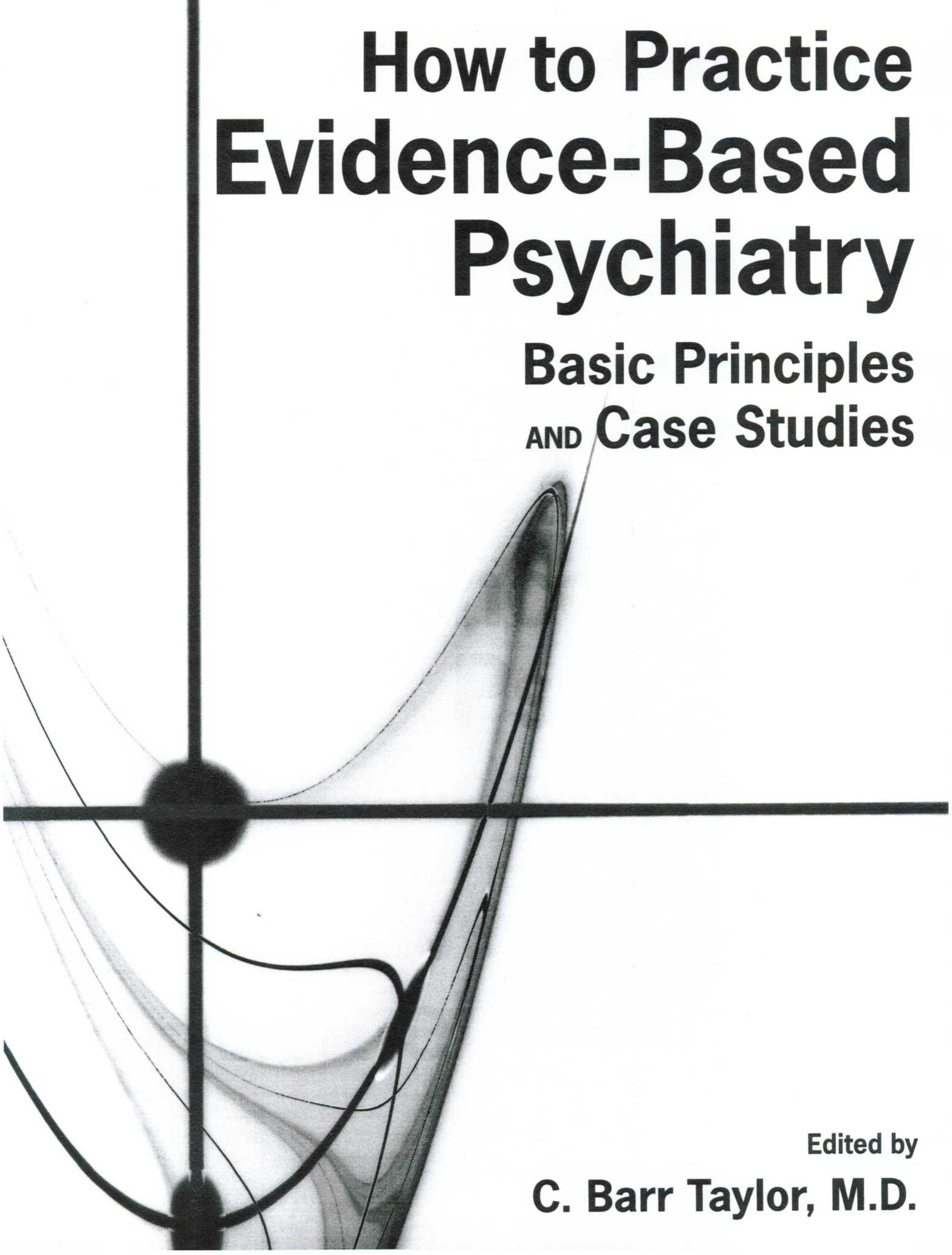
# How to Practice Evidence-Based Psychiatry

## Basic Principles AND Case Studies



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# Bulimia Nervosa

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## Setting

Patients with bulimia nervosa, most of whom present for treatment in their late teens or 20s, generally can be treated successfully in outpatient settings. Exceptions include patients who are medically unstable; patients for whom comorbid conditions, such as severe depression and suicidality, dictate the need for inpatient treatment; and patients with severe comorbid personality problems who may benefit from a structured partial hospitalization program. However, for the average patient, outpatient treatment either in an individual or group format is both adequate and preferable. Our treatment setting includes a team approach composed of psychologists, dietitians, a physician, and advanced practice nurses, because this approach targets the psychological, behavioral, nutritional, and medical needs of eating disorder patients.

## Illustration

The following case provides an example for discussion of the application of the American Psychiatric Association (2006) *Practice Guideline for the Treatment of Patients With Eating Disorders.* Initial assessment of eating disorder symptoms should include height, weight, and body mass index (BMI) measurements. The assessment should review the patient's history of eating behaviors, compensatory behaviors, and beliefs about weight, shape, and food. Gathering a general psychosocial history in order to identify stressors and assess comorbid psychopathology provides helpful information for the course and outcomes of treatment.

## Chief Complaint

Allison is a 22-year-old female who presents with complaints of depressed mood, anxiety, and binge eating and purging episodes.

## Present Illness

Allison reported her binge eating and vomiting developed at age 16 and seemed to help her "relax," especially in the evenings when her binge/purge episodes typically occurred. She reported binge eating and vomiting up to four times each evening. She hoped to avoid these episodes but was afraid of gaining weight. Her current weight was 120 lb and her height was 5'4" (BMI=20.6).

## Past Psychiatric History

The patient reported a history of depressed mood and anxiety since age 15. She denied a specific event that precipitated her mood symptoms. She had had suicidal ideation at age 15, although she reported no current plan or intent. At age 15, she often felt as if she was "not good enough or pretty enough," especially when compared with other girls at school. She experienced bouts of unprovoked crying, anhedonia, concentration difficulties, and worry about the future, which caused her to have difficulty falling asleep. She reported that these symptoms have continued since

age 15 but "aren't as intense" as they were when they first occurred. She denied past psychological treatment for any mental health concerns.

At age 15, Allison began to gain weight. Her highest weight was 140 lb. She then began to diet, reducing her intake to 1,200 calories per day. She reported that this dieting lasted about a month and that she lost approximately 8 lb. On a Saturday when her parents were away, she experienced a binge eating episode. She then developed a pattern of binge eating every weekend and then restarting her dieting pattern every Monday. After about 2 months in this pattern, Allison experienced a binge eating episode that was larger than her prior episodes. She felt the urge to vomit in order to "feel just a little less stuffed." Vomiting came easily to Allison and she thought she could be successful at losing more weight if she vomited after each dinner. Allison's binge/purge cycle then became more frequent and was occurring at least once per day by the time she was 17.

### History of Substance Abuse

The patient reported drinking one or two alcoholic drinks once monthly. She smoked marijuana on three occasions in tenth grade and related this to "peer pressure." She denied use of any other substances.

### Exercise, Diet, and Stress Management

Allison exercised five times weekly for 1.5 hours during each episode. Her exercise routine included running for 60 minutes and a weight-lifting routine lasting 30 minutes. She reported exercising even though on most days she felt fatigued. She had had some dizziness when running. Her meal plan was also quite stringent, including a diet of 1,500 calories per day and limited fat intake. However, on most days she reported being unable to follow her diet and feeling "ravenous" when arriving home from work at 6 P.M. She did not experience the urge to binge eat during the day; however, when leaving work she became anxious about her performance during the day. She reported intrusive thoughts of binge eating on her drive home from work and feeling compelled to stop at the grocery store for a few items to prepare for dinner. Her binge eating episodes always involved high-fat food items such as pizza, cookies, chocolate milk, and chips.

Allison reported eating quickly and feeling as she "blacked out" when she had a binge eating episode. She stated, "I know what I'm doing, bingein on all that food, I just can't stop." She became over whelmed with a sense of guilt after her eating epi sodes and then vomited several times. The vomitin decreased her anxiety and "clears my head... I don have to worry when I'm binge eating and I can the just get rid of the food." Allison related her de pressed mood to her inability to control her food in take and "feeling fat." She desired to weigh 110 l (BMI=18.9).

## Social History

Allison reported three or four close friends through out her schooling and several acquaintances. Sh had been involved in soccer and tennis during eight grade; however, she quit both teams to pursue he interest in playing piano, drawing, and painting. A the time of her evaluation she had very few friends She denied involvement in a romantic relationship

## Educational and Occupational History

The patient completed the twelfth grade and at tained her associate's degree in graphic design at local community college. She worked at a fast foo restaurant during high school and then began work ing at a well-known local graphic design studio afte meeting the owner through an acquaintance.

## Family History

Allison was raised by her biological mother and fa ther. She had one older brother who was studyin medicine. She reported that her upbringing wa "good...just typical, I guess." Her father was em ployed as an executive at a local grocery store, an her mother was an administrative assistant. She re ported a "good" relationship with her brother an parents but suggested her mother was sometime critical of her, accepting only "A" grades as "good Allison was on the "B honor roll," and this was ofte a point of contention with her mother. Her mothe was often concerned about what other members o her church thought about the family and was fo cused on appearing "worry-free...or perfect."

## Other Significant Findings From Assessment

### Review of Systems

- Unremarkable except for occasional headaches, primarily frontal and usually relieved by aspirin
- Occasional palpitations and tachycardia post vomiting
- Problems with intermittent constipation and diarrhea; occasional upper abdominal pain associated with binge eating
- Had two episodes in which she found trace amounts of blood in her vomitus

### Physical Examination

Patient was a well-developed, well-nourished female in no acute distress. Her blood pressure was 110 over 62, right arm sitting; her pulse was 64 and regular; and her respiratory rate was 12. Physical examination was essentially negative except for some evidence of scar formation on the dorsum of her right hand where she had traumatized the skin while self-inducing vomiting. This is known as Russell's sign.

### Diagnostic Tests

Allison's diagnostic tests were within normal limits. Of particular importance in this testing is obtaining a serum electrolyte determination, because this is the blood chemistry most commonly affected by bulimia nervosa. Of particular concern is the risk of severe hypochloremia, metabolic alkalosis, and hypocholemia.

### Psychological Tests

Allison completed the Beck Depression Inventory–II and attained a raw score of 21, suggesting moderate depressive symptoms. She also completed the Beck Anxiety Inventory with a score of 30, suggesting moderate symptoms of anxiety. The results of Allison's Eating Disorder Inventory–3 revealed clinical elevations (i.e., T/Composite Score≥50) on Drive for Thinness (T=52), Bulimia (T=56), Interpersonal Alienation (T=61), Personal Alienation (T=60), Perfectionism (T=58), and Affective Problems (T=58). The elevations appeared to align with Allison's reported dieting and binge/purge behavior as well as her lack of social support, perfectionistic tendencies, and mood problems.

## DSM-IV-TR Diagnosis

| | |
|---|---|
| Axis I | Bulimia nervosa<br>Major depressive disorder, single episode, moderate<br>Anxiety disorder not otherwise specified |
| Axis II | No diagnosis on Axis II |
| Axis III | Patient reports headaches; see medical record |
| Axis IV | Occupational stressors, limited social support |
| Axis V | GAF score: 60 |

## Treatment Plan Considerations

In general, treatments for bulimia nervosa have focused on pharmacological and psychotherapeutic approaches. Antidepressants were first used for the treatment of this condition because of the observation that many patients with bulimia were comorbidly depressed, and it was assumed that if their depression improved their eating disorder would improve as well. However, research has shown that the presence of depression does not predict response to antidepressant treatment in these patients. A variety of antidepressants have been studied, including monoamine oxidase inhibitors, tricyclic antidepressants, and most recently serotonin reuptake inhibitors. Currently the only drug approved by the U.S. Food and Drug Administration for the treatment of bulimia nervosa is fluoxetine. It is notable that the drug seems to work best in high dosages, at approximately 60 mg/day. Many patients will tolerate this as the initial dosage. By analogy, most practitioners prescribe fairly high dosages of other antidepressants if alternative medications are being used. The controlled treatment literature suggests that most of these drugs work reasonably well. However, fluvoxamine may be ineffective, and bupropion should be avoided because it seems to have a high propensity for causing seizures in this patient population.

Relative to psychotherapeutic interventions, a variety of psychotherapies have been described in the literature, but much of the work has focused on the use of cognitive-behavioral techniques in either group or individual formats. It is safe to conclude that currently cognitive-behavioral therapy (CBT) is the treatment of choice for bulimia nervosa. This treatment is usually delivered in a twice-weekly format for the first month or so, and this seems to be an

important variable in determining treatment outcome. There is also literature to suggest that interpersonal therapy may be effective, although the data are more limited and the treatment response seems to be somewhat delayed. In addition, there is some indication that dialectical behavior therapy can be helpful for some patients.

The question often arises as to whether antidepressant therapy and CBT should routinely be used in combination in the initial treatment of patients. Studies that have examined this question have found some modest benefit for the addition of antidepressants to CBT, but it is not clear that this outweighs the added costs and risks involved. Many practitioners recommend beginning with CBT and adding antidepressant treatment if there is no evidence of a fairly prompt response, demonstrated by reductions in the frequency of targeted behaviors, early in treatment.

As mentioned, individual and group psychotherapeutic interventions have been helpful in treating patients with bulimia nervosa. Dietary consultation is also beneficial in combination with psychotherapy. Family-based interventions are especially useful for adolescents because interpersonal issues can be discussed in the context of eating-disordered behavior. Self-help and support groups are also being studied for their effectiveness.

The American Psychiatric Association guideline's suggested aims for the treatment of individuals with bulimia nervosa are incorporated into Table 28–1. Note that the treatment interventions utilized target pharmacological, medical, and psychological interventions. A team approach to treating patients with bulimia is valuable, especially when considering the need for continued medication management and psychological interventions. Additionally, patients with medical or psychology comorbidities will need continued assessment to determine the appropriate level of care, especially if the patient fails to respond to outpatient treatment. The treatment guideline provides detailed information regarding the appropriate level of care for eating disorder patients based on several factors, including age, control over eating disorder behaviors, medical status, and location.

The outpatient clinic where Allison received her psychological treatment was composed of psychologists and psychiatrists. After the initial assessment, the importance of a treatment team was discussed with Allison. She was given referrals to a dietitian and a primary physician. The team of providers had worked together for several patients and had a strong history of good communication about patient needs and progress. This open communication was an essential component, especially when she became resistant to normalizing her eating out of fear of gaining weight. The dietitian communicated with the therapist through a hospital-wide computer system about progress and topics to address in therapy. Allison was referred to a dentist outside of the hospital system to address dental erosion secondary to her purging behavior.

Allison's initial assessment revealed comorbid anxiety and depression, which is common in eating disorder patients. Medication use can be implemented at the beginning of treatment or as treatment progresses, depending on the severity of the comorbid psychological condition. It is important to consider that mood and anxiety symptoms, especially depression, can remit as binge/purge episodes subside, providing one reason for delaying the use of pharmacological agents.

In addition to her psychological assessment, Allison was seen by a primary practice physician. Results of her medical assessment were largely within normal limits. Given her medical stability, Allison was a good candidate for outpatient treatment. She was followed monthly by the primary physician to ensure medical stability.

### Treatment Goals, Measures, and Methods

The goals, measures, and methods for this treatment are outlined in Table 28–1.

## Course

Allison met with the therapist twice weekly for the first 4 weeks of therapy, as is often indicated in CBT for bulimia nervosa. The beginning of psychotherapy was marked by a focus on developing a therapeutic alliance. The therapist validated the role the eating disorder behaviors served for Allison and provided a supportive and open environment to discuss concerns about the treatment course. This allowed for an environment in which Allison would feel comfortable disclosing her eating and weight concerns. The therapist provided Allison with psychoeducation regarding the hypothesized model that

**TABLE 28–1. Treatment goals, measures, and methods for a patient with bulimia nervosa**

| Treatment goal | Measure | Method |
|---|---|---|
| Reduce binge/purge episodes to zero times per week | Self-report of weekly binge/purge episodes and review of self-monitoring logs | Psychoeducation<br>CBT<br>Add SSRI if lack of early response |
| Reduce body image concerns within six sessions | Self-report, EDI-3 | CBT |
| Reduce depression and anxiety by 50% or more by week 8 | BDI-II, BAI | Consider pharmacotherapy<br>CBT |
| Provide psychoeducation regarding healthy nutrition and eating patterns | Self-report | Psychoeducation<br>Consultation with dietitian |
| Diminish food restriction behaviors and thoughts (e.g., "safe foods" or "dieting") | Food monitoring logs | CBT<br>Consultation with dietitian |
| Increase motivation to fulfill treatment requirements | Attend all therapy sessions.<br>Complete Motivational Enhancement Decisional Balance Sheet | Psychoeducation<br>Treatment contract<br>Therapeutic alliance |
| Treat all physical complications | Laboratory reports | Consultation with general medical provider |
| Discuss relapse prevention | Create a relapse prevention plan | CBT |
| Utilize social support by enlisting one family member or friend to support treatment | Discuss family therapy options, if applicable. Participation by family or friends during therapy sessions | Psychoeducation<br>CBT<br>IPT |

*Note.* BAI=Beck Anxiety Inventory; BDI-II=Beck Depression Inventory–II; CBT=cognitive-behavioral therapy; EDI-3=Eating Disorder Inventory-3; IPT=interpersonal therapy; SSRI=selective serotonin reuptake inhibitor.
*Source.* Goals adapted from American Psychiatric Association 2006.

diagrammed the development and continuation of her eating disorder as a means of helping Allison understand the impact emotions, cognitions, social settings, and behaviors can have on her eating disorder. The therapist also worked with Allison to create a treatment plan, which was a way to help her feel in control of her treatment and think of herself as a member of a collaborative relationship. The practitioner also suggested to Allison that use of a self-help guide could be a valuable aid understanding eating disorders. Notably, the American Psychiatric Association treatment guideline provides a recommended list of readings that are beneficial to specific patient groups and for families of those with eating disorders. A practitioner may also consult the treatment guideline for a list of recommended reading about the CBT treatment manuals and guides.

Allison was provided with monitoring logs to detail her eating episodes throughout the day (see Figure 28–1). These monitoring logs provided valuable information about the pattern of eating Allison experienced during the day. In addition to the monitoring logs, psychoeducation regarding the importance of normalized eating was incorporated throughout the sessions. Allison was quite resistant to accepting the idea that eating throughout the day would not lead her to become "fat," and she continued to have episodes of morning restricting throughout the first half of treatment. Targeted behavioral interventions such as preplanning and packing meals was somewhat helpful in addressing her restricting behavior, although her beliefs that feeling full meant she was "fat" likely hindered her ability to change her eating patterns. Figure 28–2 depicts the reduction in Allison's binge/purge episodes. As shown, her binge/purge episodes decreased steadily, but she continued to have periodic episodes. We began discussing alternative behaviors and coping skills that Allison was able to implement when she had urges to binge eat and purge. Allison, unlike

Date: ___/___/___

| Time | Intake (food/fluid) | Setting | Binge eat Y/N | Vomit Y/N | Laxative Y/N | Comments |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |

**FIGURE 28–1. Food log.**

*Source.* Adapted from Fairburn 2008.

some patients, enjoyed monitoring her eating behavior. Some patients feel that monitoring eating behaviors makes them focus too much on their consumption habits. This tends to resolve in many patients when they begin to see the benefit of analyzing their eating behavior during the session.

In the case of Allison, her binge/purge episodes persisted and her mood remained depressed during the first 4 weeks of therapy. A selective serotonin reuptake inhibitor (SSRI) was then added at week 4, and a steady decrease in symptoms resulted. Various pharmacological interventions have been effective in treating bulimia symptoms, and an SSRI was chosen because of its general tolerability by many patients. Allison reported decreases in her depression and overall level of anxiety; however, she continued to experience anxiety related to her strenuous work environment. Relaxation techniques and coping skills were used to target these anxiety symptoms.

Allison was referred to a dietitian to address her concerns regarding "safe" foods and to gain additional information about nutrition. Allison continued to have "bad" or "unsafe" foods in her diet, which at times would trigger a binge episode. She was comfortable avoiding these foods during therapy. As the eating patterns began to stabilize over the second half of the treatment course, Allison was able to expose herself to these feared foods and then utilize her distraction behavior until the foods became more tolerable.

The final steps of Allison's treatment involved discussing a relapse prevention plan. Allison and the therapist worked on identifying triggers to a lapse in eating-disordered behavior and the use of problem-

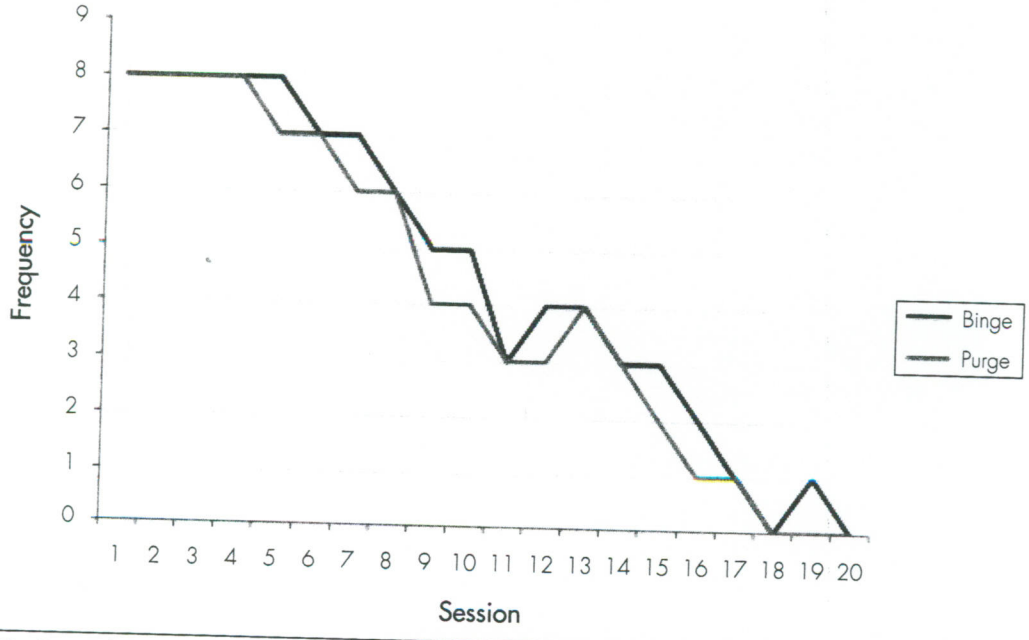


**FIGURE 28–2. Binge and purge frequency over the treatment.**

Sessions were biweekly during the first 4 weeks of therapy.

solving skills to avoid a full relapse. Allison became aware that minor setbacks were likely. Figure 28–2 displays the continued trouble Allison had in fully stopping her binge eating episodes. The therapeutic relationship and collaboration that was established in the beginning of treatment remained helpful in motivating Allison to continue to journey toward remission of binge/purge episodes.

In treating adolescents with eating disorders, family therapy is an important component because of the continuous interaction with parents and food in the home. In adults, involving relationship partners in adjunct therapy sessions can be beneficial, especially to aid in the monitoring of behavior or supporting behavioral changes. Treatment manuals are available for family-based therapy, and recommended readings are listed in the treatment guideline.

Allison was uninterested in involving her parents in the therapy process, even with continued discussion about the benefits of additional family therapy. Allison was very hesitant about disclosing her behavior to her family. Her situation did, however, present an ideal opportunity for the involvement of parents, especially because Allison has limited social support. She recognized that some of her anxiety and beliefs about weight were likely related to her mother's distorted beliefs about appearance and perfection. If Allison had been willing to involve her family in therapy, supplemental sessions would have occurred to address the role of families in eating disorder etiology and treatment.

## Summary/Conclusion

The challenges in treating eating disorder patients are the necessities of a multidisciplinary team approach, continued assessment of medical symptomatology, and the risk of chronicity of the disorders. The treatment guideline provides valuable, explicit information regarding treatment settings and level of care (i.e., inpatient versus outpatient), medical assessments, and targets of psychotherapy. Unfortunately, not all patients are motivated for treatment, and attrition in therapy can be high. Additionally, the preponderance of eating disorder cases seem to fall into the Eating Disorder Not Otherwise Specified category, highlighting the importance of developing a treatment plan tailored to the needs of the patient.

## Ways to Improve Practice

In the case described, two improvements to treatment could be considered. Allison's frequency of binge eating and purging decreased more slowly when compared with most reports in the literature regarding response patterns of bulimia nervosa patients being treated with CBT. The use of antidepressants was indicated here and was implemented in Allison's case. The addition of a third therapy session per week could also have been very helpful in reducing the frequency in these behaviors. A relapse prevention plan that included follow-up visits would also have been beneficial. Literature has suggested that patients with bulimia may not necessarily pursue follow-up treatment if they experience relapses after a successful CBT intervention (Mitchell et al. 2004). Developing a schedule of monthly follow-up sessions could be helpful in preventing full-blown relapse.

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