
76. I think there's things put in some foods that make them bad or unhealthly.....	A	F	X	R	P	G	C	O
77. I feel "greasy" if I touch fried or fatty foods	A	F	X	R	P	G	C	O
78. I feel "greasy" if I taste fried or fatty foods	A	F	X	R	P	G	C	O
79. I feel "greasy" if I eat fried, oily or fatty foods.....	A	F	X	R	P	G	C	O
80. Some food(s) lure me on, as a lover might do..	A	F	X	R	P	G	C	O
81. Some food(s) make me remember things from my past.....	A	F	X	R	P	G	C	O
82. Some food(s) make me feel hurt or bad because of the memories they are associated with.....	A	F	X	R	P	G	C	O
83. Some food(s) make me feel good because of the memories they are associated with.....	A	F	X	R	P	G	C	O
84. Thinking about the food(s) I'm going to get to eat makes me excited.....	A	F	X	R	P	G	C	O
85. Thinking about the food(s) I'm going to eat makes me feel better if I'm sad or upset.....	A	F	X	R	P	G	C	O
86. Thinking about what I'm going to eat makes me feel scared.....	A	F	X	R	P	G	C	O
87. Thinking about what I'm going to eat is un-pleasant.....	A	F	X	R	P	G	C	O
88. Thinking about what I'm going to eat makes me tense.....	A	F	X	R	P	G	C	O
89. Sometimes I find myself thinking about food without trying to.....	A	F	X	R	P	G	C	O
90. Sometimes images of food(s) will just appear in my mind.....	A	F	X	R	P	G	C	O

Food Fantasies Coding Form--Page 6

	Ani-mation	Fear	Anxiety	Revul-sion	Plea-sure	Gender	Control	Omit
91. Sometimes I feel that food is my best friend..	A	F	X	R	P	G	C	O
92. Sometimes food(s) or thoughts of it are like an enemy.....	A	F	X	R	P	G	C	O
93. Sometimes food(s) or thoughts of it are like a dictator.....	A	F	X	R	P	G	C	O
94. I refuse to think about food.....	A	F	X	R	P	G	C	O
95. I choose not to think about food or eating....	A	F	X	R	P	G	C	O
96. Something tells me when to eat.....	A	F	X	R	P	G	C	O
97. Something tells me what to eat.....	A	F	X	R	P	G	C	O
98. Something tells me not to eat.....	A	F	X	R	P	G	C	O
99. Something tells me when to quit eating.....	A	F	X	R	P	G	C	O
100. If I see or think about a certain food(s) I know I'll have to have it, even if I'm not hungry or don't really want it.....	A	F	X	R	P	G	C	O
101. Some food(s) is irresistable.....	A	F	X	R	P	G	C	O
102. I think feeling full is awful.....	A	F	X	R	P	G	C	O
103. I think feeling empty is good.....	A	F	X	R	P	G	C	O
104. I think feeling full is good.....	A	F	X	R	P	G	C	O
105. I think feeling empty is awful.....	A	F	X	R	P	G	C	O
106. Thoughts of food(s) panic me.....	A	F	X	R	P	G	C	O
107. When I eat I know where on my body the food goes.....	A	F	X	R	P	G	C	O
108. When I eat, I can see myself swell up in my mind.....	A	F	X	R	P	G	C	O
109. Sometimes "food" thoughts crowd out all other thoughts.....	A	F	X	R	P	G	C	O
110. When I eat I feel it turning into fat.....	A	F	X	R	P	G	C	O

APPENDIX D:

FOOD FANTASIES QUESTIONNAIRE

CODING FORM INSTRUCTIONS

The seven (7) factors to be considered and their definitions for purposes in this study are listed below. Please consider each statement and decide which factor it best represents, and circle the corresponding code letter for each. If you feel it does not represent any of the factors, and/or feel the statement should not be used, please circle "O" for "Omit". The items do not appear in any specific order. Any comments would be welcomed and may be recorded on the back of this page. Thank you.

Fear (F): any reference or inference of or to panic, terror or frightful avoidance, withdrawal or approach to food(s) and/or eating.

Anxiety (X): any reference or inference of or to tension, nervousness, aggitation, conflict, worry, stress or being upset in relation to food(s) and/ or eating.

Revulsion (R): any reference or inference of or to disgust, contamination, uncleanliness or avoidance because of these regarding to food(s) and/or eating.

Pleasure (P): any reference or inference of or to enjoyment, sensuousness, enticement, fun or relaxation regarding food(s) and/or eating.

Gender (G): any reference of or to male or female attributes or influences in regard to food(s) and/or eating.

Animation (A): any reference or inference of or to animal attributes, food being 'alive', showing movement, having physical features of an animal, human or the representation such as a cartoon figure; speech or indicating a life and/or will of its own regarding food(s) and/or eating.

Control (C): any reference or inference of or to internal or external authority, submission to and/or fear of authority figure(s) or concepts, lack of ability to stop or govern own thoughts and/or actions of helplessness regarding food(s) and/or eating.

APPENDIX E:

LETTER TO THE DELPHI PANEL MEMBERS:

Dear_____:

I am currently conducting research at Oregon State University concerning eating disorders. The focus of the study is the way that people with eating disorders internally represent, think and/or fantasize about food and/or eating.

All people have cognitions and fantasize about food and eating. My concern is whether people with anorexia nervosa, bulimia, bulimia nervosa or compulsive eaters think or fantasize about food or use their fantasies differently than people without eating disorders. My hypothesis is that people with eating disorders have more frequent, vivid, intense, compelling and/or graphic food related thoughts (fantasies) than do people without eating disorders, and that these may influence the enactment of anorexic and/or bulimic behaviors. Their fantasies may offer clues to underlying causal factors that are suggested by the content and nature of the fantasies. How an individual experiences their thoughts may indicate the fantasies' role in the onset and/or continuation of the eating disorder. To investigate this, I am constructing an instrument consisting of possible food related thoughts or fantasies that an individual might have. I have selected seven (7) factors by which to classify the fantasies: fear, anxiety, revulsion, pleasure, gender, animation and control. In its final form, the instrument will be a questionnaire of 42 fantasy-items that a person with an eating disorder would respond to on a six (6) point Likert-type scale ranging from "Rarely" to "Quite Often". The use I foresee for such a questionnaire would be that the therapist and client could investigate the responses along the seven factors via their subscores and find possible insight into the underlying causes for the onset and/or continuation of the disorder.

I would feel very privileged if you would assist me in deciding on how best to indicate the factors as they are presented on the instrument. I have enclosed a copy of a questionnaire designed for

coding the statements as per which factor each item represents. On the coding form, you will find statements, ideas or thoughts that an eating disordered individual might be more prone to have than a normal individual would. The items are based on or were garnered from case study, questionnaire and self-report research, diaries of individuals experiencing starvation in experimental or natural situations and fictional literature. They may appear literal or metaphoric. Each item reflects one of the seven underlying factors.

I would appreciate your participation in the coding of the items and am asking you to complete the questionnaire and return it to me in the enclosed stamped, self-addressed envelope. Please read each item and circle the code letter of the factor which, based on your research and clinical experience, is best represented by the item. Do not respond to the item as it pertains to your personal food thoughts or as to whether or not you experience the thought. Some items reflect certain factors better than others. If you think an item is a poor indicator, doesn't reflect any of the factors or is ambiguous, please circle "Omit".

Your assistance in this endeavor would be greatly appreciated. However, if you chose not to participate in the coding of the items, please return the uncoded form in the envelope. I hope to have the item selection and factor coding completed by the end of this summer so that I may prepare the instrument for testing.

Thank you for your time and assistance.

Sincerely,

Annette Bruyer-Davies, Ed.M.
Project Director

APPENDIX F:

FOOD FANTASIES QUESTIONNAIRE:

INFORMED CONSENT

This research concerns the fantasy/thoughts about food and eating that individuals experiencing problems with an eating disorder might have. The goal is to create a questionnaire that explores the fantasies and their meanings to the individual in relation to characteristics that have been associated with eating disorders. The insight gained from the questionnaire could then be used in therapy to facilitate the recovery process. There are no foreseeable risks or discomforts involved. Hopefully, the questionnaire will be informative and beneficial to you.

If you choose to participate in this study, please sign your name on the line below. Your identity and responses will be kept completely confidential. After the data are analyzed, all records that could possibly lead to your identification will be destroyed. All research results will be reported anonymously.

Your participation in this survey is entirely voluntary, and you may withdraw at any time without affecting your treatment. If you have any questions, please feel free to contact me at: 1-503-753-4229. Thank you for your time and consideration.

Annette Bruyer-Davies, Ed. M.
School of Education, Oregon State University

Signature: _____

Date Signed: _____

APPENDIX G:

FOOD FANTASIES:

People are constantly thinking, whether one is aware of the process or not. The way one thinks and the kinds of things one thinks about affect how one feels and what one does (behavior). Therefore, thought patterns may offer clues as to why one acts or feels as one does. Often, one doesn't think too much about what is going on in one's mind. At times, thoughts simply appear - one doesn't call them up. Thoughts range from being highly logical and rational to daydreams and fantasies. Most everyone has food fantasies, but they differ in each individual as to how they are experienced, what they are about, and what they may mean. The type of fantasy thoughts the questionnaire is investigating are the ones that might not seem rational, even to the person who experiences them. Often, such fantasies are hard to talk about or acknowledge, because they might be perceived as something "bad" or "strange". However, it may be that these fantasies can tell a lot about some of the problems underlying the eating disorder and the influence they may have on how the person acts and feels.

The questionnaire lists a number of possible thoughts or fantasies one may have about food and/or eating. Some items may be similar to your own thoughts, where others may not be. There are no right, wrong, or "socially acceptable" answers. The responses you give may indicate what part your thoughts play in your eating problem. Please answer as honestly as you can by circling the number that most accurately describes how frequently you experience each thought.

By participating in this research, you will be making a valuable contribution to this project and the general knowledge of eating disorders. The more that is learned about eating disorders, the clearer they are to understand and treat.

APPENDIX H:

THE FOOD FANTASIES QUESTIONNAIRE:

INSTRUCTIONS TO THE THERAPIST:

The Food Fantasies Questionnaire is the central focus of a research study regarding the subjective food and/or eating cognitions of individuals afflicted with an eating disorder.

The goal is to develop and field test an instrument for use in a therapeutic setting which relates the content, type, and/or patterns of food and/or eating thoughts to one of the seven clinical or personality characteristics that have been associated with eating disorders or are indicators of the psychopathology of the disorders. The term factor refers to the seven characteristics or indicators used in this study. The factors and their research definitions are:

Fear: Any reference or inference of or to panic, terror, or frightful avoidance, withdrawal or approach to food(s) and/or eating.

Anxiety: Any reference or inference of or to tension, nervousness, agitation, conflict, worry, stress or being upset in relation to food(s) and/or eating.

Revulsion: Any reference or inference of or to disgust, contamination, uncleanliness or avoidance because of these regarding to food(s) and/or eating.

Pleasure: Any reference or inference of or to enjoyment, sensuousness, enticement, fun or relaxation regarding food(s) and/or eating.

Gender: Any reference or inference of or to male or female attributes or influences in regard to food(s) and/or eating.

Animation: Any reference or inference of or to animal attributes, food being 'alive', showing movement, having physical features of an animal, human or the representation such as a cartoon figure; speech or indicating a life and/or will of its own regarding food(s) and/or eating.

Control: Any reference or inference of or to internal or external authority, submission to and/or fear of authority figure(s) or concepts, lack of ability to stop or govern own thoughts and/or actions of helplessness regarding food(s) and/or eating.

The eating disorders and their diagnostic criteria relevant to this project are anorexia nervosa, bulimia (including "compulsive overeating") (DSM III, 1980); and bulimia nervosa (Russel, 1979).

Cognitive disturbances and a preoccupation with food and/or eating have long been associated with starvation states, eating disorders and dieting. Many current therapies suggest cognitive restructuring as a treatment modality as well as techniques such as journals indicating thoughts and affective states in relation to eating behavior. However, these have tended to focus on dichotomous reasoning, "magical" thinking, irrational or distorted beliefs,

attitudes, or perceptions. Little attention has been given to the highly subjective, more personal fantasy-thoughts experienced by the individual. The daydreams, mental meanderings, or fantasies of the client may be fertile ground to explore regarding the nature of the eating disorder and how it is manifested in his/her mind. Identifying trends or patterns of fantasies revolving around one or more of the factors may provide insight as to the clients behavior.

POTENTIAL USES OF FOOD FANTASIES QUESTIONNAIRE

The questionnaire has many potential uses to facilitate either individual or group therapy. Some of the possibilities and advantages are listed below:

1. The questionnaire could be used to help the client focus on her/his thoughts about food. In turn, this could be an invitation to share in a dialogue about her/his food related fantasies. In a group, it could serve as a starting point for member interaction and/or sharing of experiences. The questionnaire could provide the therapist insight into the client's frame of reference and internal experiencing, thereby contributing to empathic understanding and facilitating the therapeutic relationship.

2. The questionnaire could give the client's fantasies validity. Seeing "strange" food thoughts on paper may allow the client to feel that s/he is not "crazy" for having the thoughts that s/he does, nor that s/he is alone in experiencing them. Perhaps the questionnaire could be viewed as a non-threatening way to tap the often ashamed of or hidden fantasies. This issue is also addressed in the respondent's 'Informed Consent and Instructions' form sheet. This form may appear lengthy, but its purpose is to be a 'gentle' lead into the acknowledgement of the client's fantasies and 'permission' to have them. The manner of introduction to the questionnaire may be crucial in clients with fragile egos, self-esteem, self-perception, or self-concept problems. Individuals with eating disorders are often concerned with outer appearance, be it physical or behavioral; i.e. being, looking, doing, acting 'right'. The questionnaire may allow such clients to see that it is all right to experience food fantasies and discuss them without appearing 'weird' or risking the therapist's rejection. It might not be appropriate for those showing high avoidance behavior, lack of inner or external trust, or who feel threatened by perceived loss of control.

3. The questionnaire would allow both the therapist and the client to get an idea of how much time the client's thoughts are on food; whether it is somewhat obsessed with food and eating, totally preoccupied with it or just at certain times, in certain situations or places, or concerning particular foods or behaviors. The total score would be an indication of the amount of time devoted to fantasies about food; how this relates to the amount of time spent in non-food cognitions would be a point that could be explored. (The time spent in food related thoughts [total score] has not been averaged for the eating disordered population nor for a normal control group. Until this is done and the relative difference computed, then the amount of time devoted to food thoughts and the relevance of them will have to be assessed on how the client experiences or feels about it subjectively.)

Discovering how the client feels about food thoughts, and/or the

time spent on them may provide clues as to the role the food fantasies play in the maintenance of the eating disorders. Are the fantasies welcomed or abhorred? Do they frighten or provide comfort? Is it felt that they interfere with daily functioning? What uses do they serve, or how are they used? Do the food fantasies serve as a form of self reward or self punishment? Are they used to keep the client company or as something to fill the mind? Insight may be gained through the process of answering these and similar questions.

4. Each of the questionnaire items reflects one of seven factors, with six items for each factor. Summing the score given each item in the factor category will give an idea of the predominant underlying themes or patterns of the client's fantasies. For example, a high score in the "Control" factor would indicate that the client has some concerns about issues such as feeling out of control when around food, controlling her/his thoughts about food, or that the body is resisting attempts to control it, etc. A low score on a single factor could indicate that it isn't a relevant part of the thought processes, or, as with all self-report items of this nature, that the items representing the factor (for example, "Gender") were too frightening or unacceptable to declare on paper. In light of this, perhaps the therapist's knowledge of the client would facilitate a decision as to whether or not the client was reporting honestly. (At this time, a factor analysis has not been done; the items were related to the factors via the opinion of a DELPHI panel. Until the analysis is done, it may be prudent to bear this in mind as the subscores are evaluated; however, the DELPHI Technique is recognized as an appropriate method to ascertain content validity.)

5. Once the fantasies and their associated factors are brought out and discussed in therapy, attention may then be given as to their role in the onset of the disorder and/or its continuation. Perhaps the client scored highest in the 'Control' and 'Gender' factors. The fantasies concerning these issues and the feelings attributed to and derived from them could be explored. Perhaps the client had been raised in a family where dieting or physical attractiveness were stressed. The control fantasies may be used as a focal point to investigate current feelings, fears, or behaviors as they pertain to past environment. From the information garnered through the dialogue(s) following administration of the questionnaire, therapeutic techniques and interventions may be decided upon. The disorders have been described as being multi-determined. The most productive method of therapy seems to be that which incorporates the orientation of the therapist and the needs of the client.

APPENDIX I:

FOOD FANTASIES QUESTIONNAIRE ADMINISTRATION AND SCORING

The Food Fantasies Questionnaire is a 42 item self-report pencil and paper test that is scored on a six point Likert-type scale. It is appropriate for individual therapy or group settings. The respondent circles the number which best indicates how often she experiences the fantasy represented by the item. It may be scored by either the therapist or the respondent. The total score is the sum of the point value given to each of the 42 items. It can range from 6 to 252, with 123 at the midpoint of the range. The total score reflects the prevalence and/or frequency of food and/or eating thoughts. It may suggest the relative amount of time the respondent's thoughts are preoccupied with food. No arbitrary cutoff point that distinguishes between eating disordered individuals and normal controls has yet been established, nor has a score been set which would indicate whether or not the respondent was abnormally obsessed or preoccupied with food thoughts.

The factor subscores are found by adding the point-value given each item included in the factor category. Factor subscores range from 6 to 36 with a midpoint of 21. A scoring key is provided. The purpose of the subscores is to indicate the underlying themes and content of the fantasies in relation to and between the factors. The higher the score, the more frequently fantasies revolving around the factor occur. It is assumed that the higher the score, the more relevant the factor is to the individual. No score has yet been set which indicates when a factor becomes dominant or significant in the manifestation of the eating disorders. For purposes of this research, you may choose not to score or discuss the questionnaire, or use it in therapy. The factor categories have not been ascertained beyond the use of the DELPHI Technique when the instrument was developed. A factor analysis is one of the goals of the research.

INSTRUCTIONS FOR ADMINISTRATION:

1. Give both the Informed Consent-Introduction form and the questionnaire to the individual. It may be appropriate to share the questionnaire and consent form with the parent(s) or guardian of a minor client prior to administration.
2. Read it to or with your client so that the purpose of the questionnaire is understood. If the client chooses to participate, have them sign and date the form and return it to you. Place it in the envelope marked "Consent Forms".
3. Ideally, the client would then fill out the questionnaire. However, in light of the therapy time and financial commitment involved, it may be more practical for the client to fill it out while at the office or group meeting place before or after the appointment time. Instruct the client to complete the questionnaire by themselves and not to discuss their responses. Any questions concerning the items may be directed to the person supervising the testing procedure. These measures are necessary to provide a uniform and controlled testing environment.
4. When completed, have the client return the completed form to you immediately.
5. To verify the diagnoses, please initial which disorder the client is experiencing, whether or not it is the same one the client indicated. If you wish to discuss the questionnaire with the client at a later date, feel free to make a copy.
6. As soon as you have collected all your clients' questionnaires, please place them, the scoring key (if used), and the consent envelope in the large envelope and contact me by phone (collect) at 1-503-753-4229. We will then make arrangements regarding how they will be returned to or collected by me. Please feel free to make any comments you may have regarding the Food Fantasies Questionnaire, how you used it, it's potential therapeutic value, etc.

Thank you for your cooperation.

Annette Bruyer-Davies, Ed. M.
School of Education, Oregon State University

APPENDIX J:

FOOD FANTASIES SCORING KEY:

Directions for Scoring:

1. Place the score given each item in the factory category on the corresponding line.
2. Add the six scores in each category to obtain the factor subscores.
3. Add the totals of the seven factor subscores to obtain the total score.

Factor Subscores:

Pleasure	Control	Revulsion	Anxiety	Animation	Gender	Fear
1 ____	2 ____	3 ____	4 ____	5 ____	7 ____	8 ____
6 ____	14 ____	11 ____	12 ____	10 ____	9 ____	15 ____
13 ____	16 ____	19 ____	21 ____	23 ____	24 ____	18 ____
17 ____	20 ____	22 ____	25 ____	26 ____	31 ____	30 ____
29 ____	34 ____	28 ____	27 ____	36 ____	33 ____	32 ____
37 ____	42 ____	41 ____	35 ____	40 ____	39 ____	38 ____
____	____	____	____	____	____	____

TOTAL SCORES:

Pleasure: _____

Control: _____

Revulsion: _____

Anxiety: _____

Animation: _____

Gender: _____

Fear: _____

TOTAL: _____

Comments:

APPENDIX K:

PARTICIPATING THERAPISTS:

1. Mariette Brouwers, Ph.D.
2. Susan Emerson Kerr, M.S.
3. Linda Moore, M.A., (Kris Long, group leader)
4. C. C. Naffziger, Ph.D.
5. Georgine Thompson, R.C.S.W.
6. Josephine von Hippel, M.D.
7. Barbara Weinstein, M.S.