End of Treatment Outcomes for

Patients with Anorexia Nervosa (2009-2017)

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**Description of the Sample**

This analysis includes all patients with a primary diagnosis of Anorexia Nervosa (AN) who participated in an evaluation followed by a minimum of one therapy session with me between the start of my practice in 2009 and spring 2017. Given that this is an analysis of end of treatment outcomes, patients who are currently in treatment with me were not included in this sample. Patients and families whom I saw only for evaluations or consultations rather than treatment were not included in this sample.

The sample includes 60 individuals (93% female) who ranged in age from 10 – 37 years old, with a median age of 16 and a modal age of 13. The age group breakdown was as follows: 13% of these patients were children (under the age of 13 at intake), 53% were teenagers (between the ages of 13-17 at intake), 20% were of college age (18-22 years old at intake), and 13% were adults over the age of 22. The majority of patients identified as Caucasian (69%) or Hispanic (29%), with less than 3% identifying with other racial/ethnic groups.

Twenty percent of patients in this sample met criteria for the Binge-Purge Subtype of AN, while the remaining 80% had Restricting Subtype.

Half of patients in this sample had a comorbid diagnosis, and 7% of patients had two or more co-morbid diagnoses in addition to AN. The two most common comorbid diagnosis were ADHD and Major Depressive Disorder, with 13% of patients meeting criteria for each of these disorders. Other co-morbid diagnoses included Depressive Disorder Not Elsewhere Classified (8%), Anxiety Disorder Not Elsewhere Classified (7%), Generalized Anxiety Disorder (7%), OCD (5%), Social Anxiety Disorder (2%), Borderline Personality Disorder (2%), and Body Dysmorphic Disorder (2%).

Duration of illness before beginning treatment with me ranged from 2 months to 21 years, with older patients, on average, having been sick for a longer duration of time. The mean duration of illness before entering treatment with me was just under 3 years. Most patients had a history of unsuccessful outpatient treatment with other providers prior to beginning treatment with me. Twenty-eight percent of patients had a history of hospitalization for AN prior to beginning treatment with me and 15% had a history of residential treatment.

Ten percent of the sample paid a reduced rate for services due to financial need.

**Description of Treatment Received**

All patients were required to receive medical monitoring by a physician during their treatment with me. Approximately 58% of patients took some form of psychotropic medication at some point during their treatment with me.

Duration of treatment with me ranged from one week to 6 years. The mean duration of treatment was 13 months and the mean number of sessions attended was 23. Individuals whose treatment lasted several weeks or less were those who quit treatment prematurely or who were quickly referred to other providers or types of treatment which could better meet their needs.

The majority of patients (85%) completed their treatment with me in less than 2 years. Individuals who were in treatment with me for three or more years fell into one of three categories: 1.) those who recovered fully, were discharged from treatment, and then relapsed and returned to treatment after a couple of years, thus making the total duration of treatment several years long, 2.) those whom I initially treated for AN, who remained in therapy with me after their AN recovery to address comorbid conditions such as anxiety or depression, or 3.) those who attended check-in sessions with me every few months following their recovery as part of their relapse prevention plan.

The type of treatment received was based on the patient’s age, presenting problems, living situation, and the preferences of the patient and family. Ninety-five percent of child and adolescent patients under age 18 received FBT, usually as a stand-alone treatment, and in some cases as an initial intervention for AN which was followed by individual therapy for a co-morbid condition. The remaining 5% of child and adolescent patients received individual therapy.

Forty percent of patients over the age of 18 received FBT, either alone or in conjunction with individual therapy for the patient. In these cases, the original FBT protocol was modified to meet the social-emotional and developmental needs of young adults. For example, young adult patients were typically involved in their treatment a more collaborative manner, and frequently their roommates and significant others were involved in treatment as part of their support team. The remaining 60% of adult patients received individual therapy.

**Rates of Treatment Completion**

For the purpose of this analysis, completing a “full course of treatment” means that discharge from treatment was collaboratively planned, as the patient, his/her family (when involved) and I have come to a mutual agreement that treatment goals have been met and no further treatment is needed. Of all patients who entered treatment with me for AN, 50% completed a full course of treatment, approximately 26% quit treatment prematurely, approximately 22% were referred to other providers who could better meet their needs, and approximately 3% moved to other geographic locations during treatment and thus were referred to providers near their new homes.

**Length of Time and Number of Sessions to Treatment Completion**

The time it took to complete a full course of treatment varied dramatically based on the severity of the patient’s AN, the presence and severity of any co-morbid conditions, and the patient’s rate of progress through the stages of recovery. The majority of patients who completed treatment did so in a time frame of somewhere between 7 months and 2 years. A full course of successful treatment required, on average, 27 sessions over the course of 17 months. However, 10% percent of patients completed treatment in less than 6 months and 7% of patients took more than 3 years to complete treatment.

Individuals with co-morbid conditions, such as mood or anxiety disorders, typically required more sessions to complete treatment than those who presented with AN as their only diagnosis. Patients without comorbid conditions required an average of 22 sessions to complete treatment, compared with 32 sessions for patients with one or more co-morbid conditions. Interestingly, the time it took to complete treatment did not differ significantly between patients with and without comorbid conditions. This is likely due to the fact that, once AN symptoms have abated, I will usually provide individuals with comorbid conditions with continued therapy on a regular basis (e.g., once every week or two) to address the comorbid condition. [Effective treatment for AN, in its early stages, focuses primarily on increasing nutritional intake, restoring weight, interrupting compensatory behaviors, and normalizing eating patterns.] In contrast, for individuals without comorbid conditions, sessions can be held monthly after AN symptoms have abated, once the focus turns towards establishing a healthy identity and preventing relapse.

**Treatment Outcomes**

Each patient’s recovery status was assessed as of their last session with me, regardless of the reason for treatment ending, and each patient was given a designation of full recovery, physical remission, significant progress, some progress, no progress, or regressed. I created the following definitions, each with specific criteria, in order to categorize patient outcomes:

1. Patient must meet all of the following criteria to be classified as in full remission:
2. Patient is 100% weight-restored. Target weights were calculated based on patient’s individual historic growth chart and parent input. Patients under age 20 were expected to return to their historic percentiles for height, weight, and BMI. For patients age 20 and up, target weights were calculated based on the patient’s height, body build, weight history, menstrual history, and parental input (when available).
3. Patient has started or resumed menstrual periods (for females ages 14 +).
4. Patient is medically healthy.
5. Complete abstinence from binge/purge behaviors, laxatives, and diet pills.
6. Patient eats regular, balanced meals most of the time or always , as reported by patient and parent (when applicable)
7. For children under 18 - child eats independently in an age-appropriate way most of the time or all of the time. For patients ages 18 and up, patient is able to eat independently while maintaining his/her weight.
8. No more than mild preoccupation with food, weight, body image, or fear of weight gain
9. Patient is classified as in physical remission if he/she meets criteria a, b, c, d, and e under full remission, but does not meet criteria f or g under full remission. Essentially, a patient in physical remission is physically well and free of eating disorder behaviors, but cannot eat well independently, and/or continues to be preoccupied with thoughts about food, weight, and body image.
10. Patient is classified as having made significant progress if:
11. Patient has made significant improvement in dietary habits (e.g., eats regular, balanced meals and snacks and has expanded the variety of foods he/she eats) as reported by patient and parents (when applicable)
12. Patient has restored some weight and is at least 90% of ideal body weight (as defined in criterion a under full remission)
13. Patient is medically healthy
14. If patient has a history of bingeing, purging, laxatives, or diet pills, the frequency of these behaviors has been reduced to once per week or less.
15. Patient is classified as having made some progress if:
16. Patient has improved dietary habits since intake, but needs more improvement
17. Patient has restored some weight but remains more than 10% below target weight (as defined in criterion a under physical remission).
18. Patient is a female age 14 or older but is not menstruating
19. If patient has a history of bingeing, purging, laxatives, or diet pills, he/she has reduced the frequency of these behaviors since intake but still engages in them more than once per week.
20. Patient is classified as having made no progress if he/she has not improved dietary habits, has not restored any weight, and/or has not reduced the frequency of bingeing or compensatory behaviors.
21. Patient is classified as regressed if he/she meets any of the following criteria:
22. Patient has lost weight since starting treatment
23. Patient has been eating less since intake (in terms of frequency, quantity, and variety)
24. Frequency of bingeing or compensatory behaviors has increased since intake
25. Patient has become medically unstable

Of all patients who entered treatment with me for AN, 48% achieved full recovery, 2% achieved physical remission, 22% made significant progress, 5% made some progress, 18% made no progress, and 3% regressed.

Of the patients who completed a full course of treatment (n = 30), 97% achieved full recovery from AN, while the remaining 3% achieved physical remission.

Among the patients who quit treatment prematurely (n = 16), there was a significant correlation between length of time spent in treatment and progress made. Thirty-one percent of drop-outs (n = 5) discontinued treatment after one month or less, often after attending just one or two sessions. None of these individuals had made progress as of their last session with me. The remaining 69% of drop-outs (n = 11) attended at least 7 sessions over the course of at least 2 months. All of the patients who attended at least 2 months of treatment with me had made significant progress as of their last session with me.

When a patient drops out of treatment prematurely, I typically do not know why they have chosen to quit, and I do not have data on what happens to patients after they discontinue treatment. However, these data show a clear distinction between those who dropped out after one month or less of treatment vs. those who attended 2 or more months of treatment before dropping out. I would speculate that those in the former group dropped out because they, or their families, disliked or disagreed with my approach to treatment, or they felt that I was not a good fit for them personally, or perhaps they got discouraged that treatment was not working fast enough.

In contrast, I would speculate that many of those in the latter group (who attended at least 2 months of treatment and made significant progress) were satisfied that they (or their child) had made good enough progress and thus did not feel the need to attend any future sessions. For families who dropped out of FBT prematurely, it is possible that the parents felt empowered enough by several months of treatment, and significant progress in their child, to guide their child to full recovery without further professional assistance. For adults who dropped out of individual therapy prematurely, it is possible that they were frightened by the prospect of full weight restoration. Fear of weight gain is a very common symptom of AN, and the requirement of continued weight gain may explain the high rate of drop-out in behaviorally-oriented treatments which emphasize resolution of eating disorder symptoms and restoration of healthy weight.

Both of the patients (n = 2) who moved to other geographic locations during their treatment with me had been in treatment with me for 2-3 months at the time of their move, had made some progress as of their final session with me, and were referred to other professionals closer to their new homes for continued treatment.

In 22% of cases (n = 13), treatment ended when I referred the patient to another type of treatment or another provider who could better meet their needs. The most common referral scenario is a patient who is referred to a higher level of care, such as residential treatment or day treatment, because he or she is not progressing in treatment with me, or is not progressing quickly enough. Forty-six percent of referred patients had made no progress as of their last session with me. Fifteen percent of referred patients had regressed after beginning treatment with me. Another 15% of referred patients initially made significant progress with me but then deteriorated, hence the need for referral. Eight percent of patients were referred to other providers after making some progress treatment with me. An additional 8% were referred after making significant progress with me. Yet another 8% achieved complete recovery from AN in treatment with me and then were referred for specialized treatment of another illness.

**Weight Restoration**

All patients who completed treatment achieved 100% full weight restoration, as indicated by a return to their pre-AN percentile patterns of weight and growth. The average time to achieve weight restoration was 3.6 months after the start of treatment. Patients who recovered through individual therapy took longer, on average, to achieve full weight restoration than those who recovered through FBT.

**Predictors of Treatment Outcome**

Not surprisingly, completion of a full course of treatment emerged as the strongest predictor of achieving full recovery. Ninety-seven percent of individuals who completed a full course of treatment achieved full recovery from AN, while the remaining 3% achieved physical remission.

Participation in FBT emerged as a strong predictor of treatment completion and of full recovery. Patients receiving FBT were nearly twice as likely as those receiving only individual therapy to complete a full course of treatment. Of all patients who began a course of FBT, 57% completed a full course of treatment, compared with only 29% of those receiving individual therapy.

Patients receiving FBT were also much more likely than those receiving individual therapy to achieve full recovery: 54% of FBT patients achieved full recovery, compared with 29% of individual therapy patients.

Among patients who discontinued treatment with me prematurely, those receiving FBT were five times more likely than those receiving individual therapy to have made significant progress as of their last session with me (55% for FBT vs. 10% for individual therapy).

Gender emerged as a strong predictor of recovery, as males were more likely to achieve full recovery than females. Seventy-five percent of males who entered treatment for AN achieved full recovery, compared with 46% of females. However, this finding should be interpreted with caution, as the sample size of males was far too small (n = 4) to draw any meaningful conclusions.

Age was a strong predictor of recovery, with younger patients being more likely to achieve full recovery than older patients. Children under the age of 13 had the highest rate of recovery: 75% of children who entered treatment with me for AN achieved full recovery. Nearly half of adolescents (ages 13-17) who entered treatment for AN achieved full recovery. Twenty-five percent of college students (ages 18-22) achieved full recovery, as did 38% of adults over the age of 23.

Sub-type of AN was a strong predictor of recovery. Individuals with Restrictive Anorexia Nervosa were more than twice as likely to achieve full recovery (54%) as those with Binge-Purge Anorexia Nervosa (25%).

Payment of full rate for services emerged as a modest predictor of treatment completion and good outcome. Fifty-two percent of patients paying full rate for services achieved full recovery, compared with 33% of those receiving a reduced rate. This finding may be explained by the fact that individuals who paid a reduced rate were of lower socio-economic status, and thus experienced more psycho-social stressors related to financial difficulties compared with individuals from the middle and upper classes. Another possible mediating factor here is that college students who paid for their own services (and thus were offered a discounted student rate) may have had less parental support in treatment than those whose parents paid for their services (and thus paid full rate due to their higher income). The absence of parental support - financial, logistical, and emotional - may have made self-supporting college students less likely to complete treatment and recover. Yet another possibility is that individuals who paid more money for services felt more invested in their (or their child’s) treatment outcomes and thus were more dedicated to achieving treatment goals.

Patients who took psychotropic medication during treatment with me were somewhat more likely to attain full recovery (58%) than patients who did not take medication (38%).

Caucasian (non-Hispanic) patients were somewhat more likely than Hispanic patients to achieve full recovery (51% vs. 29%).

The following variables did not predict outcome: presence of a secondary diagnosis, referral source, BMI at intake, hospitalization during treatment with me, or history of eating disorder treatment prior to beginning treatment with me.

The majority of patients in this sample had a history of some other type of eating disorder treatment – either outpatient, inpatient, residential, or day treatment – prior to starting treatment with me. Patients with histories of eating disorder treatment prior to intake with me were no more or less likely, on average, to achieve full recovery than patients who had no such history.

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| **Treatment history before intake with me** | **% who attained full recovery in treatment with me** |
| History of hospitalization | 53% |
| No history of hospitalization | 50% |
|  |  |
| History of residential treatment | 33% |
| No history of residential treatment | 42% |
|  |  |
| History of day treatment or IOP | 38% |
| No history of day treatment or IOP | 43% |