Overview

In 2018 Monte Nido and Affiliates (MNA) began a comprehensive research study, approved by an Institutional Review Board, in order to assess treatment outcomes in our Residential, Partial Hospitalization Program (PHP) and Intensive Outpatient Program (IOP) levels of care. Specifically, patients who consent to participate in our research study complete a series of questionnaires upon admission, transfer to a new level of care (stepping up or down), as well as upon discharge from the program. Additionally, we obtain follow-up data for patients who consent at specified time-points after their discharge. The surveys administered represent the gold standard of assessments for eating disorder pathology as well as depression, anxiety and trauma.

The purpose of these questionnaires is multifaceted. Primarily, it represents our commitment to personalized treatment planning. This data provides a snapshot of each patient's distinctive symptom presentation on measures of eating disorder symptoms, depression, anxiety, functional impairment, and trauma reactivity. This information deepens our understanding of the clinical challenges specific to each patient and as a roadmap for exploration of the factors that may be maintaining the eating disorder. Data guides the clinical teams in developing a shared language for each patient's experience, to build engagement and design more effective treatment plans.

In addition to guiding treatment planning, this data allows leadership at MNA to track program effectiveness and identify areas for program development. As a company, we are continually evaluating whether we are providing the most effective and evidence-based interventions to our patients. Last, this data is collected with the hope and expectation of contributing to a growing body of research and helping the field of eating disorders continue to move forward.

Sample

The patient sample for January 2018 through December 2019 included data for 537 residential stays, 561 PHP stays and 354 IOP stays.

The average length of stay in residential was 42.19 days, 36.79 days for PHP and 40.4 days for IOP.

Our Residential sample included patients with the following Eating Disorder diagnoses: 34.9% Anorexia Nervosa, Restricting Type, 22.5% Anorexia Nervosa, Binge/Purge Type, 23.1% Bulimia Nervosa, 14.6% OSFED, 2.4% Binge Eating Disorder and 2.4% ARFID.

Our PHP sample included patients with the following Eating Disorder diagnoses: 32.9% Anorexia Nervosa, Restricting Type, 20.4% Bulimia Nervosa, 25.1% OSFED, 17.0% Anorexia Nervosa, Binge/Purge Type, 2.5% Binge Eating Disorder, and 2.1% ARFID

Last, the IOP sample included patients with the following Eating Disorder diagnoses: 29.4% Anorexia Nervosa, restricting type, 28.9 % OSFED, 21.4% Bulimia Nervosa, 16.3% Anorexia Nervosa, binge/purge Type, 2.6% Binge Eating Disorder and 1.5% ARFID.

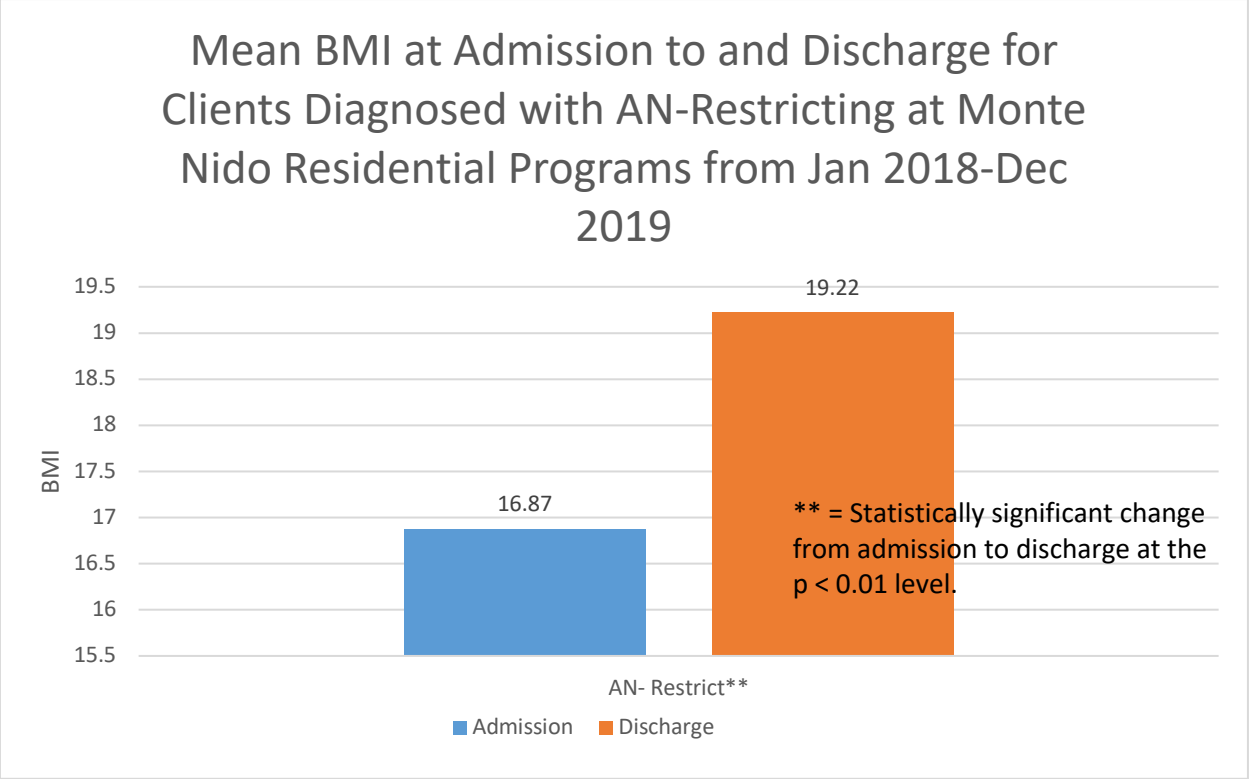
Importantly, this group of patients from all levels of care also presented with multiple co-morbidities including mood disorders, anxiety disorders, substance use disorders and post-traumatic stress disorder (PTSD).

Weight Change Data in Patients with Anorexia Nervosa at the Residential Level of Care

Overall, results demonstrate statistically significant weight gain in our patients with Anorexia Nervosa, Restricting Type (AN-R) at the residential level of care.

The average BMI of female adult patients with AN-R admitting to residential care at Monte Nido was 16.87. The average BMI at discharge was 19.22. On average, clients at Monte Nido diagnosed with AN-R experienced a BMI increase of 2.35. This change represents a statistically significant increase in BMI from admission to discharge ($p < 0.000$).

Seventy five percent of our adult female patients with AN-R restored their weight to a BMI ≥ 18.5 after 30 days at Residential level of care and 65% restored their weight to a BMI ≥ 19.

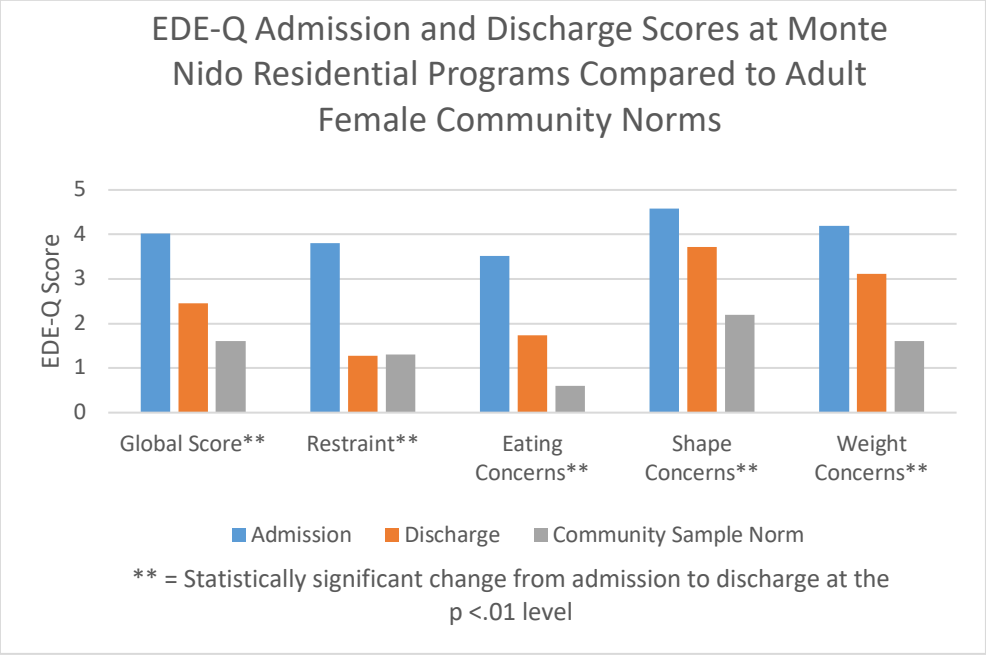


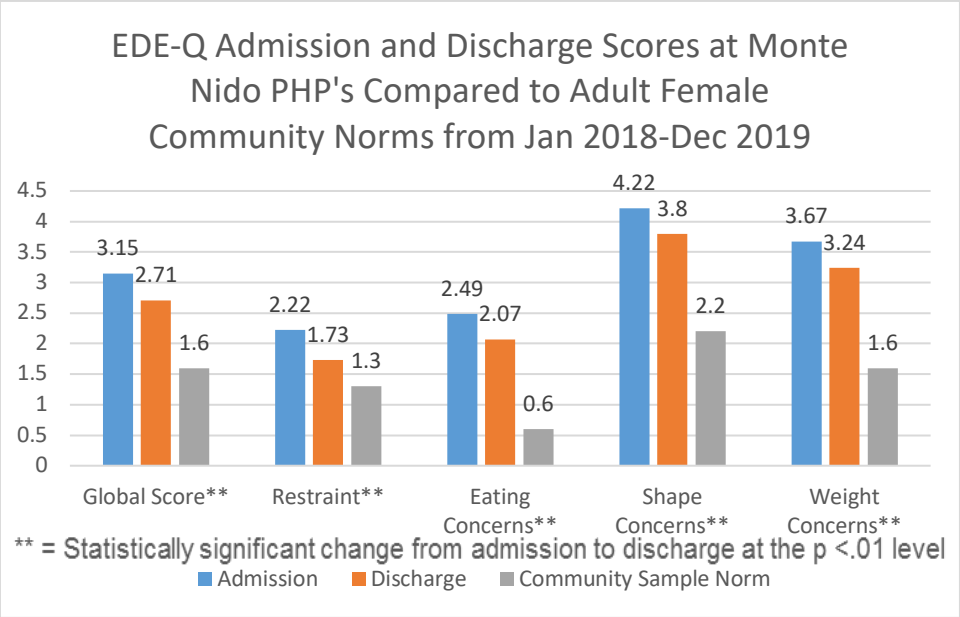
Eating Disorder Symptoms

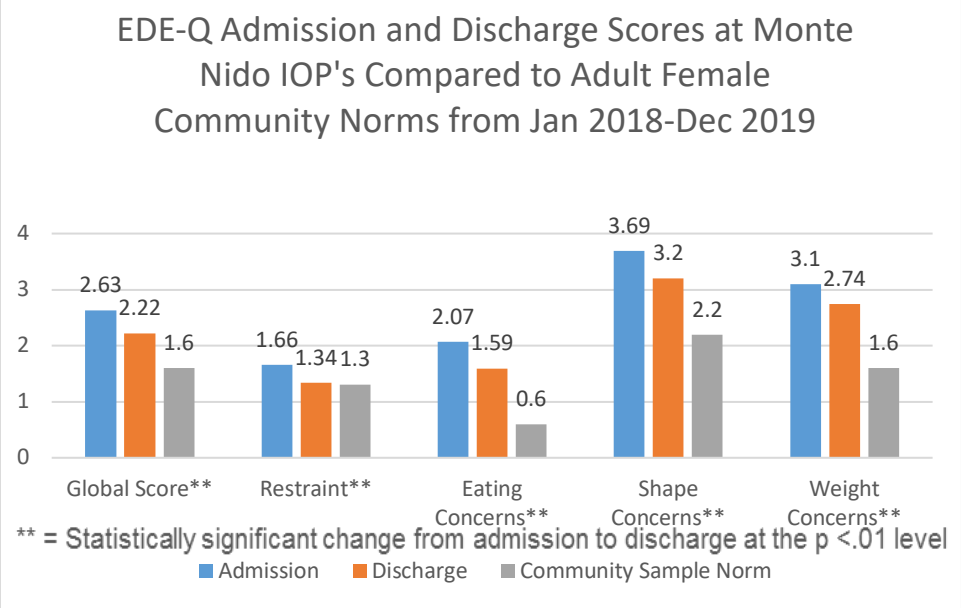
Eating Disorder Symptoms were measured using the Eating Disorder Examination Questionnaire (EDE-Q), a 28-item, self-report measure assessing the core features of eating disorder psychopathology. It is the gold-standard self-report assessment that has demonstrated reliability, validity and correlation with the lengthier assessments of eating disorder symptomology. This assessment tool measures a range of symptoms including fear of weight gain, self-induced vomiting, and loss of control with food, thus capturing the complexity and unique features of each individual's eating disorder.

Results indicate that patients experienced clinically and statistically significant reductions in eating disorder symptoms over the course of treatment in the Residential, PHP and IOP levels of care on nearly all scales.

On average, patients presented at admission with severe eating disorder symptoms relative to female community norms. Upon discharge, average patient scores on the EDE-Q were consistent with community norms, suggesting clinically significant improvements. The graphs below provides mean admission and discharge scores at Monte Nido across levels of care in comparison with community norms.







Eating Disorder Inventory (EDI-2)

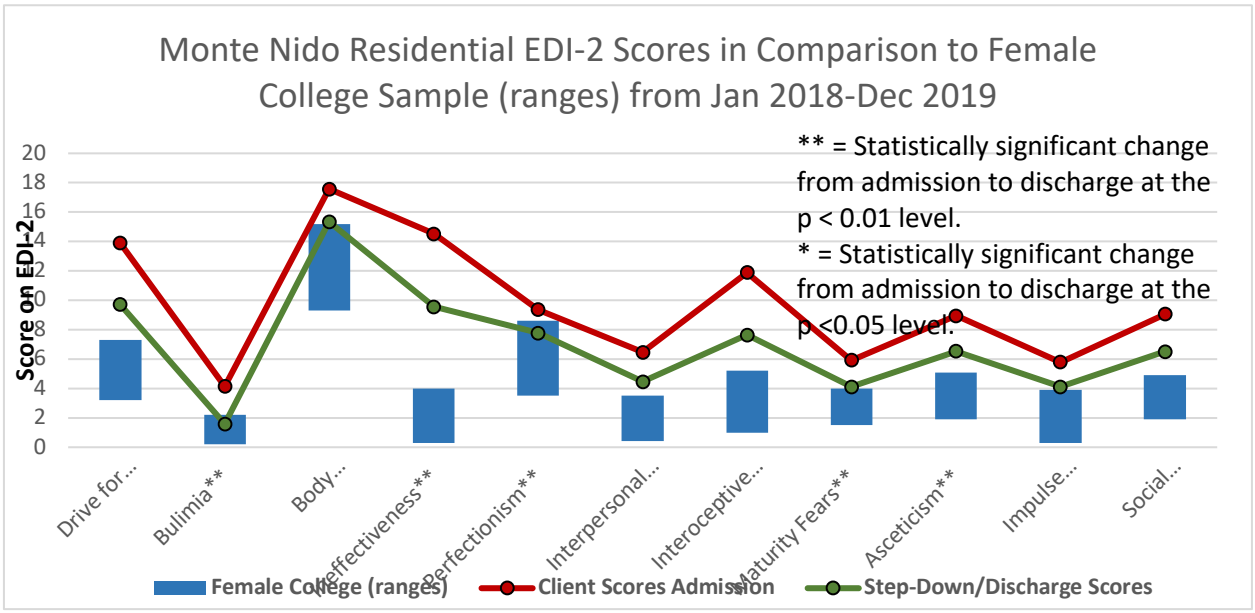
Eating disorder symptomology is also assessed using The Eating Disorder Inventory (EDI-2). The EDI-2 is a self-report measure of symptoms frequently related to anorexia nervosa or bulimia nervosa. This measure was designed to be an aid to forming a diagnosis and not as the exclusive basis for making a diagnosis. It is extremely valuable in guiding treatment planning and clinical work. The EDI-2 provides information regarding the psychological and behavioral dimensions of eating disorders. It has 91 items and 11 subscales. The subscales and a brief description of what they measure are as follows:

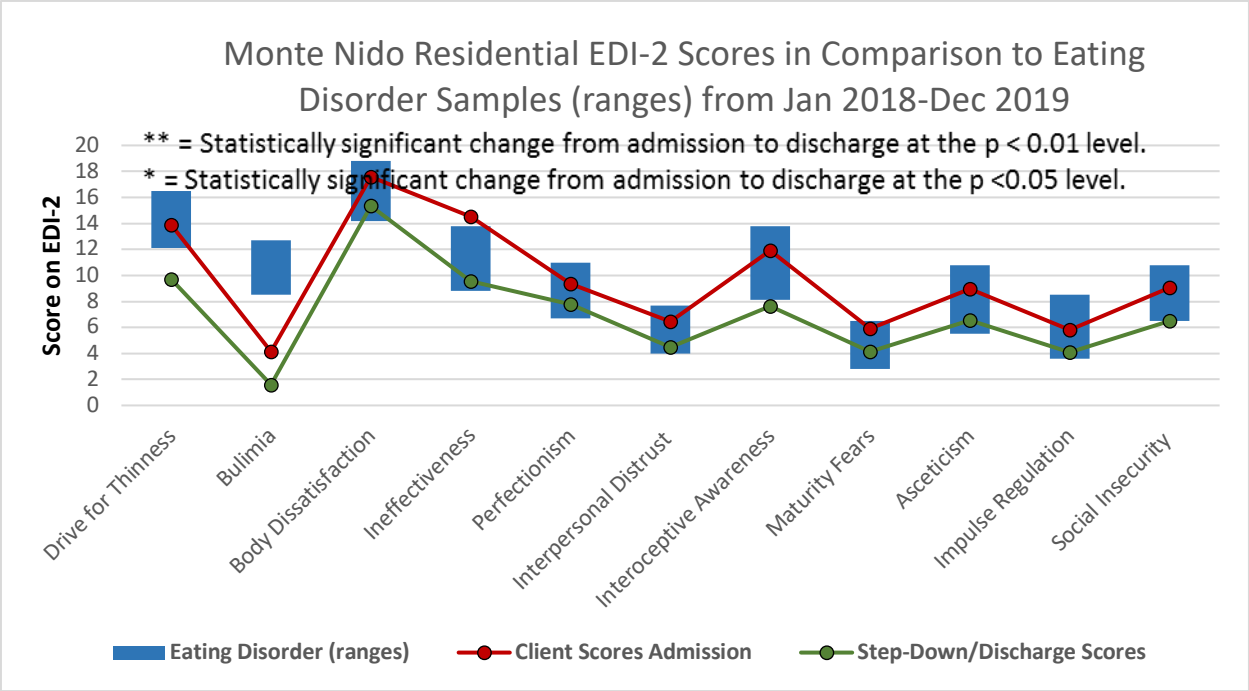
1. Drive for thinness (DT): an excessive concern with dieting, preoccupation with weight, and fear of weight gain.
2. Bulimia: episodes of binge eating and purging.
3. Body dissatisfaction: not being satisfied with one's physical appearance.

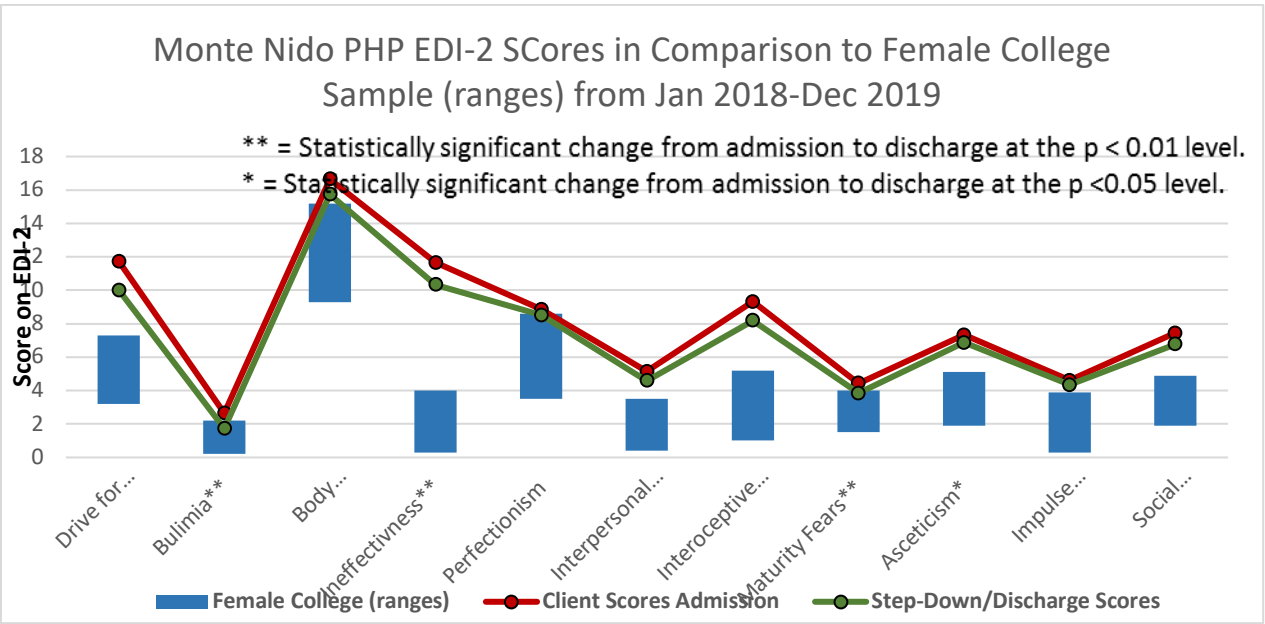
4. Ineffectiveness: assesses feelings of inadequacy, insecurity, worthlessness and having no control over their lives.
5. Perfectionism: not being satisfied with anything less than perfection.
6. Interpersonal distrust: reluctance to form close relationships.
7. Interoceptive awareness: the ability to discriminate between sensations and feelings, such as hunger and satiety.
8. Maturity fears: the fear of facing the demands of adult life.
9. Ascetism: reflects a tendency to find value in self-deprivation, as well as denial and control of feelings, wants, desires, and urges.
10. Impulse Regulation: the ability to regulate impulsive behavior, especially binge behavior.
11. Social Insecurity: estimates social fears and insecurity.

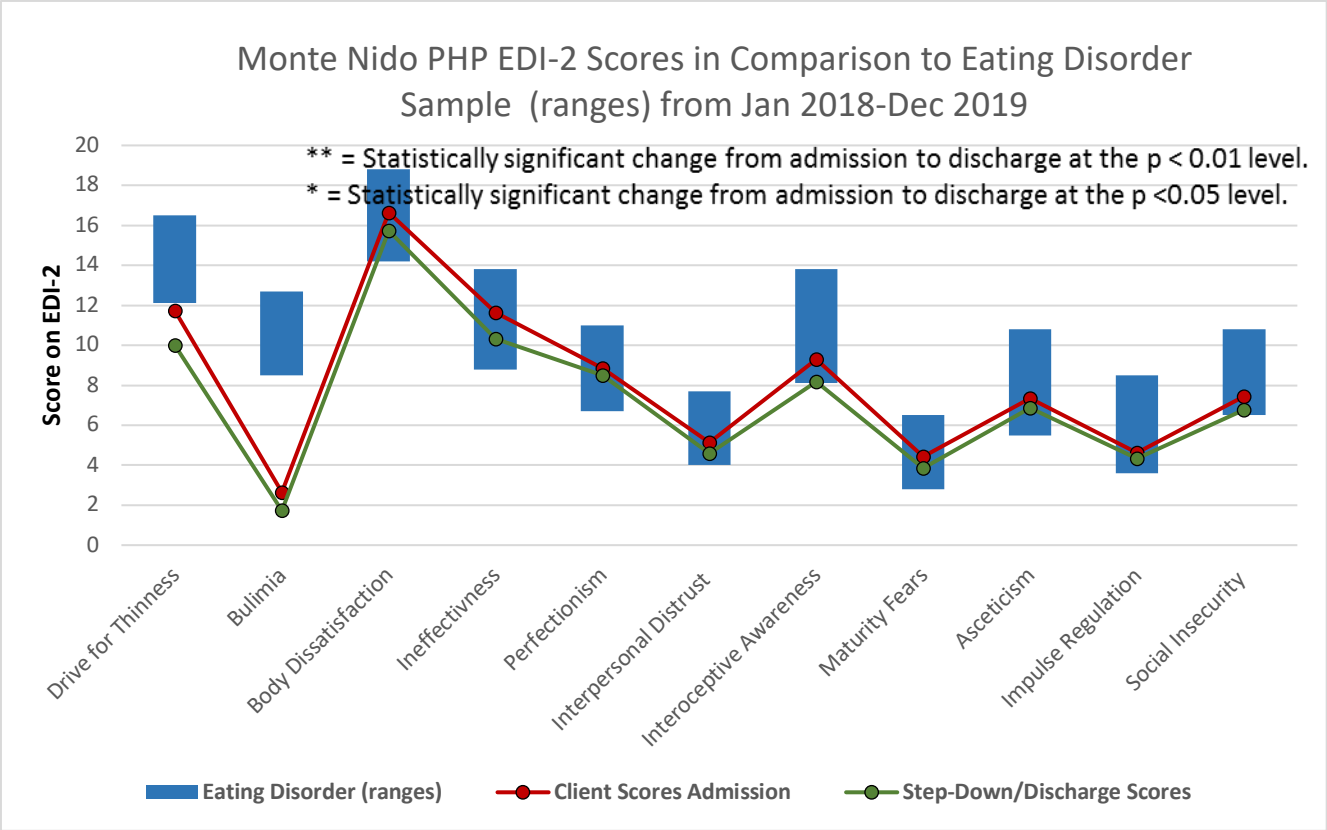
Results indicate that patients demonstrated reductions in eating disorder pathology on all subscales across the Residential, PHP and IOP programs. The majority of these reductions were statistically significant at the $p \leq 0.01$ level or the $p \leq 0.05$ level.

Below see graphs for the Residential and PHP levels of care comparing admission and transfer/discharge scores to those of female college students as well as sample of individuals diagnosed with an eating disorder. Of note, the EDI-2 is validated for the diagnoses of Anorexia Nervosa and Bulimia Nervosa only, therefore the diagnoses of BED, ARFID and OSFED were excluded for these specific analyses.




Monte Nido Residential EDI-2 Scores in Comparison to Eating Disorder Samples (ranges) from Jan 2018-Dec 2019
** = Statistically significant change from admission to discharge at the p < 0.01 level.
* = Statistically significant change from admission to discharge at the p <0.05 level.
Score on EDI-2
20
18
16
14
12
10
8
6
4
2
0
Drive for Thinness
Bulimia
Body Dissatisfaction
Ineffectiveness
Perfectionism
Interpersonal Distrust
Interoceptive Awareness
Maturity Fears
Asceticism
Impulse Regulation
Social Insecurity
Eating Disorder (ranges)
Client Scores Admission
Step-Down/Discharge Scores

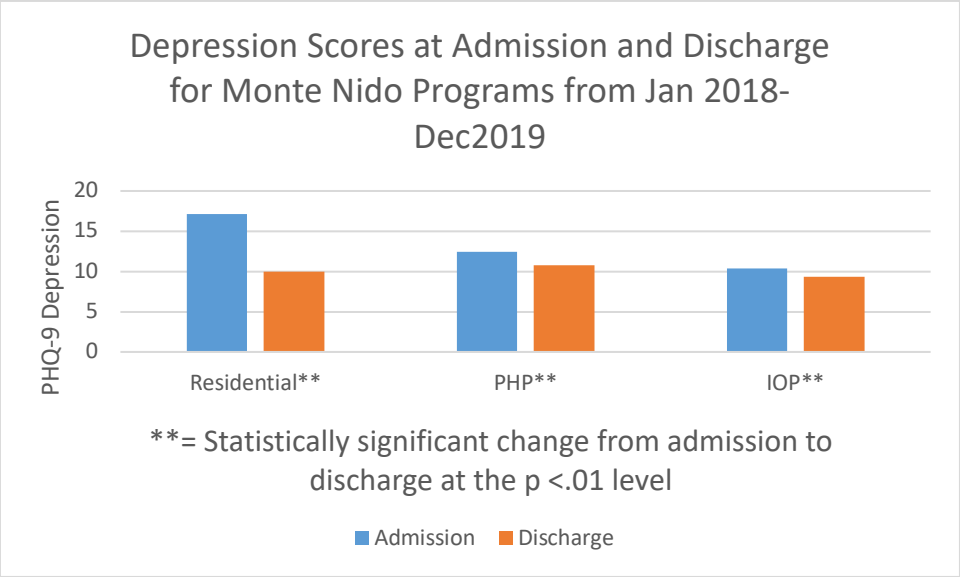

Monte Nido PHP EDI-2 SCores in Comparison to Female College Sample (ranges) from Jan 2018-Dec 2019
** = Statistically significant change from admission to discharge at the p < 0.01 level.
* = Statistically significant change from admission to discharge at the p <0.05 level.
Score on EDI-2
18
16
14
12
10
8
6
4
2
0
Drive for...
Bulimia**
Body...
Ineffectivness**
Perfectionism
Interpersonal...
Interoceptive...
Maturity Fears**
Asceticism*
Impulse...
Social...
Female College (ranges)
Client Scores Admission
Step-Down/Discharge Scores



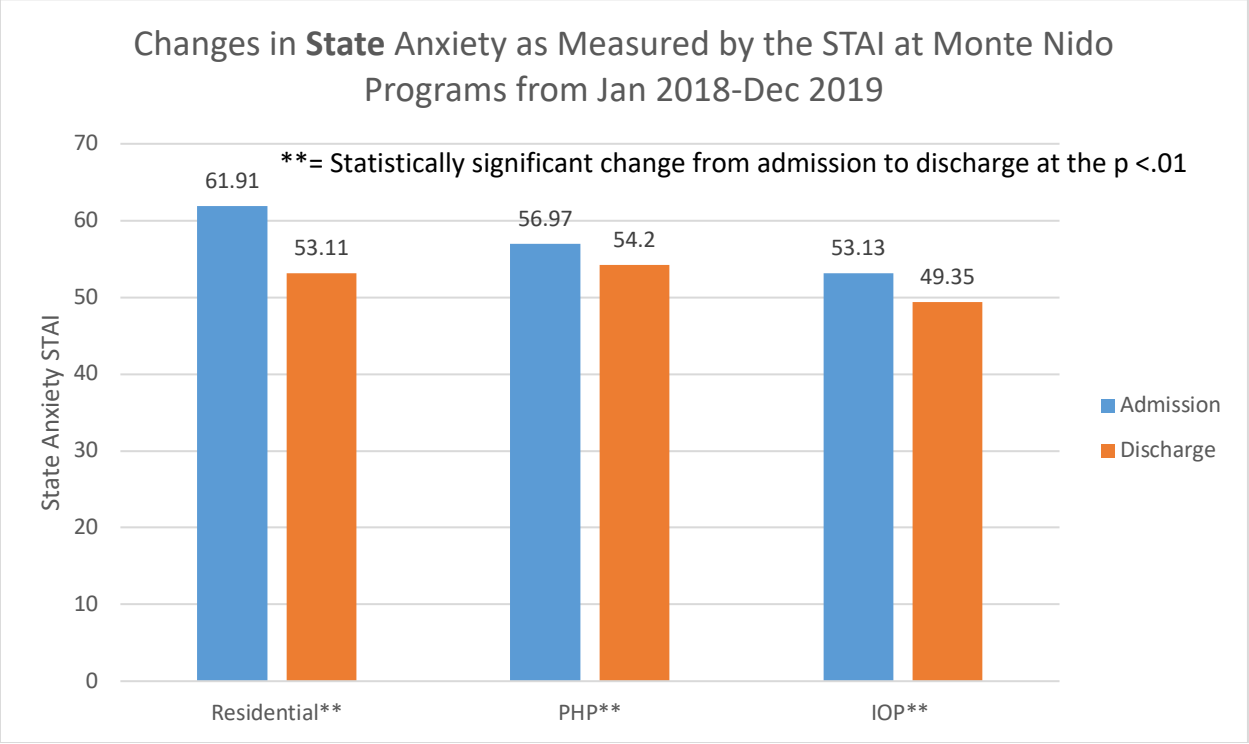
Depression and Anxiety

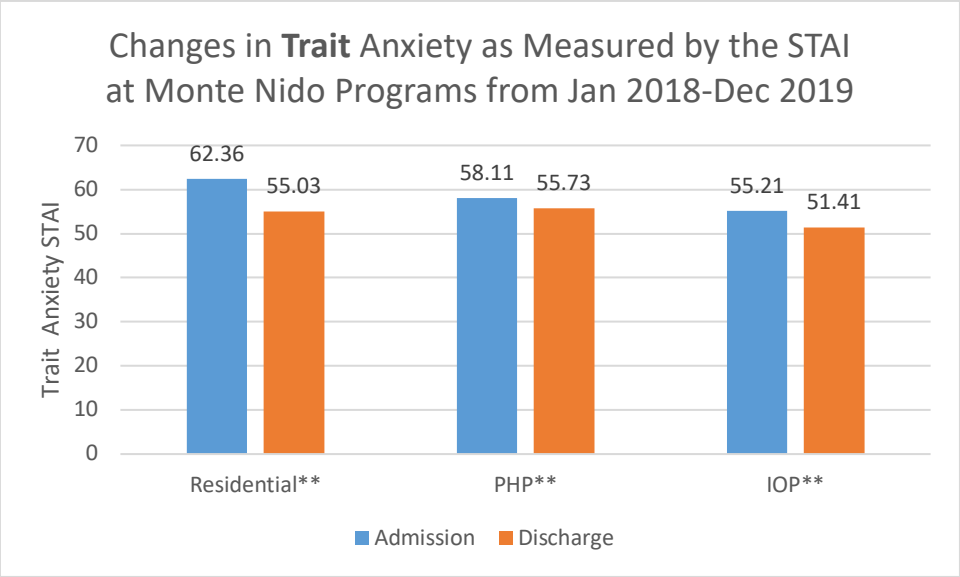
Symptoms of depression were assessed using the Patient Health Questionnaire-9 (PHQ-9), a nine-item tool used for screening and measuring the severity of depression.

Overall, results show clinically and statistically significant depression symptom reduction across levels of care. On average, scores on the PHQ-9 indicated patients admitted to the Residential Level of Care with “moderately severe” symptoms of depression and reported “moderate” symptoms upon discharge. At the PHP level of care, patients reported on average “moderate” symptoms of depression at the time of admission and reported lower levels of “moderate” symptoms of depression upon discharge. On average, patients admitted to IOP with self-reported “moderate” symptoms of depression and discharged with “mild” symptoms of depression. The graph below represents changes in depression scores at the Residential, PHP and IOP levels of care.



Symptoms of anxiety were measured using the State-Trait Anxiety Inventory (STAI), a 40 item self-report measure of anxiety. This tool assesses the temporary state of feeling anxious as well as anxiety as a more general and long-standing quality. Scores indicated that patients in the Residential, PHP and IOP levels of care demonstrated statistically significant reductions in both state and trait anxiety from admission to discharge.





Posttraumatic Stress Disorder (PTSD)

Monte Nido has also been systematically assessing for the presence and severity of PTSD and its symptoms. The presence of significant life events that either happened to an individual or was witnessed (Criterion A) was recorded after admission using the Life Events Checklist for DSM-5 (LEC-5), and in addition, other PTSD symptoms were assessed at admission and discharge using the PTSD Symptom Checklist for DSM-5 (PCL-5) (Criteria B-E). Results indicate that 54%, 45% and 41% of individuals admitted to Monte Nido Residential, PHP and IOP programs respectively met criteria for PTSD.