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Correlates of Recovery for Persons with Eating Disorders:  
A Descriptive Analysis

by

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in

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## *Dedication*

To my mother, and best friend, Carole, for her unconditional love, guidance, and belief in me.

To my father, Maurice, for providing safety and love while allowing me to grow and become my own person.

I love you both, and could never have gotten to where I am without you.

To Poppy, Nana, and Londa...with me always.

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## *Preface*

The aim of this paper is to investigate inpatient treatment for eating disorders. Chapter 1 is a review of the literature on eating disorder inpatient treatment, including a discussion of the various program types offered and inpatient outcome studies. Chapter 2 relates the genesis, methods, and results of a survey-based research project comparing recovery outcomes and patient satisfaction between two types of eating disorder inpatient programs: Nurturing vs. Non-Nurturing.



# CHAPTER 1: Current Therapeutic Modalities for Eating Disorder Inpatient Treatment

## *A. Background and Epidemiology of Eating Disorders*

In everything from medical journals to People Magazine, PBS documentaries to tabloid news programs, one can find mention of eating disorders. The emaciated figures staring back from the pages and TV screens seem to hold a strange fascination for the general public-- gasp-provoking, disturbing, and yet for many, strangely glamorous. Speculation about whether or not someone has an eating disorder is endless, the individual under intense scrutiny being anyone from "Ally McBeal" to a college coed who has been increasingly absent from the dining hall and seems to be getting thinner and thinner.

The diagnostic criteria for anorexia nervosa and bulimia nervosa (as adapted from the Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> edition, or DSM IV) are as follows:

### **Anorexia nervosa**

- ◇ Body weight <85% of expected weight (or body-mass index  $\leq 17.5$ )
- ◇ Intense fear of weight gain
- ◇ Inaccurate perception of own body size, weight, or shape
- ◇ Amenorrhea (in girls and women after menarche)

## **Bulimia nervosa**

- ◇ Recurrent binge eating (at least two times per week for three months)\*
- ◇ Recurrent purging, excessive exercise, or fasting (at least two times per week for three months)
- ◇ Excessive concern about body weight or shape
- ◇ Absence of anorexia nervosa (Becker, et al., 1999).

\* A binge is characterized by the consumption of an unusually large quantity of food during a discrete period of time, with lack of control over eating

About 1% of all young women are estimated to have anorexia nervosa, whereas bulimia nervosa is believed to affect anywhere from 4-10% of this population (Haller, 1992). Of course, these disorders affect women of all ages, with diagnoses of anorexia nervosa occurring in an age range of 7 to over 80 (Center, "Food for Thought", 2002). Current figures indicate a male to female ratio somewhere between 1:10 and 1:20 (Halmi, 1998), and 90% of individuals diagnosed with eating disorders are women (Toomey and DiMartini, 1999). These statistics, though, should not be used to classify eating disorders as "women's diseases," or to minimize the impact of these disorders upon men, for males account for roughly 5-10% of anorexics and about 35% of binge-eating disordered patients (Center, "Food for Thought," 2002). Underreporting is considered a potential factor in the gap between female and male incidence (Toomey and DiMartini,

1999), as men may be less likely to be suspected of having an eating disorder, or to come forward as having one, especially since these illnesses traditionally have been so identified with women. Men considered particularly at risk for eating disorders are homosexuals, weight lifters, wrestlers, jockeys, and dancers (Toomey and DiMartini, 1999).

A 1999 New England Journal of Medicine article holds that “eating disorders affect an estimated 5 million Americans every year” (Becker, et al., 1999). In addition, many more individuals are perpetually dieting and exhibiting “clinically important variants” of eating disordered behavior (Becker, et al., 1999). On any college campus, one can find young women who subsist almost entirely on coffee and fat free frozen yogurt, as well as those caught in a restrict-and-binge cycle that teeters on the brink of bingeing and purging. Research indicates, in fact, that as many as 36% of young adult females “exhibit subclinical forms of bulimia nervosa” (Toomey and DiMartini, 1999), referred to in DSM IV as eating disorder NOS (not otherwise specified)\*. Furthermore, a staggering 79% of female college undergraduates engage in binge eating at some time (Haller, 1992).

\*Being that a diagnosis of bulimia nervosa requires bingeing and purging at least 2x weekly for at least 3 months, subclinical forms encompass bingeing and purging of less frequency or less duration

Mirroring the pervasiveness of eating disordered *behavior* is eating disordered *thinking*. Surveys of women of all ages, with weights completely in the normal range as designated by insurance charts, show that 75% consider themselves fat and want to lose weight. Even

more alarming is that various studies have borne out that the majority of these women of normal weight who want to be thinner actually aspire “to weigh only slightly more than the weights in the anorexia nervosa range” (Yager, 1992).

Eating disorders are sometimes dismissed as the domain of young, rich, white females—more affectation and self-indulgence than actual disease. In reality, the increased prevalence of eating disorders amongst upper or middle class Caucasian females may be due in part to increased health care access and utilization. Perhaps due to mounting awareness on the part of health care providers that the seeds of eating disordered symptoms are in fact dispersed quite widely in Western society, “ethnic, socioeconomic, and gender demographics appear to have shifted somewhat in recent years” (Toomey and DiMartini, 1999).

Thus, unhealthy relationships with food and weight, whether expressed in full-blown anorexia and bulimia, or manifesting as a kind of subclinical eating disorder, run rampant in contemporary society, and there is nothing to indicate that these potentially deadly obsessions are on the wane. Underneath the glossy, illicitly alluring veneer often cast upon eating disorders in the pop-cultural domain lies the disturbing reality: eating disorders carry one of the highest mortality rates of all psychiatric disorders. About 6% of eating disordered individuals will die, whether from suicide or the physical sequelae of their illnesses, including electrolyte imbalances and cardiac arrest (Center, “Food for Thought,” 2002). The mortality rate for anorexia nervosa specifically is greater than 10%

(Toomey and DiMartini, 1999). Effective treatment for eating disorders is therefore a true necessity.

Of the estimated 5 million Americans who are afflicted with eating disorders each year, roughly 9000 will be placed in medical and psychiatric hospitals, as well as residential programs (mostly anorexic and bulimic patients, with a smaller percentage of related disorders such as binge eating) (Sesan, 1994). As will be addressed subsequently, these particular patients are often so physically, psychologically, and emotionally vulnerable that despite their relatively small percentage amongst eating disorder sufferers, the inpatient eating disorder milieu is an extremely important area of inquiry and concern.

### *B. Inpatient Treatment for Eating Disorders: Who Qualifies?*

Guidelines for admission to an inpatient facility for anorexia nervosa and bulimia nervosa are generally delineated as follows:

1. *Severely lowered weight or rapidly decreasing weight.*
2. *Serious metabolic abnormalities, especially persistent hypokalemia.*
3. *Suicide intent or preoccupation.*
4. *Failure of well-designed outpatient treatment programs (Andersen, 1983).*

More specifically, a patient with anorexia is considered medically unstable and thus a candidate for hospitalization if having a “weight loss of 10% to 15% or more from normal for relapse only or 16% to 20% or more if it is a patient’s first episode” (Wiseman, et al., 1998). Though metabolic abnormalities are seen with both anorexia and bulimia, they are more common in bulimics than anorexics\*, and the “danger signals” for inpatient admission include “serum potassium below 3 mEq/L with an abnormal electrocardiogram,” (note: ST depression, T wave flattening), or “serum potassium below 2.5 meEq/L, metabolic alkalosis, and dehydration” (Wiseman, et al., 1998). Other physical indicators for inpatient treatment for eating disordered patients include arrhythmias, peripheral edema, hypoproteinemia, and severe anemia. Besides suicidal intent, psychiatric conditions that may cause an eating disordered patient to require inpatient treatment are “psychotic depression...or incapacitating obsessions and compulsions” (Halmi, 1998). Another inpatient qualifier for bulimic patients is an out of control binge/purge cycle that is adversely affecting occupational or academic functioning (Wiseman, et al., 1998).

\* There are both “restricting” anorexics and “binge-purge” anorexics, and the latter are especially vulnerable to metabolic abnormalities.

### *C. The Range of Inpatient Settings and Treatment Protocols*

In 1874, Sir William Gull provided the first known prescription for hospitalization in the treatment of those suffering with anorexia, deeming that they would best be healed nutritionally and psychologically if briefly given space from their family and friends

(Andersen et al., 1997). In separating the anorexic patient from her loved ones until she reached a healthy weight, "Gull was {actually} using a form of behavior therapy" (Halmi, 1983, "Treatment..."). So, therein lie the underpinnings of today's widely prevailing inpatient therapeutic regime: cognitive behavioral therapy (CBT). For bulimia, CBT is the "first line 'treatment of choice'" (Mussell, et al., 2000). Unlike the case with bulimia, however, CBT's effectiveness in anorexia has not been demonstrated in controlled trials (Mynors-Wallis, 1989).

Nonetheless, CBT is the dominant treatment for both anorexia and bulimia in the inpatient setting\*, and involves "a combination of behavioral and cognitive procedures to change patients' behavior, their attitudes to shape and weight, and when relevant, other cognitive distortions, especially low self-esteem and extreme perfectionism" (Stunkard, 1997). The behavioral aspect entails patient actualization, as she is expected to maintain diaries of food intake and weight, and to begin charting a realistic and healthy diet plan (Mynors-Wallis, 1989). Applied to the inpatient milieu, CBT is carried out within a system of positive and negative reinforcements. This behavioral modification entails rewards for weight gain, such as phone and mail privileges, visits, and social and outdoor activities, and disincentives for failure to gain weight, including bed rest until patients become close to their target weights, isolation, tube feeding, and restricted bathroom use (Halmi, 1983, "Anorexia...", Halmi, 1983, "Treatment...", Wiseman, et al., 1998).

\*The general consensus within the eating disorder treatment community is that CBT, or any therapy for that matter, is most effective in anorexics when they have achieved a healthier weight, for starvation affects neurological functioning

In the last several decades, inpatient eating disorder treatment has seen several trends. Before the mid-1970's, admission to a general rather than psychiatric hospital was the norm for eating disordered patients. Generally, hospitalization was deemed a "last resort" for the radically underweight- a drastic "life-saving measure"- and so re-feeding the patient was the primary focus rather than getting at the roots of the eating disorder (Sesan, 1994, Bruch, 1973). The medical interventions included forced feeding via hyperalimentation or nasogastric tube placement, drug therapy, and even electro-shock therapy; the psychology, emotions, and socio-cultural context of the eating disorder were wholly ignored (Sesan, 1994).

Though less commonly utilized today, medical hospitalization for eating disordered patients does still occur, particularly in the ICU setting (Halmi, 1998), or in adolescent and pediatric wards (Collins, et al., 1983, Gowers, et al., 2000). Treatment in these settings, however, tends more to serve the purpose of medical stabilization en route to psychiatric hospitalization, or entails a combination of medical and psychological modalities (Gowers, et al., 2000). Because of the denial that so often characterizes eating disorders, anorexic and bulimic patients are sometimes more willing to be admitted to a medical rather than psychiatric unit: admitting to a physical malady is often easier and less shame producing for a patient than acknowledging a psychological problem (Halmi, 1982). Moreover, due to the concrete thinking often occurring in these illnesses, severe medical symptomology may be the first justification for the eating disorder sufferer that



she needs help: physical maladies are more tangible than psychic pain and obsessional behaviors. In this way, medical hospitalization can prove beneficial, even life-saving, to a resistant eating disordered patient who is in great physical and psychological danger. A drawback to a medical admission, beyond less treatment focus on the complex etiology of eating disorders, is that the staff on a general medical ward might not be well-trained in handling eating disordered patients:

*The patient's surreptitious and manipulative behavior can...be exceedingly disruptive to the nursing staff which may not have sufficient personnel to monitor secret vomiting, hoarding of food, laxative use, and exercising. Moreover, the nursing staff in a general hospital will more likely feel that anorectic patients are causing their own illness and, therefore, may be less willing to put in the time and effort to monitor the undesirable behaviors of these patients, as compared with others seriously ill, and more deserving of service (Halmi, 1982).*

Even today, with increasing public awareness of eating disorders, hospital staff are still being encouraged by treatment researchers to learn understanding and the avoidance of blame when dealing with anorexic and bulimic patients, and to handle and overcome their anger towards these patients' behavior, as is necessary with smokers suffering with lung cancer and drug and alcohol abusers (Robinson, 2000).

The potential pitfalls inherent with inpatient disorder treatment in a general medical ward are superbly captured in Stick Figure, the 2000 memoir of Stanford medical student Lori Gottlieb, which consists of her diary entries at age 11: the year she suffered with anorexia nervosa. Soon after she ceased eating due to a sudden determination that she

was “too fat”—despite being of normal weight—Lori was admitted to the general pediatric ward of Cedars-Sinai Hospital. Both hilarious and frightening are the details she shares about this experience, describing one nurse who didn’t even know why she was assigned to watch Lori eat, and so asked the young girl, “What kind of disease do you have, child?” When Lori responded that she didn’t have a disease, but rather had to abstain from “fattening things like sugar,” the nurse railed against the doctors for failing to note “diabetes” on Lori’s chart rather than a lot of illegible “nonsense” (Gottlieb, 2000).

With the nurse leaving to confront the physicians about the seeming discrepancy, Lori was able to flush the bulk of her dinner down the toilet bowl. When the nurse later learned the truth, she was angered, and dismissed Lori as making herself sick as opposed to the other children on the ward who had real illnesses, and no hand in creating them (Gottlieb, 2000). Though awareness of eating disorders in both the health care field and society as a whole has dramatically increased since 1978, when Lori was hospitalized, her account captures the lingering problems with a general medical ward as the setting for eating disorder inpatient treatment—lack of education with regard to eating disorders can easily lead normally caring staff onto avenues of impatience and reproach in their dealings with anorexic and bulimic patients. Alarming, this reproachful attitude may actually reinforce the patient’s own pathogenic belief that her illness is an offense and she is the sole culprit.

Though general hospital eating disorder inpatient treatment varies, some features are almost universally present, encompassing the regimented structure and positive and negative rewards so common to CBT-based eating disorder treatment. These modalities include bed rest and restricted visitation until target weight is neared, monitored food/liquid intake and output, and lack of free choice in foods until the patient is in her “maintenance” weight phase (initially, high calorie liquid supplements like Sustacal are usually offered 6 times daily in lieu of solids, especially for markedly underweight patients) (Halmi, 1982).

As the 70's drew on, the psychology behind eating disorders began garnering increasing consideration, and so the favored inpatient milieu began shifting from medical to psychiatric units. Like the strictly medical programs, the early psychiatric inpatient protocols stressed weight gain, but couched this goal within a more psychological and emotional context. Moreover, forced nasogastric tube placement and hyperalimentation were largely abandoned, while bed rest and liquid supplements were maintained to effectuate weight gain. Behavioral modification carried over from the general wards, with the aforementioned mandatory bed rest and liquid meals as treatment measures until the achievement of target weight—deemed a powerful incentive for patients to be compliant with treatment (Sesan, 1994).

Currently, inpatient psychiatric facilities for the treatment of eating disorders exist within private psychiatric hospitals or on the psychiatric wards of general hospitals. The unit

may solely treat the eating disordered population, or exist as a mixed treatment ward, with patients grappling with various mental disorders all grouped together. More recent psychiatric programs pride themselves on “multidimensional” treatment models that view eating disorders as intricate illnesses weaving together mind, body, emotion, and culture in their expression. This broader conceptualization is given form through psycho-educational groups aimed at empowering patients with the biopsychology of their disorders and nutritional knowledge, as well as group therapy giving attention to body image, assertiveness training, and women’s identity. Thus, treatment is constructed as a richly faceted, dynamic process, aiming to address a complex etiology, and occurring in individual, group, and family settings (Sesan, 1994, Wiseman, et al., 1998).

Despite the increasingly comprehensive therapeutic approach in psychiatric inpatient units, however, “the majority of programs continue to focus on weight gain, weight stabilization, and normalization of eating behaviors as primary goals, with only secondary attention paid to underlying psychological distress” (Sesan, 1994). Insight-oriented therapy is usually deferred in favor of CBT and concomitant positive and negative reinforcements, the former not deemed as effective in the initial “control {of} eating disorder symptomology” (Sesan, 1994). Furthermore, various psychiatric programs still rely on forced nasogastric intubation for efficient and effective weight gain (Wiseman, et al., 1998). Thus, an eating disordered patient’s experience on a psychiatric treatment ward may initially mirror a stay in the general hospital.

Notwithstanding the many common threads running through psychiatric inpatient treatment programs and the various widely applied protocols, areas of debate certainly exist. Discussion of weight and calories is one significant item of contention. Some programs place a complete moratorium on all talk of weight and calorie counting: "rather the emphasis is on patients' achieving self-understanding of their feelings and thoughts," and any discussion of weight is seen as wholly detrimental to a patient's recovery (Andersen, et al., 1997). For some eating disordered patients, the lack of weight discussion is actually a relief, for the idea of directly addressing weight gain or healthy caloric intake is overwhelming. Hilde Bruch, however, a psychiatrist specializing in eating disorders, has long held that failure on the part of a therapist to address a patient's weight, either in the out- or inpatient setting, is "antitherapeutic," regardless of a patient's preference. Various treatment programs share this ideology, deeming that "the problems that come up in connection with weight changes offer important material for psychotherapeutic exploration" that will be left unexcavated if the direct address of weight is not undertaken (Bruch, 1978).

In the midst of hospital-based programs, residential treatment centers for eating disorders exist as alternative inpatient locales. Recognizing the reputation of the traditional medical and psychiatric hospital program as punitive, rigid, and coolly clinical, residential centers often pride themselves on being nurturing and more fluid in their therapeutic practice. The Renfrew Center, founded in 1985, with inpatient facilities in Pennsylvania and Florida and an outpatient center in New York, was the first residential center established

expressly for eating disordered women. This program employs the same team approach as most psychiatric hospitals, with patients receiving multidimensional care via psychiatrists, psychologists, social workers, nurses, physicians, nutritionists, family therapists, exercise instructors, and art therapists.

Though cognitive behavioral therapy is part of the treatment approach, this program prides itself on less of a castigatory climate than traditional behavioral modification based hospital programs. The facility website and written literature speaks of the center's "warm, safe and friendly atmosphere," describing itself as a "sheltering 'home' in which to heal." Mealtime Support Therapy is offered during and after every meal, and "includes non-coercive, staff-supported mealtime, as well as group therapy following meals to help process and resolve feelings that arise as a result of eating." Peer interactions are extolled as a potent restorative force, the belief being that "as women connect with each other, they draw strength and comfort from this special community." Thus, group therapy is greatly emphasized, with up to eight sessions offered each day. Another inherent principle at the heart of the program is that each patient is an individual, with a unique illness journey. The Center's basic therapeutic goals of medical stabilization, symptom management, relapse prevention, and transitional living are unilaterally applied but are personalized for each patient. Like the majority of medical and psychiatric hospital programs, however, medical/weight stabilization is the primary initial goal at the Renfrew Center.

Another residential center whose eating disorder treatment emphasizes warmth and individuality is Sierra Tucson in Arizona. This program adopts a holistic healing approach, and as explained on its website, employs a combination of “both traditional and innovative therapies {that} engages patients experientially,” and aims to “embrace the whole person”: her “mind, body, spirit, and emotions.” Sierra Tucson’s therapeutic method includes shame reduction—the center’s theory being that inner psychic shame and guilt is at the heart of an eating disorder—as well as eating disorder education as a means of empowerment, a 12 step model, and “expressive arts” focused on body awareness and “self-nourishment” (i.e. having patients use drawing, writing, and magazine clippings to depict self-perception, fears and insecurities, and personal goals and hunger—physical, spiritual, and emotional). “Gentle meal” focuses on the aesthetic appreciation of food, its goal being a balanced approach to eating that replaces the guilt attached to food with a healthy savoring.

The treatment practices found at residential clinics such as the Renfrew Center and Sierra Tucson display the trend towards feminist inpatient eating disorder treatment explored and advocated by various contemporary clinicians and researchers. Robin Sesan, PhD and Director of Brandywine Psychotherapy Center in Delaware, discusses feminist inpatient treatment protocols for eating disorders in a chapter of the 1994 compilation Feminist Perspectives on Eating Disorders. As she explains, feminist treatment facilities “value and foster ‘safe’ connections and facilitate interdependence as opposed to fostering isolation and competition” (Sesan, 1994).

A more traditional behavioral modification hospital program, such as the eating disorder programs at Cornell University-New York-Presbyterian Hospital and Stanford University, routinely limits or completely restricts peer interaction for patients failing to gain weight or for transgressing rules, and requires residents to report each other for any break of protocol. From the feminist vantage, these actions create a competitive, potentially divisive environment that only serves to reinforce a sense of isolation—the continuation of eating disordered behavior on an inpatient unit is deemed as “a longing for or fears of connection with others,” so no benefit is seen from further alienating someone who is acting out of a prevailing sense of alienation (Sesan, 1994). The feminist alternative would be “symptom acceptance,” with even a patient in the midst of purging being allowed the emotional and physical embrace of a peer (Sesan, 1994). This faith in the healing strength of interconnection—“of women breaking through shame and isolation as they voice their pain to one another” (Sesan, 1994)—is at the core of residential facilities such as the Renfrew Center and Sierra Tucson.

Thus, contemporary inpatient options for eating disorder treatment vary in setting, philosophy, and application. With perpetual investigation and debate surrounding the possible psychological, genetic, neuro-chemical, and socio-cultural roots of both anorexia and bulimia, the range of therapeutic offerings is sure to continue widening and transforming.



## CHAPTER 2: Research

### I. INTRODUCTION

#### *A.) Review of the literature on eating disorder inpatient treatment*

Amongst psychiatric disorders, anorexia nervosa and bulimia nervosa carry one of the highest Standardized Mortality Ratios (SMR), with anorexia specifically carrying a mortality rate anywhere from 5% to 20% (Robinson, 2000). As discussed in Chapter 1, the percentage of eating disorder patients who enter inpatient treatment facilities is admittedly extremely small: 9000 per year out of the approximately 5 million Americans with eating disorders (Sesan, 1994). However, taking into account the relatively high risk of mortality from eating disorders and the extreme physical and psychological vulnerability of most patients seeking inpatient treatment, a closer look at inpatient treatment practices and efficacy is quite significant and potentially life saving.

A study involving adolescent eating disorder patients indicates the necessity of investigation into inpatient practices (Gowers, 2000). The study sample consisted of 75 adolescents with anorexia nervosa, 21 of them having received in-patient care in a hospital setting (either pediatric or psychiatric) and 51 receiving out-patient care with no in-patient treatment (2 died during the study, and one was lost to follow up). Follow up

occurred at 2-7 years from the time of initial assessment, and the outcome was judged according to weight (whether or not maintained above at least 85% of ideal), the occurrence of regular menses, and degree of social functioning. The researchers found the poorest outcomes were associated with having received inpatient treatment. Of course, the arguably profound physical and psychological distress marking those eating disordered individuals receiving inpatient care could be the more immediate cause of the poor outcomes rather than inpatient treatment itself. Though acknowledging the "severe" medical and emotional distress of most inpatient clients, Gowers does maintain that "the results {of the adolescent study} do not lend compelling support to the effectiveness of {in-patient} intervention" (Gowers, et al., 2000). Even more potentially alarming is the researchers' assertion that "when treatment is considered alongside other predictors of outcome," (predictors including age, length of illness, weight at assessment, etc...), the "receipt of in-patient treatment is the most important predictor of poor outcome" (Gowers, et al., 2000). Of note, no mention was made in the piece of whether the hospital programs were nurturing or punitive in nature.

Unfortunately, formalized inquiries into long-term inpatient treatment outcomes are largely lacking. The researchers in the aforementioned adolescent study noted that "there are no randomized controlled trials of in-patient v. out-patient treatment in adolescent anorexia nervosa" (Gowers, et al., 2000). This is also the case with adults. Most of the research on treatment outcomes has focused on the efficacy of specific therapies (i.e. cognitive behavioral vs. interpersonal therapy in bulimic patients) in inpatient, partial

hospitalization, and outpatient settings rather than on the efficacy of particular inpatient programs (Jansen, 2001). Choice of therapy, however, is but one of many critical components of an inpatient program, and does not exist as a static entity. There is a dynamic interplay between mode of therapy, its application, staff-patient and peer relationships, psycho-educational, artistic, and/or spiritual workshops, and unit protocol, thus necessitating a study of the success of the inpatient milieu as a contained unique treatment entity.

One study (Jansen, 2001) that addressed the specific role of inpatient treatment for eating disorders was conducted by German researchers and published in 1999. They studied 103 individuals with anorexia who “were admitted to a large medical-psychological hospital for an average of 120 days and underwent...’broad spectrum treatment” that included “psycho-education, creative therapy, dance therapy...body-oriented therapy,” and work on the improvement of “self-esteem and social skills,” addressing emotions, and “relapse prevention” (Jansen, 2001). The participants were studied six years after having received the inpatient treatment, and 55% were found to no longer have an eating disorder (though almost all of these individuals were markedly underweight and still showed restrictive eating patterns and other eating disorder symptomology), while 6% had perished. This study is problematic for various reasons. Methodologically, it has no control groups, standardization, or “manipulation check.” Moreover, the results that were reached are far from encouraging, indicating that “such multimodal and total treatment”

is “mediocre in the long run despite the fact that neither cost nor effort were spared” (Jansen, 2001).

The limited data concerning inpatient efficacy, as well as the poor inpatient outcomes displayed in the studies that have been undertaken, point to the need for a more thorough inquiry into inpatient offerings and success rates. Another indicator of the necessity for further clarification are the outcome results published by the Renfrew Center Foundation, which has residential eating disorder treatment facilities in Pennsylvania and Florida and an outpatient center in New York, and purports to providing patients with a “nurturing” healing environment. In contrast to the aforementioned results from medical inpatient treatment outcome studies, the Renfrew Center provides these figures (based on the self-reporting of females who had received an average of 50 days of residential treatment at the Renfrew Center from 1988 until 1991, these results received up to 3 years following treatment):

- ◇ 82.7% of those with anorexia nervosa “reported significant decreases in eating disorder symptoms and no longer met full diagnostic criteria for anorexia”
- ◇ 61% of those with bulimia markedly reduced their bingeing and purging
- ◇ 25.4% of those with bulimia indicated a complete cessation of binge/purge behavior (Renfrew, 2000, “Eating Disorder Treatment Outcomes”).

Though the Renfrew Center acknowledges that these results are at best “tentative” (they had no control group, nor did they account for the role of other factors, such as outpatient treatment, in the patients’ recoveries), such figures suggest the possibility that different inpatient treatment settings (i.e. “traditional,” hospital based vs. residential, “supportive”) may yield strikingly different recovery outcomes. Again, though, the lack of formalized, methodologically strong data makes problematic any definite conclusions about efficacy rates amongst individual inpatient settings.

### *B.) Research Questions*

As set forth in Chapter 1, current inpatient treatment modalities for eating disorders exist on a continuum ranging from punitive programs that employ a system of rewards and punishments, to more nurturing, spiritual, or feminist based facilities that focus more on emotional support and insight than discipline. This wide range in treatment protocol, along with the limited and questionable pool of data concerning inpatient treatment outcomes, generates some exceedingly valuable research questions. Is there any correlation between prevailing inpatient therapeutic tone and patient satisfaction? What is the relationship between recovery outcome measures and the inpatient treatment philosophy and approach? Is there any validity to the possibility raised by a comparison of the aforementioned studies: are emotionally supportive inpatient therapeutic models more efficacious than predominantly behavioral modification based programs in engendering recovery amongst eating disordered individuals?

## II. METHODS

### *A. Participants*

Criteria for participation in this study were as follows:

- ◇ Diagnosis of anorexia nervosa or bulimia nervosa
- ◇ Female gender
- ◇ Age 18-60
- ◇ Utilization of eating disorder inpatient treatment within the past four years
- ◇ In recovery from the eating disorder for at least 6 months

### *B.) Recruitment, Consent, and Survey Design*

Participants were recruited through the use of an advertisement (see Appendix A) posted on two internet websites: [www.bodypositive.com](http://www.bodypositive.com) and [www.palereflections.com](http://www.palereflections.com). These websites offer education about eating disorders as well as support, chat rooms, and referrals. In describing the study's eligibility requirements, the advertisement served as a screening tool, and also clearly explained the requirements for participation, time involved, and rights to confidentiality. Additionally, the posting contained the researcher's contact number and e-mail address so that interested individuals could easily

ask questions and begin their participation. During initial contact, the researcher confirmed recovery status by asking if there was a decrease or cessation of eating disorder behaviors (starvation, bingeing and purging) for at least 6 months. Note: prior to the start of data collection, the researcher was granted permission from the Human Subjects Committee at University of California, Berkeley.

Once contact was established and participation was agreed upon, the researcher asked for an address, e-mail account, or fax number (according to participant preference) where the questionnaire packet could be sent. This packet included a cover letter (Appendix B), an informed consent form (Appendix C), the survey (Appendix D), and if sent by mail, a self-addressed, stamped return envelope for easy return. They were asked to return all materials within two weeks of receipt, and were told they would receive a check or money order for \$16 upon researcher's receipt of the signed consent form and completed questionnaire. Participants were also reminded that they were free to contact the researcher with questions, that they could withdraw from the study at any time without penalty, and had the right to receive the study results at its completion.

The researcher devised a 10 page survey (see Appendix D) to assess participants' *most recent* inpatient experience within the past four years. Initial drafts of the survey were fine-tuned with the assistance of a clinical psychologist specializing in the treatment of eating disorders. Additionally, the survey was employed in a pilot study of 10 recovered eating disordered individuals who had received inpatient treatment within the past 8

years, and changes were made based on their feedback. The survey format consisted predominantly of checklists. For the researcher's questions, the following information from the questionnaire was particularly germane:

- ◇ Treatment Philosophy of Program (punitive—rewards/punishments, nurturing, or even mix)
- ◇ Usage of Positive and Negative Reinforcements in Program
- ◇ Recovery Outcome Measures
- ◇ Frequency of Relapses
- ◇ Factors Participants View as Integral in Effectuating Recovery
- ◇ Participants Overall Inpatient Treatment Satisfaction

Other topics addressed by the survey included co-morbid psychiatric diagnosis, use of psychiatric medication, severity and length of eating disorder prior to entering inpatient treatment, circumstances of admission and departure (i.e. voluntary vs. involuntary, self-discharge against medical advice, etc...), demographics, weight history, and a comments section for respondents choosing to express feelings and opinions regarding illness, treatment experience, survey design, etc...

In the course of the researcher's data analysis, survey respondents were grouped according to the nature of their inpatient treatment program (punitive, nurturing, mixed). Thus, the study sample was not randomly assigned to groups, and a "true" experimental design was



not employed. Furthermore, no control group was utilized in this study (i.e. *unrecovered* eating disordered females who had received inpatient treatment for their disorder within the past 4 years). See the Discussion section for more details of study limitations.

### *C.) Variables Used in Analysis*

The primary outcome variable identified in this study was the current frequency of relapses (i.e. starvation, binging/purging). Secondary outcomes included weight maintenance, decrease in associated symptoms (i.e. normal eating patterns, recognition of hunger and fullness, realistic body image), and psychosocial indicators (i.e. steady employment or attendance at school, attending social functions, sustaining an intimate relationship).

The key predictor variable was the prevailing therapeutic tone of the inpatient program: nurturing vs. non-nurturing (punitive and mixed). Therapeutic tone was assessed using both objective and subjective criteria. Participants were asked if their programs contained positive and negative reinforcements, and if they answered yes, to choose from a checklist the specific positive and negative reinforcements employed (a fill-in was offered for any reinforcements not offered on the checklist). Survey respondents were then asked to choose what they considered the program's "main treatment philosophy or attitude:"

Rewards/Punishments (Punitive), Nurturing and Supportive, or a Fairly Even Mix of Both.

Analysis was stratified by age, length of illness (prior to inpatient admission), co-morbid psychiatric diagnosis, age at admission, length of illness prior to admission, use and type of psychiatric medication, circumstances of admission (i.e. voluntary vs. involuntary), length of stay, and family history of eating disorders.

### *E.) Statistical Methods*

Statistical approach included bi-variate analysis and chi-square testing. Given the limitations in sample size (n=81) these methods were deemed best applicable (see Limitations section). Odds ratios, 95% confidence intervals, and p values were calculated with STATA. A significance level was established at 0.05. In the tables included in Results, the following key was used:

- ◇ \* = p value between 0.05 and 0.01
- ◇ \*\* = p value between 0.01 and 0.001
- ◇ \*\*\* = p value less than 0.001

### III. RESULTS

This study was designed to find differences in recovery outcomes and level of patient satisfaction based on the therapeutic tone of inpatient eating disorder programs: nurturing vs. non-nurturing. In total, 102 surveys were sent out, and 81 completed and returned, for a final response rate of 79.4%. Amongst the survey variables chosen for data analysis, there were no missing responses. 39 participants considered their programs nurturing, 36 punitive, and 6 a fairly even mix of both nurturing and punitive. The “fairly even mix” group was relatively small (n=6), and to facilitate data analysis, the final grouping was established as nurturing (n=39) vs. non-nurturing {punitive (n=36) and mix (n=6) for a total “non-nurturing” n=42}. The mixed group was combined with the punitive group because 5 of the 6 mixed programs contained 3+ positive and/or 3+ negative reinforcements: distinctions not typical of the nurturing group (see Table 1).

Recovery outcomes were grouped as follows:

- ◇ Current *relapses* of eating disorder behavior (starvation, bingeing, purging)
- ◇ Maintenance of *target weight* or *weight stabilization*
- ◇ Improvement in *associated* or *secondary symptoms* {normal eating pattern (eating 3 meals/day, variety of foods, normal portions), recognition of hunger and fullness, healthy body image}

- ◇ Expression of *psychosocial indicators* {attending social/family functions, sustaining an intimate relationship for >3 months, maintaining employment, attendance at school}

The participants' designations of treatment approach were compared to the utilization and number of positive and negative reinforcements in a given program, and subjective designations correlated very well with presence (or absence) and number of positive and negative reinforcements (i.e. nurturing programs tended to have either no system of rewards or punishments *or* fewer positive and negative reinforcements than non-nurturing programs). All participants who reported having no positive and negative reinforcements designated their programs as nurturing, comprising 44% of the total "nurturing" sample. Furthermore, 100% of those in programs with 3 or more negative reinforcements deemed their programs "punitive." In fact, 95% of the programs deemed non-nurturing employed 3+ negative reinforcements. Also, only one respondent in the 3+ positive group saw her program as nurturing. Programs with 1-2 positive reinforcements comprised 54% of the nurturing group and 35% of the punitive (see Table 1).

Examples of positive reinforcements were outdoor privileges, increased participation in meal planning, being allowed to engage in moderate exercise, and removal of bathroom supervision. Negative reinforcements included loss of privileges (i.e. telephone, TV, going outdoors), mandatory bed-rest, prohibition of all exercise, meeting with staff,

restricted contact with staff and peers, feeding tube placement, bathroom supervision, and shortened family visits.

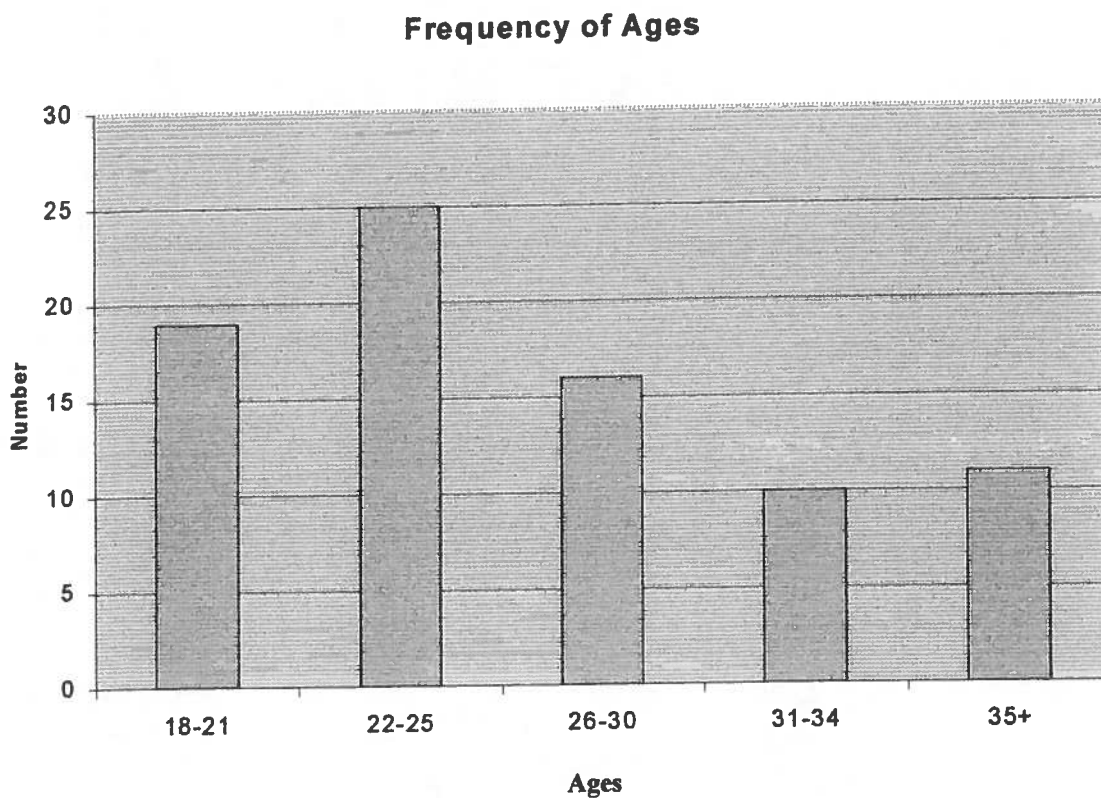
(Note: "Positive" and "negative" incentives tend to go hand in hand in eating disorder inpatient treatment practice—as reflected in the literature and the surveys comprising this study—and are thus included (or excluded) as one entity. So, a program is not likely to have rewards without punishments and vice versa).

For many demographic variables, the nurturing and non-nurturing groups did not differ significantly (see Table 2). The most notable differences related to age. While those aged 18-23 comprised only 21% of the Nurturing group, they formed 48% of the Non-Nurturing group. Similarly, individuals 30 years or older were 21% and 41% of the Nurturing and Non-Nurturing groups, respectively. This difference in age composition is further reflected by the relative percentages in both groups of those with admission age >21 and high school as the highest level of education completed.

The total sample of 81 females had a mean age of 27 years, with the standard deviation (SD) being 7.9, and the range was from 18-54 (see Chart 1 for age distribution). The racial breakdown of the sample was as follows: 70% Caucasian, 14% African-American, 10% Asian-American, 5% Latina, 5% Pacific Islander, 4% Mexican-American, 2% Native American, and 2% Middle Eastern (Note: there is some overlap between the groupings, as some respondents were bi- or multi-racial). 57% of the participants were single, and 77% had no children. As for the highest level of education completed, results included: 41% high school, 16% junior college, and 28% four-year college or higher. 46% of subjects were employed full-time, and 49% were students.

51% of the sample was diagnosed with bulimia nervosa and 49% with anorexia nervosa (31% restrictive subtype, 18% binge/purge subtype). 52% of participants had a co-morbid psychiatric diagnosis, and the breakdown of this percentage was as follows: 35% mood disorder, 16% anxiety disorder, 10% substance abuse, and 7% personality disorder. 51% of the respondents were currently taking psychiatric medicine for their eating disorders and/or co-morbid conditions, the medications being: 26% selective serotonin reuptake inhibitors (SSRIs), 16% non-SSRI antidepressants (10% heterocyclics, 4% tricyclics, 2% monoamine oxidase inhibitors), 11% antibipolar medication (9% antiseizure medications, 2% lithium), and 2% antipsychotics. Of statistical significance is that those currently taking SSRIs were only 0.31 times as likely to be weight stabilized or maintaining a program-provided target weight in comparison to those not on SSRIs (including both those on other psychiatric medications and those taking no medications).

The mean age of eating disorder onset was 17 (SD=5.3) and mean age of diagnosis was 20 (SD=6.4). Average age at admission was 25 (SD=7.8) and the mean length of stay was 31 days. Mean length of illness prior to inpatient admission was 8 years. When analyzed by recovery outcomes, participants having >5 years between eating disorder onset and admission in the survey discussed program were 3.1 times more likely to express improvement in secondary symptoms than those with  $\leq 5$  years between onset and admission. Admission was voluntary for 65%, and involuntary for 35%. Finally, 28% of respondents had a first degree relative with an eating disorder. See Table 3 for an analysis of the preceding demographic and illness variables by recovery outcome measures.

**Chart 1: Histogram of Participants' Ages****Table 1: Comparison of participants' designations of therapeutic tone with number of positive and negative reinforcements (by percentages)**

	<i>% of Nurturing (n=39)</i>	<i># in Nurturing</i>	<i>% of Non- Nurturing (n=42)</i>	<i># in Non- Nurturing</i>
<i>No. of Positive Reinforcements</i>				
0	44%	17	0%	0
1-2	54%	21	35%	15
3+	2%	1	64%	27
<i>No. of Negative Reinforcements</i>				
0	44%	17	0%	0
1-2	56%	22	5%	2
3+	0%	0	95%	40

**Table 2:** Description of participants by percentages in nurturing and non-nurturing programs

	<i>Number</i>	<i>% of Nurturing</i>	<i>% of Non-Nurturing</i>
<i>Age</i>			
18-23 yrs.	28	21%	48%
24-29 yrs.	28	38%	31%
30+ yrs.	25	41%	21%
<i>Eating Disorder Type</i>			
Anorexia: restrictive	25	31%	31%
Anorexia: binge/purge	15	23%	14%
Bulimia	41	46%	55%
<i>Psychiatric History</i>			
Co-morbid psych. illness	42	59%	45%
Any psych. meds	41	59%	43%
SSRI medication	21	28%	24%
Non-SSRI anti-depressant meds	13	23%	10%
Anti-bipolar meds	9	13%	10%
Family history of eating disorders	23	23%	33%
<i>Program Stay</i>			
Voluntary admission	53	72%	60%
Length of stay >30 days	27	36%	31%
Admission age >21	47	67%	50%
Yrs. between onset & admission >5 yrs.	46	62%	52%
<i>Race</i>			
White	57	74%	67%
Nonwhite	24	26%	33%
<i>Social Factors</i>			
Single	46	49%	64%
No children	62	69%	83%
High school ed.	33	31%	50%
Junior college ed.	13	15%	17%
4 yr. college or more	23	33%	24%
Employed full-time	37	54%	38%
Student	40	44%	55%



**Table 3:** Descriptions of participants by outcomes (all values in odds ratios—OR—95% confidence interval)

	No.	Current Relapses (n=44)	Maintaining Target Weight/ Wt. Stabilized (n=66)	Improved Secondary Symptoms (n=45)	Expressing Psychosocial Indicators (n=76)
<i>Age</i>					
18-23	28	-----	-----	-----	-----
24-29	28	0.65 (0.22-1.9)	0.42 (0.11-1.6)	1.8 (0.62-5.2)	1.0 (0.13-7.6)
30+	25	0.7 (0.24-2.1)	1.2 (0.25-6.1)	1.7 (0.58-5.2)	1.8 (0.16-22)
<i>Psych. History</i>					
Co-morbid psych. dx.	42	0.85 (0.35-2.0)	0.47 (0.15-1.5)	1.1 (0.48-2.7)	See note 1 below
Any psych medication	41	1.4 (0.59-3.4)	0.30 (0.09-1.05)	1.0 (0.44-2.5)	See note 1 below
SSRI meds	21	1.5 (0.55-4.2)	0.31 (0.095-0.99)*	0.65 (0.24-1.8)	See note 1 below
Non-SSRI anti-depressants	13	0.68 (0.21-2.2)	0.71 (0.17-3)	2 (0.56-7.1)	See note 1 below
Anti-bipolar meds	9	1.1 (0.26-4.3)	0.77 (0.14-4.1)	1 (0.25-4)	See note 1 below
Family hx. of eating disorders	23	2.4 (0.88-6.8)	1.1 (0.31-3.9)	0.83 (0.31-2.2)	See note 1 below
<i>Program Stay</i>					
Voluntary admission	53	1.6 (0.65-4.1)	0.41 (0.11-1.6)	0.58 (0.22-1.5)	See note 2 below
Length of stay >30days	27	0.55 (0.22-1.4)	2.3 (0.59-8.9)	1.6 (0.61-4.1)	0.74 (0.12-4.7)
Age >21 at admission	47	0.9 (0.37-2.2)	0.9 (0.29-2.8)	1.5 (0.61-3.6)	0.92 (0.14-5.8)
>5 yrs. btwn illness onset and admission	46	0.44 (0.18-1.1)	1.7 (0.53-5.1)	3.1 (1.2-7.7)*	2.1 (0.33-13)

Note1: No odds ratios could be established. Psychsoc=1 predicts failure perfectly (STATA)

Note 2: No odds ratio could be established. Psychsoc=1 predicts success perfectly (STATA)

Table 4 provides the results of analysis of recovery outcomes by program type and number of positive and negative reinforcements. The nurturing and non-nurturing groups were quite similar with respect to two of the recovery measure groupings: weight stabilization/target weight maintenance and psychosocial indicators. Striking differences emerged, however, when it came to relapses and secondary eating disorder symptoms. Those having been in non-nurturing programs were 9.3 times more prone to relapses than those who had received treatment in nurturing programs, and only 0.13 times as likely to have improvement in secondary symptoms.

The number of both positive and negative reinforcements also yielded statistically significant results in relation to relapses and secondary symptoms. Individuals whose programs had 3+ negative reinforcements were 6.3 times more likely to have current relapses than those in programs with zero negative reinforcements, and they were only 0.10 times as likely to express improvement in secondary symptoms. In keeping with the tendency for positive and negative reinforcements to go hand in hand, the results for the positive reinforcements largely mirror those for the negative. In comparison with the zero positive reinforcement group, participants with 3+ positive reinforcements were 9.4 times more likely to have relapses and only 0.11 times as likely to express secondary symptom improvement.

**Table 4:** Program variables in relation to recovery outcomes (all values in OR, 95% confidence interval)

	No	Current relapses	Maintaining target weight or wt. stabilized	Improvement in secondary symptoms	Expressing psych- soc indicators
<i>Program Type</i>					
Non-Nurturing	42	9.3 (3.4-26)***	0.93 (0.3-2.9)	0.13 (0.05-0.35)***	0.25 (0.03-2.3)
Nurturing	39	-----	-----	-----	-----
<i># of Negative Reinforcements</i>					
3+	40	6.3 (1.8-22)**	0.63 (0.12-3.4)	0.10 (0.03-0.4)**	See note
1-2	24	0.75 (0.2-2.8)	0.4 (0.07-2.3)	0.64 (0.14-30)	See note
0	17	-----	-----	-----	-----
<i># of Positive Reinforcements</i>					
3+	28	9.4 (2.3-39)**	0.58 (0.1-3.3)	0.11 (0.03-0.45)**	0.76 (0.06-9.1)
1-2	36	0.93 (0.29-3.0)	0.42 (0.08-2.2)	0.55 (0.15-2.0)	0.97 (0.08-11)
0	17	-----	-----	-----	-----

Note: For these variables, no odds ratio could be established: psychsoc=1 predicts success perfectly (STATA)

Degree of treatment satisfaction also varied according to type of program. Those in the nurturing group were 3.7 times as likely as the non-nurturing group to give their programs an overall satisfaction score of 8-10 on a 10 point scale. Moreover, those in nurturing programs were 6.1 times as likely as the non-nurturing group to recommend their programs to others, 3.7 times as likely to attribute their recovery to their inpatient treatment, and 3.6 times as likely to indicate marked improvement in eating disorder severity (marked improvement defined as >5 point improvement on a 1-10 scale, with

immediate post-treatment severity rating subtracted from pre-treatment severity rating)\*\*.

Additionally, participants expressing the aforementioned indicators of satisfaction had much lower incidences of relapses and higher incidences of secondary symptom improvement than those without indicators of marked satisfaction. These results are in Tables 5a and 5b.

\*\* Note: Mean pre-treatment severity rating was 8.7, mean post-treatment rating was 5.2, and so the mean difference in severity was 3.5.

**Table 5a:** Type of program vs. measurements of satisfaction (all values in OR, 95% confidence interval)

	<i>Highest Program Satisfaction (8-10 on a 1-10 scale)</i>  <i>n=43</i>	<i>&gt;5 pt. Improvement in Eating Disorder Severity (1-10 scale, from pre to immediate post treatment)</i>  <i>n=35</i>	<i>Positive Recommendation Of Program to Others</i>  <i>n=50</i>	<i>Attribute Recovery to Program</i>  <i>n=45</i>
<i>Nurturing</i>	3.7 (1.5-9.2)**	3.6 (1.4-9.1)**	6.1 (2.2-17)***	3.7 (1.5-9.5)**
<i>Non-Nurturing</i>	—————	—————	—————	—————

Note: A strong correlation existed between highest program satisfaction and >5 pt. improvement, with 34/35 of those with > 5 pt. eating disorder improvement expressing highest program satisfaction

**Table 5b:** Measurements of satisfaction vs. recovery outcomes (all values in OR, 95% confidence interval)

	<i>Current Relapses</i>	<i>Improvement in 2° Symptoms</i>
<i>Highest program Satisfaction</i>	0.33 (0.13-0.83)*	2.8 (1.2-7.1)*
<i>&gt; 5 pt. Improvement in Eating Disorder Severity</i>	0.29 (0.11-0.72)**	2.6 (1.0-6.5)*
<i>Positive Recommendation of Program to Others</i>	0.41 (0.16-1.03)	3.9 (1.5-9.9)**
<i>Attribute Recovery to Program</i>	0.4 (0.16-0.99)*	2.8 (1.1-6.9)*

An additional factor that demonstrated a statistically significant connection with recovery outcomes was method of therapy. Within the nurturing and non-nurturing inpatient treatment milieus exist specific therapies. Cognitive behavioral therapy (CBT) is perhaps the most commonly applied therapy for eating disorders, particularly in the inpatient setting. In this study, 36 of the 81 participants received treatment in programs emphasizing CBT. Of the other 45: 27 received primarily insight oriented therapy, 7 mostly interpersonal, 5 religious/spiritual, 4 had a 12-step model and 2 feminist\*. For the purposes of analysis, the interpersonal, religious/spiritual, 12-step, and feminist categories were grouped together as "Other".

\*CBT explores the connections between thoughts, attitude, and behavior, and is focused on the present as the key to psychological healing. It is often applied within a system of rewards and punishments. Insight oriented therapy, on the other hand, entails the analysis of past personal history and events that gives meaning and "insight" to present behavior. The interpersonal approach focuses on identifying stress in relationships and social interactions that may have contributed to the development of the eating disorder.

In this study, CBT was overwhelmingly associated with non-nurturing rather than nurturing programs and an insight oriented approach was strongly connected with nurturing facilities. While CBT was the primary therapy in only 13% of programs deemed nurturing, it was the main approach in 74% of the non-nurturing programs. The insight oriented approach, in contrast, was the primary therapy in 64% of the nurturing programs and only 5% of non-nurturing programs. See Table 6a for these results.

As for the connection between therapeutic method and recovery outcomes, insight based, CBT, and "other" therapeutic approaches effectuated contrasting results. Of greatest statistical significance is that participants in programs employing CBT were 10.5 times as likely to relapse as those whose programs had an insight oriented approach. The CBT group was also 0.18 times less likely than the insight focused group to have improvement in secondary symptoms. Furthermore, participants whose programs emphasized "Other" therapeutic approaches were 5.5 times more likely to relapse than the insight oriented group. These results are shown in Table 6b.

**Table 6a:** Mode of therapy vs. program type (values in percentages)

	No.	% of Nurturing	% of Non-Nurturing
<i>Cognitive Behavioral</i>	36	5/39 = 13%	31/42 = 74%
<i>Other</i>	18	9/39 = 23%	9/42 = 21%
<i>Insight Oriented</i>	27	25/39 = 64%	2/42 = 5%

**Table 6b:** Mode of therapy vs. recovery outcomes (OR, 95% confidence interval)

	<i>Current relapses</i>	<i>Maintaining target weight or wt. stabilization</i>	<i>Improvement in secondary symptoms</i>	<i>Expressing psychosocial indicators</i>
<i>Cognitive Behavioral</i>	10.5 (3.2-34)***	1.4 (0.4-5)	0.18 (0.06-0.53)**	See note
<i>Other</i>	5.5 (1.5-20)*	1.4 (0.3-6.6)	0.91 (0.24-3.5)	See note
<i>Insight Oriented</i>	-----	-----	-----	-----

Note: psychsoc=1 predicts success perfectly

## IV. DISCUSSION

### *A.) Data Analysis Conclusions*

This study was designed to discern the impact of eating disorder inpatient therapeutic tone upon recovery outcomes and patient satisfaction, and to discover any differences in this regard between Nurturing and Non-Nurturing programs.

Statistically meaningful results appeared in two recovery outcome groupings: current relapses and improvement in secondary eating disorder symptoms. Analysis of both weight stabilization/maintenance of target weight and expression of psychosocial indicators vs. program type did not yield statistically relevant data. The figures in terms of relapse and secondary symptom improvement, however, are striking: the non-nurturing group, in comparison to the nurturing, was 9.3 times as likely to have current relapses of bingeing/purging or starvation behavior, and 0.13 times as likely to have improvement in secondary symptoms. In keeping with the tendency for non-nurturing programs to be associated with a higher numbers of both positive and negative reinforcements than nurturing programs (see Table 1 in results, and Chapter 1 discussion of nurturing vs. punitive), those in programs with 3+ negative reinforcements were 6.3 times more likely to relapse and 0.10 times less likely to have secondary symptomatic improvement than those in programs with zero negative reinforcements. Likewise the 3+ positive group had 9.4 times the tendency to relapse and only 0.11 times the likelihood of improvement in



secondary symptoms. So, a higher number of even *positive* reinforcements were not experienced as useful or therapeutic in terms of recovery outcomes.

The tendency toward relapse and the lower incidence of subjective symptomatic improvement experienced by the participants whose programs contained higher numbers of positive and negative reinforcements may be due to a fundamental incompatibility between eating disordered patients and behavioral modification. Compliance, rooted in a profound need for approval, is a trait shared by many eating disordered patients, and they are often willing to gain weight as a means of showing that they are "good" and that they can be safely discharged. The punishments, and even rewards, are thereby experienced as an outside means of control that must be adhered to, and they do not engender an internal system of regulation. Even the apparent success effected by non-nurturing programs, therefore, may be no more than an ephemeral concealment of relapsing tendencies that reemerge when the patient returns to her original environment.

The majority of nurturing programs in this study did contain a system of negative and positive reinforcements: while 44% had no system of positive and negative reinforcements, 56% did. However, they tended to have a lower number of positive and negative reinforcements than did the non-nurturing programs (see Table 1 in Results). Specifically regarding negative reinforcements, 1-2 reinforcements were disproportionately found in nurturing rather than non-nurturing programs, comprising 56% of nurturing programs and only 5% of the non-nurturing programs. Interestingly,

when compared to a baseline of zero negative reinforcements, having 1-2 negative reinforcements did not yield a statistically significant difference in recovery outcomes. Three participants described their nurturing programs as being “compassionate” or “sympathetic,” and therefore effective, in implementing positive and negative reinforcements. Four respondents from the non-nurturing group, in contrast, expressed that the “cold,” “detached,” or “regimented” application of rewards and punishments in their programs made them feel secondary in importance to rules and regulations. As one participant noted, “The sanctity of the rules and the swift and harsh way penalties were handed down for failing to obey made the rules seem like ends in and of themselves. Not feeling that the punishments were being carried out with my genuine interest at heart made me resent being subjected to them and worked against my recovery.” So, perhaps both number of positive and negative reinforcements as well as the *staff attitude* surrounding their application, can affect patients’ perceptions of programs as nurturing or non-nurturing, as well as determine whether the reinforcements are detrimental to their recovery.

The emergence of relapses and secondary symptoms as the recovery outcomes most impacted by therapeutic tone raises some interesting questions and conjectural possibilities. In the “Comments” section of the survey, fifteen respondents used language relating to legal incarceration to describe their inpatient experiences. Programs were likened to “jail,” “prison,” “a police station,” and staff were compared to “wardens” and “prison guards.” Participants expressed being made to feel like “criminals,” that

“deserved” to be “punished”, and that struggling with an eating disorder was somehow a “sin,” “transgression” or “crime” against society. Other respondents described feeling “micromanaged,” “under a microscope,” and that “big brother” was watching. So, perhaps the increased tendency to relapse seen amongst those treated in non-nurturing facilities is in some ways a rebellious response to newfound “freedom” as well as an internalization of reproachful, accusatory messages. One participant from a non-nurturing program offered this regarding her tendency toward relapse:

*I'm glad I'm filling out this survey a few years after being in the program because now I know that I didn't dislike the program simply because I was in the midst of a really bad period in my eating disorder...I am really happy and a lot healthier now, and it is in spite of the program, not because of it. The staff treated us like we were things, not people...and {their} main priority was having us finish everything on our plates. There was no real attention paid to our fears or desires, and no genuine recognition that we were sick...our eating disorders were treated more as self-inflicted problems than actual mental illnesses. If you messed up, didn't eat enough... you were kept alone in your room. Instead of seeing a backslide or slip up as indicators that extra care and concern might be needed, these were viewed and treated by the staff as transgressions, and the anger, disgust, and blame they dumped on us basically said that we were too stupid, worthless, or criminal to deserve understanding and sympathy. When I left there, I felt so low that all I had was my eating disorder to hold on to. I am not saying that I tried 100% in the program or after I left, but how much can you believe in yourself and your ability to get better when the staff treats you like a bad child or criminal that can't be trusted? It's only been with the help of a therapist who looks at me as a whole person, more than the sum of her symptoms, and suffering with a mental illness, not perpetrating a crime, that I have been able to care enough about myself to reduce the frequency of my bingeing and purging. We're working on the fears and trauma hidden beneath my eating disorder and that works better than counting how many kernels of corn are left on my plate or isolating me if I throw up.*

Moreover, the non-nurturing programs may help maintain eating disorder behavior by inadvertently fostering competition amongst patients. Five respondents in non-nurturing programs described being so “denigrated” or “humiliated” by punishments and constant supervision, whether in the dining room or the bathroom, that competing for who was the best at her eating disorder became a way to feel worthwhile. As one respondent expressed with poignancy and stark eloquence:

*The only empowerment left to us—after the daily indignities of feces measurement, peering faces outside the bathroom stalls, crumb for crumb accounting of food intake, and an official 24 hr. guard if you dared to still exhibit symptoms of your illness—was to see who could get away with the most secret exercise, which grown women could fit into children’s clothes, who had the best tricks for inducing quick vomiting, who knew just the right combination of over the counter diet pills and prescription ups that could bring the fastest weight loss. I left there a much more successful bulimic, with new helpful hints about better purging and drug-induced appetite suppression, and desperately holding onto my sagging muscles and jutting bones as twisted badges of honor and strength. Therapy has helped me begin finding healthy sources of value in myself, and healthy coping mechanisms, and I’ve gotten a lot better, but every now and then I still feel the need to binge and purge and prove that I’m still good at it and that I could still have my eating disorder to hold onto if I ever needed it.*

Secondary symptoms were defined in this study as establishment of normal eating habits (3 meals/day, varied foods, balanced portions, etc...), recognition of hunger and fullness, and realistic body-image. These symptoms are more subtle and subjective than weight stabilization, and perhaps the mandatory weighing and calorie focused approach employed by many non-nurturing programs (see Part I) lacks the nuances required to treat these symptoms. Eating disorders are characterized by fear, guilt, and rituals

surrounding food, and emotionally supportive inpatient programs may be more effectual in addressing and tackling these symptoms. Moreover, realistic body-image largely rests upon strong self-esteem, and the disciplinary model of many non-nurturing programs, with the requirement for patients to “measure up” to rules and regulations in order to avoid “punishment,” may overlook or even counteract the establishment of positive self-image. As one participant noted about her nurturing program:

*I had been in another program several years before this one, and they were like night and day. The other program was about towing the line and it made me feel bad all the time, like I was a failure for not having the strength to stop restricting my calories. 90% of the staff's attention was devoted to food rather than on the underlying, truly significant issues. The last program I was in struck the right balance between paying attention to what I was eating while addressing the conflicts and turmoil that got me in trouble in the first place. I saw that the therapists and other staff valued me as a human being and didn't hold my eating disorder against me. Their caring and optimism helped me start to feel good about myself for the first time in years. I'm at my "target weight," and weigh more than I have in 6 years, and I can honestly say that I when I look in the mirror, I can see that I'm not fat and accept myself, and my inpatient treatment was the first step in getting to this level of self-acceptance.*

Significant impact upon recovery outcomes was also found with specific modes of therapy. Cognitive behavioral therapy (CBT) was overwhelmingly associated with non-nurturing rather than nurturing programs: 84% those programs emphasizing CBT were designated as non-nurturing. The reverse was true with insight oriented therapy, as 93% of programs employing this as their primary form of therapy were categorized as nurturing. As would be expected, based on these definite associations with program type,

participants in the CBT programs were 10.5 times more likely to have relapses than participants in programs focusing on insight-oriented therapy, and only 0.18 times as likely to have improvement in secondary symptoms. These figures suggest the possibility that a specific mode of therapy may be at the root of differing recovery outcomes between nurturing and non-nurturing programs. The association of CBT with increased tendency toward relapse, as compared to the insight oriented approach, once again suggests a poor fit between a disciplinary, behavioral modification centered approach and eating disordered patients. Often, their unhealthy and extreme eating patterns represent desperate efforts to gain self-mastery in the face of overwhelming feelings of powerlessness and ineptitude. Thus, they need to develop and cultivate a healthy system of self-regulation and control that can be a lasting alternative for—and security against—their disordered eating. Behavioral modification, as an exterior means of authority and discipline, may do little to nurture the necessary internal infrastructure.

Regarding demographics, as well as illness and psychiatric history, two instances of statistical significance emerged in the analysis of recovery outcomes. Individuals with greater than 5 years between eating disorder onset and inpatient admission (in the program discussed in the survey) were 3.1 times more likely to exhibit improvement in secondary symptoms than those with 5 or less years between illness onset and program admission. Establishing and maintaining a diet marked by variety and normal portions and the recognition of hunger and fullness require practice and dedication for most individuals struggling with eating disorders, as they must diminish their fear and learn to

view food and eating in healthy and pleasurable terms. Furthermore, a realistic body-image involves building self-esteem and learning self-acceptance. These are all processes that may take many years of both therapy and personal work, potentially explaining the positive impact on secondary symptom improvement of having greater than 5 years between illness onset and inpatient admission: prior to entering their only or most recent inpatient programs, the seeds of subjective symptom improvement may have already been sown. Participants currently on SSRI medication were 0.31 times less likely to have weight stabilization or maintenance of target weight than those not on SSRIs. This difference is most likely due to the use of SSRIs specifically to treat eating disorders, particularly bulimia, irrespective of a co-morbid diagnosis of depression. SSRIs often decrease appetite and can assist in diminishing bingeing and the subsequent purging. Also, SSRIs are used to treat OCD: a co-morbid diagnosis commonly found in eating disordered patients. The obsessions and compulsivity often include rituals and prohibitions surrounding food that can promote and reinforce eating disordered thinking and behavior. Thus, participants prescribed SSRIs may be more seriously eating disordered and “less recovered” than those not prescribed SSRIs—whether they are not on any psychiatric medication or are prescribed other psychiatric drugs.

The difference in age between the nurturing and non-nurturing groups brings up the possibility of age as a confounder. The non-nurturing group was noticeably younger than the nurturing group—individuals 18-23 years old comprised 21% of the nurturing group and almost 50% of the non-nurturing group, while those 30 or older were 41% of the

nurturing and only 21% of the non-nurturing—thereby raising the question of whether the differences in recovery outcomes and treatment satisfaction between the nurturing and non-nurturing groups are due, in small or large part, to participant age. Analysis of recovery outcomes by age, however, revealed no statistically significant data, suggesting that the age disparity between the nurturing and non-nurturing groups was not a considerable confounding factor.

Finally, measurements of patient satisfaction showed a pronounced correlation with program type. Participants treated in nurturing programs were 3.7 times more likely than those treated in non-nurturing programs to attribute their recoveries to their inpatient treatment and also to give their programs high overall satisfaction ratings (8-10 on a 10 point scale). Additionally, the nurturing group was 6.1 times more likely than the non-nurturing to positively recommend their programs to others. Another measure of treatment satisfaction was participants' assessments of their eating disorder severity pre and immediately post treatment, rating both on a 10 point scale. Participants treated in nurturing programs were 3.6 times more likely than those in non-nurturing programs to indicate a greater than 5 point improvement from pre to immediately post treatment.

The higher pre to post treatment improvement ratings of those in the nurturing group fits with the lower incidence of current relapse and higher incidence of secondary symptom improvement expressed by the nurturing rather than non-nurturing group. In fact, those participants with >5 point improvement in illness severity pre to immediately



post treatment were found to be 0.29 times less likely than those with less improvement to have current relapses and 2.6 times more likely to have improvement in secondary symptoms. Considering that 97% of those with >5 point improvement in eating disorder severity immediately following treatment also expressed overall program satisfaction of 8-10, inpatient treatment satisfaction correlated with both short and long term recovery success.

Examining the markedly increased recovery success associated with nurturing, insight-oriented inpatient programs, as opposed to non-nurturing, CBT focused programs—as well as the higher rates of patient satisfaction associated with nurturing rather than non-nurturing facilities—calls for a potential shift in the prevailing inpatient treatment paradigm for eating disorders. Eating disorder patients are often dangerously engulfed by feelings of inadequacy, failure, and self-recrimination. Moreover, those eating disorder patients who are markedly underweight often receive a blatant or unspoken “Just eat already” message from family, friends, and even health care professionals. With their tendencies to self-flagellate and to elicit reproachful responses, it therefore seems completely misguided and detrimental to subject eating disorder patients to the culpability and subjugation inherent in a disciplinary program emphasizing positive and negative reinforcements. Rewards and punishments may, however, have a place in effective eating disorder treatment if they are used sparingly and applied in a supportive and empathetic—rather than “regimented” and castigatory—manner.

Challenging the establishment of greater numbers of nurturing, insight oriented treatment programs is the tremendous legitimacy and authority granted CBT in the eating disorder canon. CBT is the treatment mainstay at many renowned, high profile inpatient centers, such as the eating disorder programs at Cornell (New York-Presbyterian Hospital) and Stanford University. A search of medical journals for eating disorder information yields many articles extolling the value of the CBT/behavioral modification approach for eating disorders—a large number written by the directors of the Cornell and Stanford programs, Dr. Katherine Halmi and Dr. Stuart Agras, respectively. As two of the leading contemporary authorities on eating disorder treatment, their therapeutic philosophies claim widespread acceptance amongst health care professionals, and even with the general public; concerned relatives of eating disordered patients, as well as proactive patients themselves, are often apt to seek treatment with well-regarded “experts.” Thus, a widespread change in inpatient approach to eating disorders will require further studies comparing nurturing and punitive approaches, as well as the dedicated advocacy of health care professionals and patients who believe in and have seen firsthand the physical and psychic benefits of a nurturing approach.

The following statements from a participant with experiences in both types of programs elucidate the potential rewards of a nurturing approach:

*I've spent much of my life submerged in self-doubt, feeling worthless, and without a real identity...unknowable, especially to myself. When I*

*entered my first inpatient program, I was in a desperate state, and I knew I needed help. I expected that I'd find understanding and knowledgeable compassion, and begin establishing the sense of self-regard and worth needed to fight my eating disorder. So I was devastated to almost immediately discover that everything was about obedience. All the rules, incentives and disincentives, seemed like an easy way out for most of the staff: they didn't have to get to know us beyond whether or not we did what we were supposed to. Those were the two groupings, and both were invisible. If you followed, like not shoving your food under the radiator, you were allowed to disappear into the sitting room to watch TV, and if you were caught throwing up, you were sent to the isolation room so you could be forgotten about for awhile. So I did what I had to do to get the gold star and leave, and I felt more empty than when I got there. Then I threw up within minutes of being home. It's hard to learn inner control and self-esteem when you are treated as little more than a checklist of calories consumed. When I was recommended to my last program, I had stopped believing that I deserved, or even could be, helped. There wasn't any one magical thing in this program, and I didn't miraculously abandon my eating disorder overnight. The simple fact that the staff heard me, and didn't banish me to solitary confinement for throwing up or pat me on the head and send me on my way for being a good girl, made me start recognizing myself as a real person, with feelings and needs that merited attention. The therapeutic bonds I formed at this facility helped me get into the recesses of my mind and begin dealing with the hurt, conflict, and fear I had tried to bury and which had gained expression through my eating disorder.*

## **B.) Limitations**

One major limitation in this project was the lack of a control group. The study sample consisted solely of recovered women who'd received inpatient treatment. Surveying unrecovered individuals who'd sought inpatient treatment for their eating disorders would have been a potential source of valuable information. Are there personal factors (length of illness, co-morbid psychiatric illnesses, family history of eating disorder, etc...) that

distinguish recovered individuals from the un-recovered? Or, are there differences in inpatient treatment modalities (punitive vs. nurturing, use of positive and negative reinforcements, etc...) experienced by recovered vs. un-recovered persons: i.e. were un-recovered individuals more likely than recovered persons to have been in a punitive program?

The pool of participants presents another potential problem with this study. These females were recruited via eating disorder internet websites. Thus, participation in the study presupposed access to and understanding of computers, as well as a certain level of interest in their eating disorder and perhaps in maintaining recovery. This raises the dilemma of generalizability: can these results be applied to eating disorder sufferers as a whole? Are there factors unique to those with computer access/familiarity and use of eating disorder websites (socioeconomic, motivational, etc...) that affect recovery outcomes, and thus separate them from other eating disorder sufferers?

Another fundamental problem with this study is its reliance on self-reporting. Denial plays a large role in the psychopathology of eating disorders, and this creates the possibility of self-deception in survey responses. The question of reliability is especially problematic since one of the most crucial designations in the study—Nurturing programs vs. the Non-Nurturing—rests largely on participants' subjective designation. Perhaps a program was seen as nurturing or non-nurturing more because of the personalities of staff members than actual therapeutic ethos. Questions about the presence and specific nature

of positive and negative reinforcements were also included in the survey as a means of supplementing and validating subjective impressions with more objective criteria, but the survey could definitely have benefited from more concrete, impartial criteria for what separates “nurturing” from “punitive” or “non-nurturing.”

The problem of reliance on self-reporting also potentially includes “revisionist history,” perhaps on a subconscious level. Those currently expressing many recovery measures, particularly lack of relapse and improvement in secondary symptoms, might be so content with their level of recovery that their inpatient experience is transmitted through a “rose-colored” perspective. Thus, the non-nurturing aspects of their treatment might be forgotten or even repressed. Likewise, those individuals whose recoveries are marked by struggles with relapse and subjective symptoms, such as a persistently negative body image, may tend to ruminate on and perhaps magnify the punitive aspects of their programs. So, the correlation of better recovery outcomes with nurturing programs may include some degree of recall bias.

Other study flaws include unclear survey terminology. “Maintenance of target weight” was included in the recovery outcome checklist, and was in reference to target weights established by inpatient programs. Participants might not have realized that, and could have thought target weight meant a personal target. Also, not every inpatient program employs target weights, so someone not checking it could mean two very different things: they are not maintaining the target weight they were given or they were never given a

target weight. Because target weights are not utilized in every facility, “weight stabilization” was included in the checklist, but this phrase is also vague, as someone could be stabilized at an unhealthy body weight.

It is also significant that the survey employed was of a non-validated design. A pilot study of 10 participants was employed and attempts were made to provide explanations of potentially confusing terms (i.e. descriptions were offered for Cognitive Behavioral Therapy, Interpersonal Therapy, etc...when they were included in a checklist). Rigorous survey design, however, traditionally involves large-scale, long-term refinement of questions, putting them through multiple batteries of tests to clear up as many ambiguities and flaws as possible, and these measures were not taken in this project.

Furthermore, the sample was not very racially diverse: roughly 72% of respondents were Caucasian, with the next highest representation found amongst African Americans (14%). However, though this sample may not seem like an accurate cross-section, the preceding percentages are actually in keeping with current epidemiology: though racial and “ethnic...demographics appear to have shifted somewhat in recent years,” the majority of eating disorder sufferers are still Caucasian (Toomey and DiMartini, 1999).

Lastly, the study sample was small ( $n=81$ ), hampering multi-variate data analysis. Additional factors could have been controlled for if the sample size was larger. For example, differences in recovery outcomes/relapses between those whose eating disorder

involved binge behavior, such as bulimics and binge-purge anorexics, and those without bingeing history (restrictive anorexics) could have been determined. In this sample, the majority (69%) had a binge history, so the non-bingeing group was relatively small, hampering comparison. Also, the impact of a positive family history of eating disorders (raising the possibility of both genetic and environmental predisposition) is another potentially relevant factor in impacting treatment outcomes, but only a relative minority of surveyed individuals had positive family histories, thus limiting the potential for statistically relevant results. Finally, 94% of the sample expressed psychosocial indicators, and with such a small n for the non-psychosocial indicator group, meaningful comparison between the nurturing and non-nurturing programs in terms of this significant recovery outcome was hindered.

So, as the data was not subjected to as rigorous and textured an analysis as possible, the problem of generalizability arises again, and points to the need for a larger sample size in the future.

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**Have You Been in Recovery from Anorexia or Bulimia  
For at least Six Months?**

**Have You Received Inpatient Treatment for Anorexia or Bulimia  
Within the Past Four Years?**

**Are you a female between the ages of 18 and 60?**

If the answer to all of these questions is yes, I am asking for you to share your voice. I am a 3<sup>rd</sup> year medical student enrolled in a Master's/MD program, and I am writing a thesis on current inpatient treatment practices for anorexia and bulimia.

The purpose of my project is to find out your opinion about what was helpful, and what wasn't, in your inpatient treatment and to compare treatment results between different types of inpatient programs. In this way, I wish to promote further knowledge and insight in the treatment of eating disorders.

**Here's what you'll be asked to do:  
Complete and return a 20-35 minute survey  
that you'll receive in the mail**

**All information will be kept entirely CONFIDENTIAL.**

*If you are interested in participating in my project, or have any questions, please  
call or e-mail me.*

**Thank you so much for your invaluable contribution, and for joining me  
in the pursuit of knowledge in eating disorders.**

**My contact info:  
Marissa D. Foster  
[mfooster@socrates.berkeley.edu](mailto:mfooster@socrates.berkeley.edu)  
UCSF-UCB Joint Medical Program, MS/MD  
University of California at Berkeley  
(510) 928-1900**

**You can leave a voice mail at any time, giving me your first name and a phone number.  
I look forward to talking with you!**

Dear Participant,

Thank you so much for taking the time to be part of my study in this incredibly significant area! I appreciate you setting aside the time to participate in this project. In this packet I've enclosed:

- The questionnaire, which you can fill it out in pen
- An Informed Consent Form
- Self-addressed, stamped return envelope

Please complete and return the questionnaire and informed consent form in the self-addressed, stamped return envelope within two weeks of your receiving them. If more convenient for you, you may receive, complete, and/or return the informed consent form and questionnaire by fax or e-mail. You can indicate your preference by calling or e-mailing me. The informed consent form refers to a telephone interview. Currently, however, my study is focusing on the survey, so the telephone interview most likely will not occur. In the event of a telephone interview, however, it will be tape-recorded. As with your completed questionnaire, the tapes will be kept strictly confidential and labeled with an identification #. Upon my receipt of your completed questionnaire and informed consent form, I will send you \$16. Also, once my study is concluded in the next few months, I will contact you with the results.

You have made an invaluable contribution to my research- thank you, and much continued success and support in your recovery.

If you have any questions, please *do not hesitate* to get in touch with me at (510) 928-1900 or by e-mail: [mfoster@socrates.berkeley.edu](mailto:mfoster@socrates.berkeley.edu)

Sincerely,

Marissa Foster  
UCSF-UCB Joint Medical Program, MS/MD  
University of California at Berkeley

## Informed Consent Form

By signing this form, you hereby acknowledge the following:

**1.** My name is Marissa D. Foster. I am a 3<sup>rd</sup> year medical student in the UCSF-UCB Joint Medical Program (part of the Health and Medical Sciences Department at the University of California at Berkeley), and am not a licensed clinician. I'm conducting research about inpatient treatment practices for anorexia and bulimia, and you are invited to participate.

**2.** The purpose of this study is to investigate established inpatient treatment practices for eating disorders, specifically for anorexia nervosa (AN) and bulimia nervosa (BN). Is there a gap between the therapy being offered in the inpatient setting and those treatment practices recovering eating disorder sufferers, who've received inpatient treatment, consider necessary for bringing about, encouraging, and/or maintaining their recovery? Are certain types of inpatient programs more effective than others in bringing about recovery?

**3.** This study's procedures include interaction with me first through an e-mail or phone response to my web posting, followed by receipt of a packet containing a cover letter, questionnaire, this informed consent form, and a personalized ID number, as well as a self-addressed, stamped envelope. You are then asked to complete this questionnaire, which will take 20-35 minutes, to sign the informed consent form, and to return these materials within two weeks of your receiving them in the enclosed self-addressed, stamped envelope. Upon my receipt of these materials, you will be contacted by phone or e-mail, and asked to agree to a date and time for a telephone (or in-person, geography permitting) interview between you and myself. The interview will be 45 minutes, and it will be audio-taped.

Here is a sampling of the questionnaire:

- What treatment aspects did your inpatient program(s) include? Check any that apply (for example, group therapy, individual psychotherapy, psychiatric medication, yoga/relaxation, bathroom restriction, etc...) and rate these on a 1-10 scale, 10 indicating most helpful to you and 1 least helpful.
- Did you have the opportunity in the program to develop significant relationships, with staff (i.e. therapist, team leader, etc...) or other patients? Please rate the impact upon your recovery of being able to have, or prevented from having, these relationships.

The interview questions will provide you with the opportunity to more fully discuss your inpatient treatment experiences, and to explain why you feel certain treatment

practices have been helpful, harmful, or unnecessary in your recovery. Also, you'll be asked to share your personal recommendations for improving inpatient treatment.

**4.** There are no foreseeable risks to you as a participant in this research. Because some of the questions are of a personal and sensitive nature, you may become upset or uncomfortable and may end your participation at any time.

**5.** There is no direct benefit to you from participating in this study. You will be given the chance to share your experiences in inpatient treatment, and through this sharing, the possibility exists for further insight and knowledge in eating disorder inpatient treatment.

**6.** Your participation in this project will be kept entirely confidential. The audiotape and questionnaire will be stored in a locked file with only your personal ID number—there will be no labeling of these materials with your own name. Thus, you will not be able to be identified through your questionnaire. The audiotape will not be heard by anyone other than myself. The key to the code of names and ID numbers will be kept in a separate locked file. No names will be used in my thesis or in any reports of my research. I will save the tapes and questionnaires, perhaps to use at a later date for my own research, but the same confidentiality rules will apply, and once again, no one else will have access to the data or to the key of ID number codes. The audiotapes will never be released in any capacity.

**7.** Upon completion of the telephone interview, you will be sent a check or money order for \$16.

**8.** Your participation in this study is strictly voluntary, and you are free to refuse participation altogether or to withdraw from the study at any time, without any penalty.

**9.** At any point in this study, you are free to contact me with any questions or concerns. If you are not in my local calling area, I will immediately call you back upon receiving your call or phone message. You can also contact me via email at any time, and I will check my email daily. My phone number is 510-928-1900, and my email address is [mfoster@socrates.berkeley.edu](mailto:mfoster@socrates.berkeley.edu)

If you have any questions about your rights or treatment as a participant in this research project, please contact the University of California at Berkeley's Committee for Protection of Human Subjects at 510-642-7461, [subjects@uclink.berkeley.edu](mailto:subjects@uclink.berkeley.edu)

**10.** Finally, if interested, you can receive the results written in a general form once the study is complete.

I \_\_\_\_\_ agree to participate in this study conducted by Marissa Foster, a graduate student in the Health and Medical Sciences Dept. of Univ. of CA, Berkeley under the conditions listed in this consent form.

**AGREED AND ACCEPTED:**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**NAME (PLEASE PRINT):**

Thank you.

Marissa Foster

## Part I: Eating Disorder Inpatient Treatment Questionnaire for Individuals in Recovery

For official study use only:

Identification # \_\_\_\_\_

### A.) Illness and Treatment History

1. Age \_\_\_\_\_
2. What eating disorder have you been diagnosed with? Check all that apply.
  - A. Anorexia Nervosa \_\_\_\_\_  
If yes, Binge/Purge Type? \_\_\_\_\_ Restrictive? \_\_\_\_\_
  - B. Bulimia Nervosa \_\_\_\_\_  
If yes, which of these methods did you rely upon to compensate for a binge? Check all that apply:  
 Vomiting \_\_\_\_\_ Laxatives \_\_\_\_\_ Fasting \_\_\_\_\_ Excessive Exercise \_\_\_\_\_  
 Diuretics \_\_\_\_\_ Diet Pills \_\_\_\_\_ Ipecac \_\_\_\_\_
3. At what age do you feel your eating disorder first began? \_\_\_\_\_
4. At what age were you diagnosed with an eating disorder? \_\_\_\_\_
5. A. Have you ever been diagnosed with any of the following psychiatric disorders? Please check any that apply:  
 Depression/Mood Disorder \_\_\_\_\_ Anxiety \_\_\_\_\_ Personality Disorder \_\_\_\_\_  
 Other (please specify) \_\_\_\_\_  
 B. For any checked above, please indicate specific illness (i.e. bipolar disorder, borderline personality, obsessive compulsive disorder, schizophrenia, etc....), as well as year of diagnosis:  
 Disorder: \_\_\_\_\_ Year of diagnosis: \_\_\_\_\_  
 Disorder: \_\_\_\_\_ Year of diagnosis: \_\_\_\_\_  
 Disorder: \_\_\_\_\_ Year of diagnosis: \_\_\_\_\_
6. How long have you currently been in recovery?:  
 6 months-1yr. \_\_\_\_\_ 1-2 yrs. \_\_\_\_\_ 2-3 yrs. \_\_\_\_\_ 3-4 yrs. \_\_\_\_\_

7. Is this your first recovery from your eating disorder?

Yes\_\_\_ If yes, please skip to question #9

No\_\_\_

8. What has been your longest period of recovery from your eating disorder?

6 months-1yr. \_\_\_ 1-2 yrs. \_\_\_ 2-3 yrs. \_\_\_ 3-4 yrs. \_\_\_ 5+ yrs. \_\_\_

9. Which of the following are part of your current recovery? Please check any that apply:

Maintenance of a target weight\_\_\_

Weight stabilization\_\_\_

Absence of starvation behavior\_\_\_

Marked decrease in starvation behavior\_\_\_

Absence of binge/purge behavior\_\_\_

Marked decrease in binge/purge behavior\_\_\_

Normal eating patterns (i.e. 3 meals/day, variety of foods, normal portions)\_\_\_

Recognition of hunger and fullness\_\_\_

Realistic body image\_\_\_

Ability to maintain employment\_\_\_

Enrollment and attendance at school\_\_\_

Willingness to attend social functions (holiday celebrations, parties, etc...)\_\_\_

Sustaining an intimate relationship for greater than 3 months\_\_\_

10. Do you have any relapses of eating disordered behavior, i.e. starvation or bingeing and purging?

Yes\_\_\_

No\_\_\_ If no, please skip to question #12

11. Please indicate the approximate frequency of your relapses:

A few times a year\_\_\_

1-3x per month\_\_\_

1x or more per week\_\_\_

12. Are you currently on any medication for your eating disorder and/or other psychiatric condition?

Yes\_\_\_

No\_\_\_ If no, please skip to question #14

13. Please give the name of your medication:\_\_\_\_\_



14. Please give the name and location of your most recent inpatient treatment program, within the past four years:

Name of Program: \_\_\_\_\_

15. Please check the one that best applies to your program:

Strictly for eating disordered individuals \_\_\_\_\_

Mixed treatment ward (i.e. unit held patients with other psychiatric disorders) \_\_\_\_\_

16. What was your age at the time of this admission? \_\_\_\_\_

17. What was your length of stay? Please fill in a number in the appropriate space:

\_\_\_\_\_ days

\_\_\_\_\_ weeks

\_\_\_\_\_ months

18. What were the circumstances of this admission? Please check one:

Voluntary Admission \_\_\_\_\_

Involuntary Admission \_\_\_\_\_

19. Who made the referral (i.e. family doctor, therapist, etc...)? \_\_\_\_\_

20. Who paid for the treatment? Please check the one that best applies:

Parent(s) \_\_\_\_\_

Self-Insurance \_\_\_\_\_

Coverage \_\_\_\_\_

Other (please specify) \_\_\_\_\_

21. What were the circumstances of your departure? Please check the best one:

Self-discharge *not* against medical advice \_\_\_\_\_

Self-discharge against medical advice \_\_\_\_\_

Staff-determined Discharge \_\_\_\_\_

Insurance Coverage Lapsed \_\_\_\_\_

22. Please rate the severity of your illness, (1-10, 10 being the most severe):

Upon arrival in the program: \_\_\_\_\_

Upon leaving the program: \_\_\_\_\_

23. Which of the following components did Program 1 include, and how helpful/unhelpful do you consider these components to have been in your treatment? Check all that apply, and for those checked, rate on a 1-10 scale, 10 indicating most helpful to you, 1 for least helpful.

{Please note: If your program involved a voluntary component that you didn't engage in (i.e. religious services), or a treatment component that did not apply to you, (i.e. liquid meal replacement for markedly underweight patients), you can place a check beside the component, and rate it as NA for not applicable.}

- |                                                                                                                            | <u>1-10 or NA</u> |
|----------------------------------------------------------------------------------------------------------------------------|-------------------|
| 1.) Group Therapy _____<br>If yes, how many sessions per week? _____                                                       | 1.) _____         |
| 2.) Family Therapy _____<br>If yes, how many sessions per week? _____                                                      | 2.) _____         |
| 3.) Individual Psychotherapy _____<br>if yes, how many sessions per week? _____<br>Length of each session? _____           | 3.) _____         |
| 4.) Cognitive Behavioral Therapy _____                                                                                     | 4.) _____         |
| 5.) Social Worker Visits _____<br>If yes, how many sessions per week? _____                                                | 5.) _____         |
| 6.) Medical Management (hospital-type program) _____                                                                       | 6.) _____         |
| 7.) Psychiatric Medication _____                                                                                           | 7.) _____         |
| 8.) Choice in whether or not you received<br>psychiatric medication _____                                                  | 8.) _____         |
| 9.) Psychological Testing _____                                                                                            | 9.) _____         |
| 10.) Expressive Arts (i.e. art therapy) _____                                                                              | 10.) _____        |
| 11.) Yoga/Relaxation _____                                                                                                 | 11.) _____        |
| 12.) Psycho-education _____<br>(i.e. learning about the psychology of eating disorders)                                    | 12.) _____        |
| 13.) Religious/Spiritual Services _____                                                                                    | 13.) _____        |
| 14.) 12-Step Model _____                                                                                                   | 14.) _____        |
| 15.) Choice/Preferences in Meal Planning _____<br>If so, at what stage in treatment? _____                                 | 15.) _____        |
| 16.) Assigned Meals _____                                                                                                  | 16.) _____        |
| 17.) Liquid meal supplements _____<br>If yes, liquid alone? _____ liquid with some food? _____                             | 17.) _____        |
| 18.) Minimum required caloric intake _____                                                                                 | 18.) _____        |
| 19.) Required Weighing _____                                                                                               | 19.) _____        |
| 20.) Permission to know your weight _____                                                                                  | 20.) _____        |
| 21.) Bathroom Restriction _____<br>(i.e. limited and/or pre-designated access times)                                       | 21.) _____        |
| 22.) Monitored Bathroom/Commode Visits _____                                                                               | 22.) _____        |
| 23.) Free/Unstructured Time _____ How much per day? _____                                                                  | 23.) _____        |
| 24.) Any other not mentioned (please specify) that you<br>regard as significant, whether positively or<br>negatively _____ | 24.) _____        |

24. Did this program include positive and negative reinforcements?

Yes \_\_\_

No \_\_\_ If no, please skip to question #29

25. What was the nature of the positive reinforcements? Please check any that apply:

Positive reinforcements (for compliance, meeting weight goals, etc...):

--Gain of privileges (such as going outdoors or off-unit)\_\_\_

--Removal of bathroom supervision\_\_\_

--Increased participation in meal planning\_\_\_

--Being allowed to engage in moderate exercise\_\_\_

--Other (please specify)\_\_\_\_\_

26. What was the nature of the negative reinforcements? Please check any that apply:

Negative reinforcements (for lack of compliance, failure to meet weight goals, etc...):

--Loss of privileges (i.e. telephone, going outdoors)\_\_\_

--Required meeting with therapist, other staff \_\_\_\_\_

--Bed-rest\_\_\_

--Restricted exercise\_\_\_

--Feeding tube placement\_\_\_

--Increased daily supervision (close observation)\_\_\_

--Restricted contact with other patients\_\_\_\_\_

--Other (please specify)\_\_\_\_\_

27. Do you consider the positive and negative reinforcements to have been effective in your recovery?

Yes\_\_\_

No\_\_\_

Somewhat effective\_\_\_

28. Please rate the effectiveness of positive and negative reinforcements in your recovery (1-10, 1 for completely unhelpful, 10 for extremely helpful): \_\_\_

29. A. Were you given the opportunity in the program to develop significant relationships with staff (i.e. therapist, team leader, dietician, etc...)?

Yes\_\_\_ If yes, please go to part B. of this question)

No\_\_\_ If no, please go to part C. of this question)

- B. Please rate the impact on your recovery of being given the chance to develop significant relationships with staff members (1-10, 1 being completely unhelpful, 10 being extremely helpful):\_\_\_\_\_
- C. Please rate the impact on your recovery of *not* being given the chance to develop significant relationships with staff members (1-10, 1 being very harmful, 10 being totally unhelpful):\_\_\_\_\_
30. A. Were you given the opportunity in the program to develop significant relationships with other patients?  
 Yes\_\_\_ If yes, please go to part B. of this question)  
 No\_\_\_ If no, please go to part C. of this question)
- B. Please rate the impact on your recovery of being given the chance to develop significant relationships with other patients (1-10, 1 being completely unhelpful, 10 being extremely helpful):\_\_\_\_\_
- C. Please rate the impact on your recovery of *not* being given the chance to develop significant relationships with other patients (1-10, 1 being very harmful, 10 being totally unhelpful):\_\_\_\_\_
31. How would you define the *main* treatment philosophy or attitude of your program? Please check the one that best applies:
- Rewards/Punishments (Punitive)\_\_\_  
 Nurturing and Supportive \_\_\_  
 A fairly even mix of both\_\_\_
32. How would you define the *main* established therapeutic method of your program? Please check only one:
- Cognitive Behavioral Therapy \_\_\_  
 (connections between thoughts, attitude, and behavior)
- Interpersonal Therapy \_\_\_  
 (identifying stress in relationships and social interactions that may have contributed to the development of the eating disorder)
- Insight Oriented Therapy\_\_\_  
 (analysis of past personal history and events that gives meaning and "insight" to your present behavior)
- 12 Step Model \_\_\_  
 Religious/Spiritual \_\_\_  
 Feminist \_\_\_  
 Not sure \_\_\_
33. Please rate your overall, satisfaction with your program (1-10, 10 being extremely satisfied, 1 very unsatisfied):\_\_\_\_\_

34. Would you recommend this program to others? Please check the one that best applies:

- Yes, definitely\_\_\_\_  
 Yes, but with some reservations or hesitation\_\_\_\_  
 Maybe\_\_\_\_  
 Probably not\_\_\_\_  
 Never\_\_\_\_

35. What factor(s) do you most attribute with bringing about and maintaining your recovery? Please check no more than three:

- Inpatient Therapy (the program discussed in this survey)\_\_\_\_  
 Outpatient Therapy\_\_\_\_  
 Day Program\_\_\_\_  
 Health Care Professional(s) (please specify if therapist, nurse, social worker, family doctor, etc...)\_\_\_\_\_  
 Medication\_\_\_\_  
 Family\_\_\_\_  
 Friends\_\_\_\_  
 Partner\_\_\_\_  
 Eating Disorder Support Groups\_\_\_\_  
 Religious/Spiritual Beliefs\_\_\_\_  
 Personal Reading & Research (i.e. eating disorder education, self-help literature)\_\_\_\_  
 Other (please specify)\_\_\_\_\_

## B.) Brief Background

1. Highest Level of Education Completed\_\_\_\_\_

2. Occupational Status: please check *the one that best applies* to you:

- Employed Full-time\_\_\_\_  
 Employed Part-time\_\_\_\_  
 Seeking Employment\_\_\_\_  
 Other (please specify)\_\_\_\_\_

If none of these apply to you, skip to question #4

3. What is your occupation?\_\_\_\_\_

4. Are you a student?

- Yes\_\_  
 No\_\_ If no, please skip to question #7

5. Check the one that best applies to you:  
Full-time student\_\_\_\_ Part-time student\_\_\_\_ On academic leave\_\_\_\_
6. What degree program are you enrolled in (i.e. bachelor's, master's, etc...)?\_\_\_\_\_
7. What race or ethnic group do you identify with? Please check *all* that apply:
- Caucasian\_\_\_\_  
African American\_\_\_\_  
Asian American\_\_\_\_  
Mexican American\_\_\_\_  
Latina\_\_\_\_  
Native American\_\_\_\_  
Pacific Islander\_\_\_\_  
Other (please specify)\_\_\_\_\_
8. What is your current religious affiliation?:
- Protestant\_\_\_\_  
Catholic\_\_\_\_  
Jewish\_\_\_\_  
No Affiliation\_\_\_\_  
Other (please specify)\_\_\_\_\_
9. What is your marital status?:  
Single\_\_\_\_ Married\_\_\_\_ Separated\_\_\_\_ Divorced\_\_\_\_  
Widowed\_\_\_\_
10. Do you have any children?  
Yes\_\_\_\_  
No\_\_\_\_
11. Is your mother currently living?  
Yes\_\_\_\_  
No\_\_\_\_
12. Is your father currently living?  
Yes\_\_\_\_  
No\_\_\_\_
13. What is your parents' marital status?  
Single\_\_\_\_ Married\_\_\_\_ Separated\_\_\_\_ Divorced\_\_\_\_  
Widowed\_\_\_\_

14. Do you have siblings?

Yes\_\_\_

No\_\_\_

If no, please skip to question #16

15. Number of brothers\_\_\_\_\_ Ages if living\_\_\_\_\_

Number of sisters\_\_\_\_\_ Ages if living\_\_\_\_\_

16. Has anyone in your immediate family had an eating disorder?

Yes\_\_\_

No\_\_\_

If no, please go to section C.

17. Please specify which relative(s) were or are affected by an eating disorder?  
(i.e. mother, sister, brother, etc...)\_\_\_\_\_

18. Which eating disorder(s) do your relative(s) have?\_\_\_\_\_

### C.) Weight History

1. What is your current weight?: \_\_\_\_\_lbs.

2. About how long have you been at this weight? Please fill in a number in the appropriate space:

\_\_\_\_days \_\_\_\_weeks \_\_\_\_months \_\_\_\_year(s)

3. Were you given a target weight at your last inpatient facility?

Yes\_\_\_

No\_\_\_ If no, please go to question #5

4. What target weight were you given?: \_\_\_\_\_lbs.

5. What is your height (in feet and inches)?: \_\_\_\_\_

6. What is your desired weight?: \_\_\_\_\_lbs.

7. What is your highest adult weight since age 17?: \_\_\_\_\_lbs. at age\_\_\_\_\_

8. What is your lowest adult weight since age 17?: \_\_\_\_\_lbs. at age\_\_\_\_\_

9. How long did you remain at your lowest adult weight? Please fill in a number in the appropriate space:

\_\_\_\_days \_\_\_\_weeks \_\_\_\_months \_\_\_\_year(s)

10. What is your highest weight between the ages 12-17?: \_\_\_\_\_lbs. at age\_\_\_\_

11. What is your lowest weight between the ages 12-17?: \_\_\_\_\_lbs. at age\_\_\_\_

