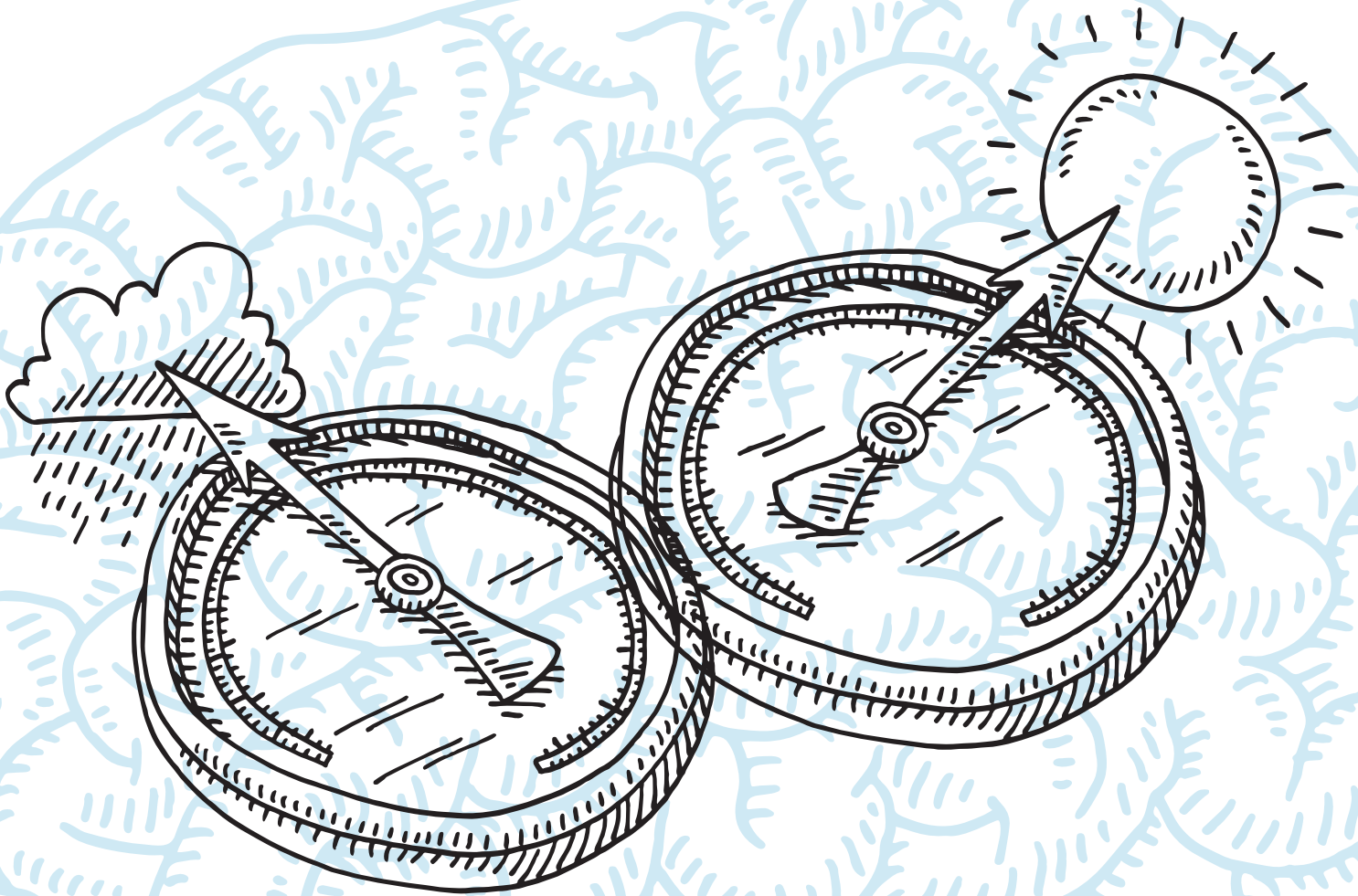# OUTCOMES
RESEARCH SUMMARY 2020
ADULT PROGRAMS

COMBINING **DATA-DRIVEN TREATMENT** WITH **WHOLE PERSON CARE**

![Skyland Trail logo]

Skyland Trail

We treat each individual, individually, tailoring an approach that includes a broad mix of evidence-based one-on-one and group therapies that help our clients grow, recover, and reclaim their lives.

References

1 Results are significant at the p<.05 significance level. The 32-item Behavior and Symptom Identification Scale (BASIS-32): © Copyright McLean University, Affiliate of Harvard Medical School.

2 Results are statistically significant at the p<.05 significance level. Beck Hopelessness Scale: Beck AT, Weissman A, Lester D, Trexler L. (1074). The measurement of pessimism: The Hopelessness Scale. *Journal of Consulting and Clinical Psychology*, 42(6), 861-865.

3 Results are statistically significant at the P<.05 significance level. Medication Attitude Inventory: Hogan TP, Awad AG, & Eastwood R. (1983). A self-report scale predictive of drug compliance in schizophrenics: reliability and discriminative validity. *Psychological Medicine*, 13, 177-183.

4 Overall JE, Gorham DR. The Brief Psychiatric Rating Scale. *Psychological Reports.* 1962; 10:799-812.

5 Montgomery, S.A. & Åsberg, M. (1979). A new depression scale designed to be sensitive to change. *British Journal of Psychiatry*, 134, 382-389.

6 Young RC, Biggs JT, Ziegler VE, Meyer DA: A rating scale for mania: reliability, validity and sensitivity. *British Journal of Psychiatry*, 133:429-435, 1978.

7 Hamilton M: The assessment of anxiety states by rating. *British Journal of Medical Psychology*, 32:50-55,1959.

8 Bernstein DP, Fink L, Handelsman L, Lovejoy M, Wenzel K, Sapareto E, Gurriero J. Initial reliability and validity of a new retrospective measure of child abuse and neglect. *American Journey of Psychiatry* 1994; 151: 1132- 1136.

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DATA-DRIVEN TREATMENT
WHOLE PERSON CARE

Skyland Trail is a trailblazer in the area of outcomes research, which is an integral part of our evidence-based treatment model. Our robust outcomes and research program employs evaluative instruments considered to be the gold standards in the mental health field to measure the effectiveness of our treatment programs.

Outcome data from 2008 through 2020 confirm that our unique integrated, evidence-based approach helps our clients return to their communities with reduced symptoms and improved skills to pursue more independent and productive lives.

ASSESSMENT SCALES

IMPROVEMENT IN FUNCTIONING
Behavior & Symptom Identification Scale-32 (BASIS-32)
Medication Attitude Inventory (MAI)
Making Decisions Scale (MDS)

REDUCTION IN SYMPTOMS
Behavior & Symptom Identification Scale-32 (BASIS-32)
Beck Hopelessness Scale (BHS)

DISEASE-SPECIFIC OUTCOMES
Schizophrenia & Schizoaffective Disorder: Brief Psychiatric Rating Scale (BPRS-24)
Major Depression: Montgomery-Asberg Depression Rating Scale (MADRS)
Anxiety: Hamilton Anxiety Rating Scale (HAM-A)
Bipolar: Young Mania Rating Scale (YMRS)

2020 KEY OUTCOMES

Every one of the clinical outcomes measures improved from admission to discharge for the entire sample of clients to a statistically significant extent, all p<.05.

89%
of all clients experienced a clinically significant improvement in functionality, symptoms, and social relationships[1]

88%
of clients with very severe symptoms of depression experienced clinically significant reduction[5] in symptoms

85%
of clients with anxiety experienced clinically significant improvement in control of anxiety[7]

100%
of clients who had clinically meaningful episodes of mania showed no symptoms of clinically meaningful mania at discharge[6]

86%
of all clients experienced a clinically significant improvement in hope[2]

90%
of clients leave treatment with a positive attitude about taking their psychiatric medication[3]

REDUCED SYMPTOMS BY DIAGNOSIS

Skyland Trail administers disease-specific outcome measurement tools every two weeks of treatment, based on the confirmed diagnosis at admission. Though the scales differ for each measurement, lower scores always indicate improved symptomatology.

🟩 SCORE CLOSEST TO ADMISSION

🟦 SCORE CLOSEST TO DISCHARGE

Scores closest to admission and closest to discharge, show that for all four diagnosis-specific measures, clients show a clinically and statistically significant improvement of symptomatology.
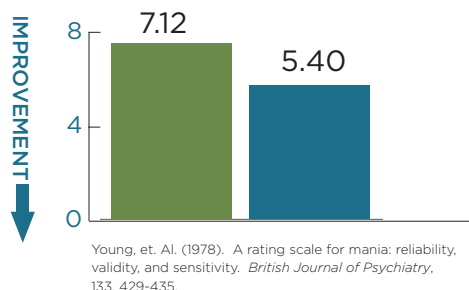
BIPOLAR ILLNESS

100%

of clients who had clinically meaningful episodes of mania showed no symptoms of clinically meaningful mania at discharge[6]

Young Mania Rating Scale 2020
t(25) = 4.42 p = .001

IMPROVEMENT

7.12 | 5.40

8
4
0

Young, et. Al. (1978). A rating scale for mania: reliability, validity, and sensitivity. *British Journal of Psychiatry*, 133, 429-435.
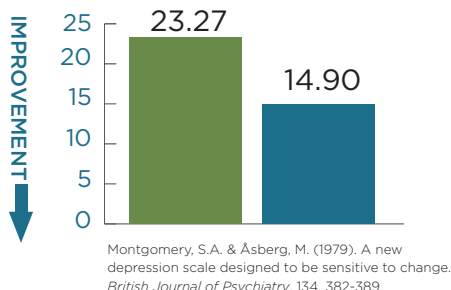
MAJOR DEPRESSION

88%

of clients with very severe and severe symptoms of depression experienced clinically significant reduction[5]

Montgomery-Asberg Depression Rating Scale 2020
t(222) = 10.30, p =.000

IMPROVEMENT

23.27 | 14.90

25
20
15
10
5
0

Montgomery, S.A. & Åsberg, M. (1979). A new depression scale designed to be sensitive to change. *British Journal of Psychiatry*, 134, 382-389.

Skyland Trail is a measurement-driven program. We use normed assessment tools and science to guide therapy. This is a national model for psychiatric treatment.
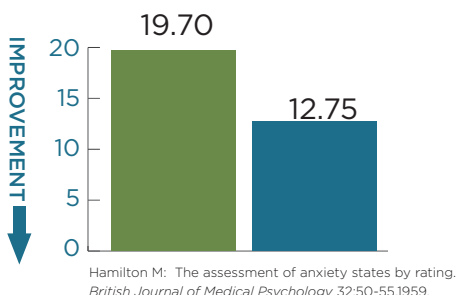
ANXIETY DISORDERS

85%

of clients with anxiety experienced clinically significant improvement in control of anxiety[7]

Hamilton Scale of Anxiety 2020
t(202) = 6.44 p =.000

IMPROVEMENT

19.70 | 12.75

20
15
10
5
0

Hamilton M: The assessment of anxiety states by rating. *British Journal of Medical Psychology* 32:50-55,1959.
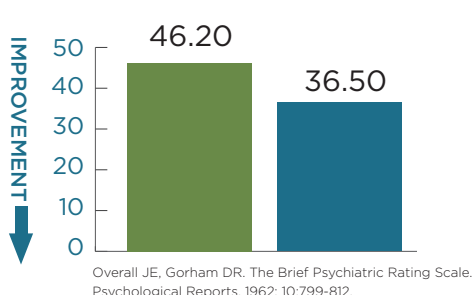
THOUGHT DISORDERS

86%

of clients with psychosis experienced clinically significant improvement in their thought disorder symptoms[4]

Brief Psychotic Rating Scale 2020
t(46) = 11.8, p =.000

IMPROVEMENT

46.20 | 36.50

50
40
30
20
10
0

Overall JE, Gorham DR. The Brief Psychiatric Rating Scale. Psychological Reports. 1962; 10:799-812.
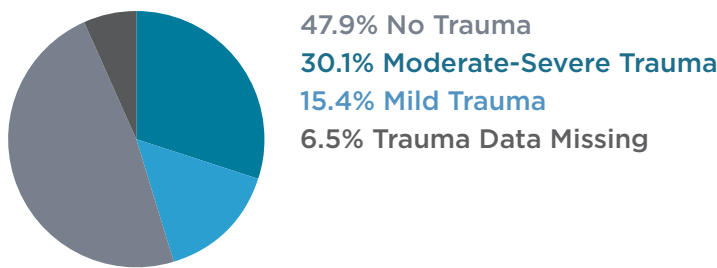
CHILDHOOD TRAUMA

Trauma exposure has been reported to be associated with inflammatory responses, as has obesity. In 2020, we assessed exposure to childhood trauma through the Childhood Trauma Questionnaire (CTQ) and measured levels of C-Reactive protein (CRP) through laboratory bloodwork in adult clients at admission. We divided a sample of 280 cases with valid CTQs and CRPs into low, moderate, and high cohorts.

- Elevated CRPs were associated with treatment resistance
- Very high elevations (10 or more) in CRP levels were associated with trauma exposure. These elevations were specific to the experience of sexual abuse and were not explained by elevations in BMI.
- There were no linear correlations: sexual abuse was specifically associated with very high CRP.
- The specific experience of sexual abuse leads to an inflammatory response.

Childhood Trauma Rates 2020 (Adults)

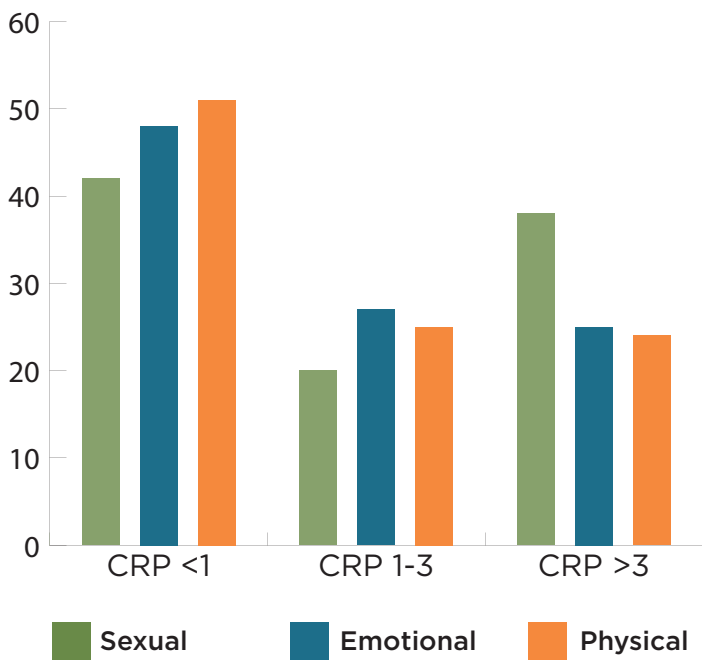As measured by the Childhood Trauma Questionnaire (CTQ) assessment given at admission

47.9% No Trauma
30.1% Moderate-Severe Trauma
15.4% Mild Trauma
6.5% Trauma Data Missing

Categories of Childhood Trauma 2020 (Adults)

As measured by the Childhood Trauma Questionnaire (CTQ) assessment given at admission

23% Physical Abuse
43% Emotional Abuse
16% Sexual Abuse
20% Emotional Neglect
18% Physical Neglect
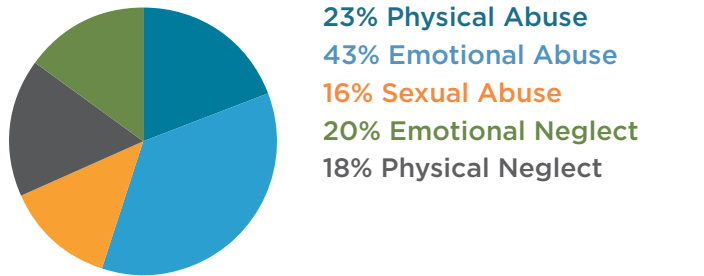
CRP and Specific Trauma Exposure 2020

Sexual   Emotional   Physical

Applications for Treatment

Our goal with this study was to explore a set of predictors to better identify patients who may be at higher risk of treatment resistance or poorer treatment outcomes. If predictors could be identified - for example a combination of CTQ scores and CRP levels - they could be used to target groups of patients early in the course of treatment with specialized interventions to help improve treatment outcomes.

WEIGHT GAIN IN TREATMENT

The Wellness Program is working. In 2020, 72 percent of adult clients had no BMI gain. Improvements may be due, in part, to changes in availability of unhealthy meals and snacks due to restrictions imposed for Covid-19 (e.g. fewer off-campus shopping trips, fewer trips to off-campus restaurants, and fewer deliveries of food from visitors) .

Adult BMI Change Rates (Admission to Discharge)

72% of adult clients had no BMI gain while in treatment

51% Decreased BMI
11% Increased BMI
28% Maintained BMI
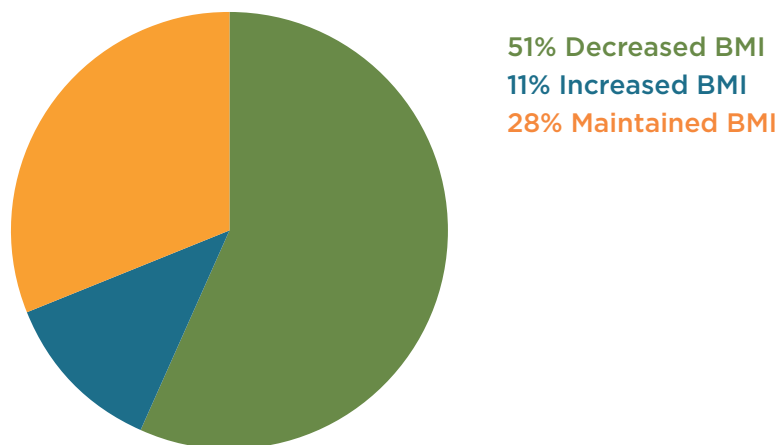
WORKING TOWARD REMISSION

Historically, when we treat patients with bipolar mania, they are uniformly in remission from mania at discharge, meaning they no longer experience symptoms of mania.

We are looking at how to bring about remission for other diagnoses, specifically depression, and are moving the needle in that direction.

In 2020:

- 31% of clients with major depression were considered in remission - completely symptom free - at discharge
- 40% of patients with major depression improved by 50% or more
- 88% of all patients with major depression experienced a clinical improvement in symptoms

(Based on a comparison of scores on the Montgomery-Asberg Depression Rating Scale at admission and discharge.)

31% of clients with major depression were considered in remission at discharge

IMPROVED FUNCTIONING

In 2020, on average, our clients experienced significant improvement in:

SOCIAL RELATIONSHIPS

DEPRESSION & ANXIETY

DAILY LIVING SKILLS

PSYCHOSIS

IMPULSIVITY

In 2020, patients consistently showed statistically significant functional improvement as measured by the BASIS-32. Comprised of 5 subscales, the BASIS-32 contains an overall average score ranging from 0 to 4, with lower scores indicating greater levels of functioning in daily life, interpersonal relationships, impulsivity, psychosis, depression, and anxiety.

Clients as a group showed significant impairment at admission, and low-moderate impairment (and in many cases, no impairment) at discharge.

BASIS-32 Overall and Subscales Change Scores 2020

Significant Impairment
>1.5 Significant and systemic impairment in daily life and/or interpersonal relationships, with extreme impulsivity, psychosis, depression, and/or anxiety present.

Moderate Impairment
.5–1.5 Moderate impairment in daily life and/or interpersonal relationships, with some impulsivity, psychosis, depression, and/or anxiety present.

Full Functioning
<0.5 Indicates full functioning with no significant impairment in daily life and/or interpersonal relationships, with little or no impulsivity, psychosis, depression, and/or anxiety present.

The 32-Item Behavior and Symptom Identification Scale (BASIS-32). © Copyright McLean University, Affiliate of Harvard Medical School.

IMPROVEMENT

ADMISSION
DISCHARGE

t(259)=1302, p<.001

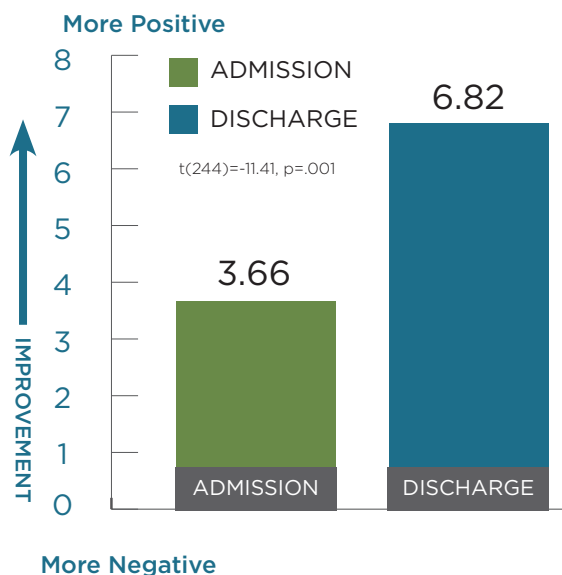|	OVERALL	RELATION TO SELF/OTHERS	DEPRESSION/ANXIETY	DAILY LIVING SKILLS	PSYCHOSIS	IMPULSIVITY
Admission	1.64	2.16	2.19	2.26	.47	.61
Discharge	.79	1.08	1.12	1.07	.21	.21

IMPROVED MEDICATION ADHERENCE

Attitude toward taking psychiatric medications is a surrogate measure for medication adherence. **Medication adherence is one of the best predictors of sustained recovery.**

>6 Indicates generally positive attitudes towards medication use and are correlated with greater levels of medication adherence in a clinical setting.

Hogan TP, Awad AG, & Eastwood R. (1983). A self-report scale predictive of drug compliance in schizophrenics: reliability and discriminative validity. Psychological Medicine, 13, 177–183.

Medication Attitude Inventory 2020

More Positive

ADMISSION
DISCHARGE

t(244)=-11.41, p=.001

IMPROVEMENT

6.82

3.66

ADMISSION | DISCHARGE

More Negative

Scores on the Medication Attitude Inventory (MAI) range from 0 to 10, with higher scores indicating more positive attitudes towards medication use and medication adherence. On average, clients experienced statistically significant improvement with an average attitude score of 3.66 at admission to a 6.82 at discharge.

INCREASED HOPEFUL THINKING

In 2020, clients continued to experience a statistically significant decrease in feelings of hopelessness, t(255)=9.04, p <.001. This finding indicates that, on average, individuals improved from feeling very hopeless at admission to having hopeful future expectations at discharge.

Hope for one's future is one of the best predictors of continued adherence to a recovery plan.

Human beings are much more than constellations of symptoms, thoughts and behaviors. **Hopefulness, social interconnectivity, and a sense of self efficacy define recovery and what it means to be mentally well.**

Beck Hopelessness Scale Scores 2020

7.9

ADMISSION

3.3

DISCHARGE

IMPROVEMENT

ADMISSION
DISCHARGE

t(255)=9.04 p<.001
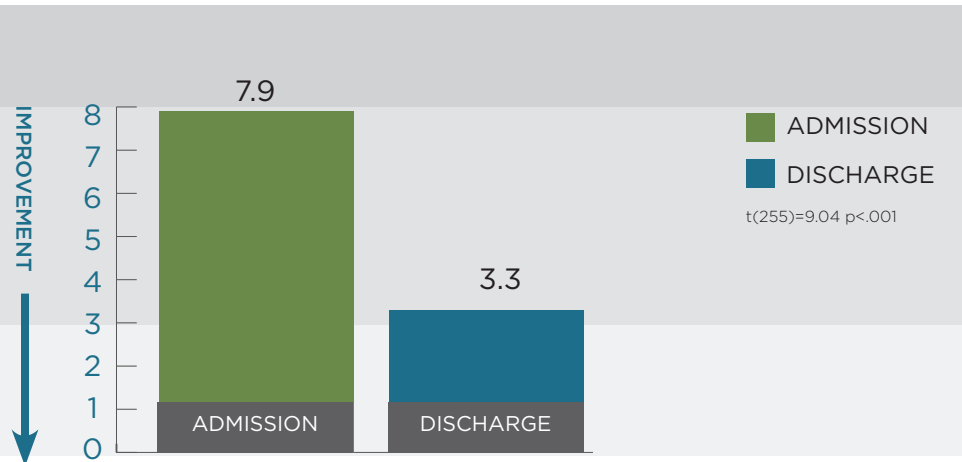
Nihilistic Preoccupations
>8 These individuals see very little hope in all domains of their lives.

Some Hopelessness
3–8 Individuals display some hopelessness in their thinking. Individuals closer to 8 can be said to be very hopeful while those scoring closer to 3 can be said to be somewhat hopeless.
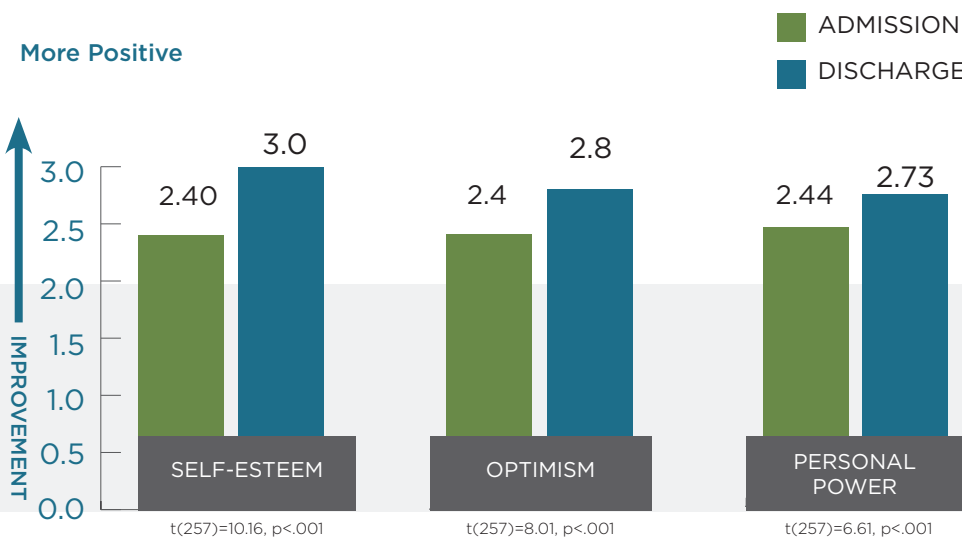
Hopeful
<3 Individuals are said to be hopeful.

Beck AT, Weissman A, Lester D, Trexler L. (1974). The measurement of pessimism: The Hopelessness Scale. *Journal of Consulting and Clinical Psychology*, 42(6), 861-865

IMPROVED ABILITY TO MAKE DECISIONS

Making Decisions Scale 2020

More Positive

ADMISSION
DISCHARGE

IMPROVEMENT

2.40 | 3.0
SELF-ESTEEM
t(257)=10.16, p<.001

2.4 | 2.8
OPTIMISM
t(257)=8.01, p<.001

2.44 | 2.73
PERSONAL POWER
t(257)=6.61, p<.001

More Negative

A sample of 258 clients who completed the Making Decisions Scale at admission and discharge demonstrated statistically significant improvement in their ability to use self-esteem, optimism, and personal power in making decisions.

A four-point scale, where scores **centered around 1** indicate **negative beliefs** about the ability to make decisions with psychological components like:
- self-esteem
- optimism
- activism
- personal power (beliefs in the efficacy to make decisions on one's own)

Rogers et al. (1997). A consumer-constructed scale to measure empowerment among users of mental health services. Psychiatric Services, 48(8), 1042-1047.

PATIENT COMPLEXITY

61% of clients had >3 co-occurring diagnoses confirmed at admission

Co-occurring disorders include: anxiety disorders, substance misuse, borderline personality disorder, others

Skyland Trail has specialized in treating complex patients for many years. Many patients enroll in the residential treatment program after participating in other outpatient or inpatient therapeutic programs without results.

In 2020, Skyland Trail treated a large number of young adult patients ages 18 to 25 with a complex constellation of co-occurring disorders: a mood disorder, borderline personality disorder, and a substance misuse disorder.

Patients in this category had outcomes similar to the broader patient population and experienced significant improvement in symptoms, functionality, and hopeful thinking.
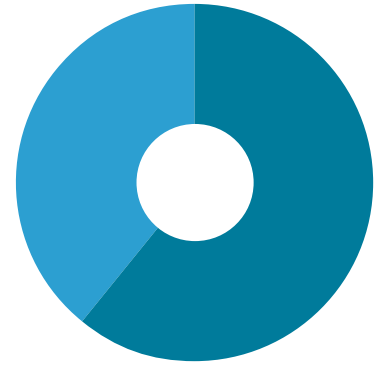
61% Three or more diagnoses
39% Less than three diagnoses

Skyland Trail

LOCATED IN ATLANTA, Skyland Trail is a nationally recognized nonprofit mental health treatment organization serving adults and adolescents with a primary psychiatric diagnosis. Through our residential, day treatment, and outpatient programs, we help our clients grow, recover, and reclaim their lives.

CONTACT US

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866-528-9593

www.skylandtrail.org

Joint Commission National Quality Gold Seal of Approval Since 1995

ADULT CONTINUUM OF CARE

Residential Treatment
Day Treatment
Intensive Outpatient
Independence Coaching

Outpatient Programs:
Wellness Clinic, TMS, Vocational Services, Comprehensive Assessment, Alumni Program

AVERAGE LENGTH OF STAY ADULT PROGRAMS

3-6 MONTHS

SPECIALIZED, EVIDENCE-BASED COMMUNITIES FOR ADULTS

Cognitive Behavioral Therapy

Dialectical Behavior Therapy

Cognition and First Episode (Young Adults)

Social Integration

Dual Diagnosis
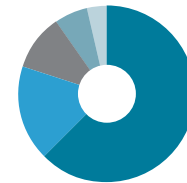(offered as a second area of focus for clients in all communities)

2020 ADULT CLIENT COMMUNITY

Primary Psychiatric Diagnoses
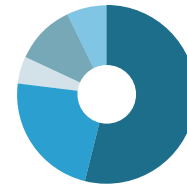
56% Major depression
20% Bipolar illness
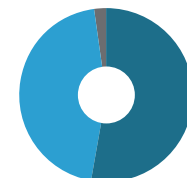**7% Psychotic disorders**
12% Anxiety disorders
6% Other

Age

63% Ages 18-25
17% Ages 26-35
10% Ages 46-55
6% Ages 36-45
4% Ages 55+

Gender
Gender reporting includes transgender clients according to their gender identity.

55% Female
44% Male
<1% Gender neutral or non-binary