



EVALUATION REPORT

A SUMMARY OF TREATMENT OUTCOMES 2016 - 2024

DEAR BLACK MOUNTAIN ACADEMY COMMUNITY,

I am pleased to share the results of Black Mountain Academy's recent outcome evaluation. This evaluation is part of our ongoing commitment to transparency, accountability, and continuous improvement. It provides us with valuable insights into how well we are living out our mission: equipping neurodiverse adolescents with the skills, education, and social confidence they need to thrive in school and beyond.



The evaluation was conducted to better understand the effectiveness of our school and program as well as to identify opportunities for growth. We include stories from six former students to capture their specific progress as rated by themselves in each of our core competencies. Their contribution was also essential to this evaluation process. It is stories like theirs that remind us of the profound impact of our work. Positive outcomes are made possible because of the dedication of our staff and the trust of our students and families.

The evaluation revealed important strengths, including student engagement, family engagement, and measurable growth in social-emotional development. At the same time, it highlighted areas for improvement, such as refining assessment tools to better fit our student population and align with our six core competencies and overall mission. These results are generally positive, however we will now strive to do better at collecting data from alumni students and families after they transition from our school and program so we can understand the lasting impact of our work.

These findings affirm that we are on the right path while guiding us toward improvements. We will refine our assessment, and examine areas to deepen the gains our students make throughout their stay. Each of these steps aligns with our mission and strengthens our commitment to preparing students for independence and meaningful lives as adults.

We are deeply grateful to our staff, students, and families for their honesty and participation in our evaluation. I invite you to review the report and share feedback as we move forward together. Your voices are essential in shaping the future of Black Mountain Academy.

Thank you for your continued partnership and for believing in our vision where neurodiverse adolescents can learn, grow, and thrive. Together, we will keep developing our school and program in ways that inspire growth, connection, and lasting success.

Brandon Moffitt, MA, LCMHC
Executive Director & Founding Partner
Black Mountain Academy





EXECUTIVE SUMMARY



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BACK MOUNTAINS OVERLOOK

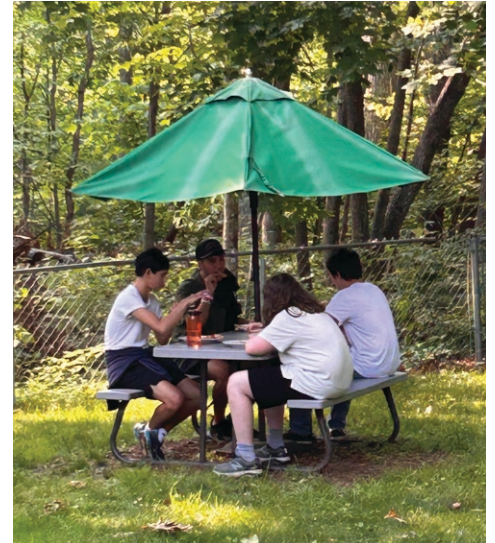
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About Black Mountain Academy

Black Mountain Academy is a specialized boarding school supporting adolescent males who have learning differences and struggle with relationships, anxiety, and traditional academics. Each student's individualized treatment plan fosters growth across six core competencies: academics, healthy wellbeing, emotional regulation, executive function, independence, and daily living skills.

Growth in the six core competencies is nurtured in myriad ways. At Black Mountain Academy, students prepare for college and find or rekindle their passion for learning. Friendships are developed in a safe place, and students build confidence and competence to manage the complexities of the social world. We partner with local organizations to provide meaningful opportunities to practice citizenship through



positive contribution. Clinical services blend various evidence-based approaches, such as Solutions-Focused Therapy and Cognitive-Behavioral Therapy, with a focus on student strengths and successes. Finally, a Health and Wellness Coach works with each student to create a personalized plan that includes a healthy diet, routine activity, and wellness goals.

FAMILY INVOLVEMENT IS AT THE CORE OF THE BLACK MOUNTAIN ACADEMY. FAMILY WORK IS NURTURED THROUGH WEEKLY CALLS WITH THEIR ADOLESCENT'S THERAPIST, MONTHLY PARENT SUPPORT CALLS, AND QUARTERLY FAMILY WORKSHOPS.

Black Mountain Academy is committed to demonstrating the impact of our work. Since 2019, we have been measuring student health before, during, and after the program. We measure the six core competencies, student mental and behavioral health, and family functioning. This report summarizes the findings of this work and provides a platform to celebrate successes and develop evaluation-informed quality improvement.

Executive Summary

BLACK MOUNTAIN ACADEMY INITIATED THIS PROJECT TO QUANTIFY THE IMPACT OF THEIR WORK AND ENSURE THAT THEY WERE MEASURING WHAT MATTERS TO THEIR CLIENTS AND FAMILIES.

Black Mountain Academy engages in a gold standard of treatment — routine progress monitoring. This practice is designed for optimal care through real-time measurement and appropriate treatment adjustments. Routine monitoring also informs the impact of client care, which was the goal of this project.

Across the Core Competencies of Academic Skills, Emotion Regulation, and Health and Wellness, Black Mountain students reported statistically significant differences in their scores at admission, during treatment, and at departure. For all three core competencies, the magnitude of difference across

timepoints was small. On Overall Health, students report slightly healthier scores at discharge than admission, and then post-discharge, scores were approximately the same as at admission.

CAREGIVERS REPORTED CLINICALLY AND STATISTICALLY SIGNIFICANT AND LARGE IMPROVEMENT IN THEIR CHILDREN FROM ADMIT TO DISCHARGE, WITH A SLIGHT UPTICK IN SYMPTOMS AFTER PROGRAM COMPLETION.

These results merit discussion. First, any change among neurodiverse adolescents might indicate a clinically meaningful or even profound impact. This may be especially so when measured by tools that were not designed specifically for neurodiverse populations. There is no existing literature that helps to understand how to interpret assessments completed by neurodiverse adolescents that were developed, tested, and normed with neurotypical respondents. Second, the discrepancy between caregivers and students is compelling and warrants dialogue about who should assess neurodiverse clients and how to interpret score differences.

ABOUT BLACK MOUNTAIN STUDENTS

Admissions

ADMISSIONS TO BLACK MOUNTAIN ACADEMY

Between 2016 and 2025, 211 students have attended Black Mountain Academy. Three admitted when the program first opened, in late 2016. From 2017 to 2024, an average of 24 students were admitted each year. Five students re-admitted to the program after their initial stay — one about a week after their initial departure, three within the first year, and one over two years later.



TREATMENT DURATION

Students stay an average of 317 days in the program, with no significant difference based on year of admission¹. Students who fully completed the program had an average length of stay of 426 days. The five returning students stayed an average of 164 days initially, and 228 days during their second stay.



REFERRAL SOURCES

Students at Black Mountain Academy are typically referred by an Educational Consultant. Of the 136 clients for whom data were available, 89% were referred by an Educational Consultant while 2% or less were referred by other programs or schools, word of mouth, internet searches, or previous clients. Most students (71%) were in a therapeutic program immediately prior to admission at Black Mountain Academy.

Client Characteristics

AGE

Black Mountain Academy students ranged in age from 13 to 19 at the time of admission, with an average age of 16.2. This age has been consistent across the years of operation².



¹ No significant difference in LOS by year ($F_{(9,177)} = 1.6, p = 0.12, (n.s.)$).
² No significant difference in age by year of admission ($F_{(9,177)} = .38, p = 0.29, (n.s.)$).
8 EVALUATION REPORT - A Summary of Treatment Outcomes



SEX & GENDER

Black Mountain Academy welcomes adolescent males into the program. Students are all assigned-at-birth males, 4% of students identified as transgender or non-binary.

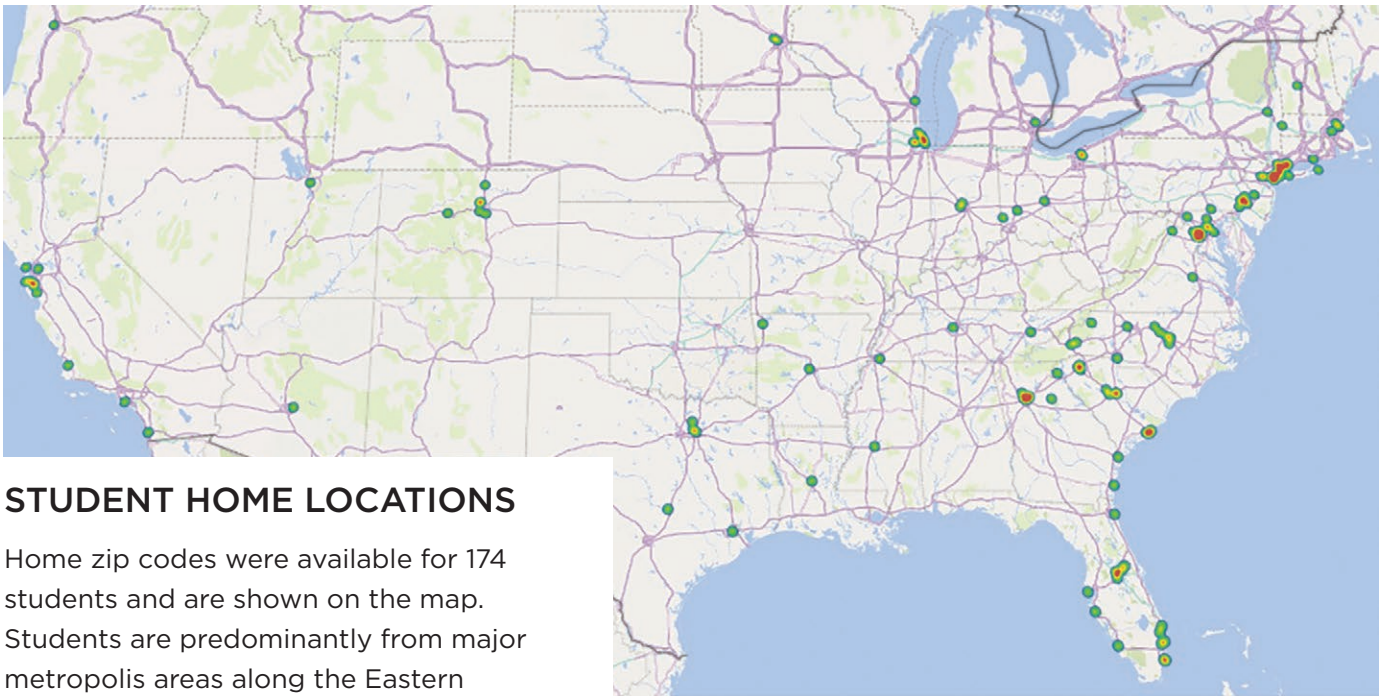
SCHOOL ACHIEVEMENT

Information from 84 caregiver admission surveys showed that about a third (36%) of students earned a 3.5 - 4.0 GPA when they were last in school. Another third (37%) earned a 2.5 - 3.0 GPA. The remainder earned 2.0 or less when they were in school.

ADOPTION

Information about adoption was available from 90 caregiver admission surveys. Of those, 17% indicated that their child had been adopted, typically in infancy. The proportion of adopted adolescents at Black Mountain Academy is higher than the general population in the U.S.; about 3% of children in the country are adopted.

17%
ADOPTED



STUDENT HOME LOCATIONS

Home zip codes were available for 174 students and are shown on the map. Students are predominantly from major metropolitan areas along the Eastern Seaboard; 13% from NY, 10% from FL, 8% from SC, and 6% from NC. The rest are from around the U.S.



HOSPITALIZATION HISTORY

Information about hospitalization history was available for 88 students. Almost half (44%) had been hospitalized for psychiatric care before coming to the program. Of those who had, 28% had been admitted more than once.

Based on 89 caregiver admission surveys, 35% of Black Mountain Academy students had been to an ER for mental health-related care before coming to the program. Of those who had, 26% had visited the ER for mental health reasons more than one time.



CLINICIAN-RATED REASON FOR REFERRAL

Almost every Black Mountain Academy student was referred for reasons related to neurodiversity, predominantly Autism Spectrum. At the time of admissions, clinicians are asked for the three most prevalent reasons for the student's referral to the program, and Autism Spectrum was noted for 95% of admissions. Attention Deficit Disorder (with or without Hyperactivity) was marked as a reason for referral for half (50%) of Black Mountain Academy Students. Other reasons for referral included anxiety (for 19% of students), depression (for 9%), and specific learning disorders (for 5%).



While at Black Mountain Academy

STUDENT THERAPEUTIC EFFORT

At the time of a student's departure, clinicians rate the student on their effort toward therapeutic work. Over half of the students were rated as giving exceptional (13%) or high (38%) effort. About a third (34%) were rated as giving moderate effort, while 11% were rated as giving low effort and 1% as giving no effort.

85%

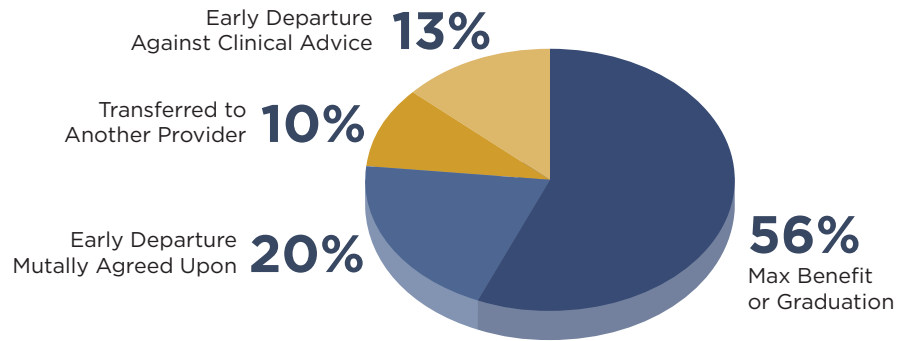
**STUDENTS GAVE
MODERATE TO
EXCEPTIONAL
EFFORT**



STUDENT PROGRESS

Over half of Black Mountain Academy students were noted by clinicians as having received maximum benefit or to have graduated from the program. Another 20% departed before graduation under mutual agreement between the student, their family and the clinical team. Notably, only 13% of Black Mountain Academy students left early against clinical advice.

Therapeutic Progress & Completion in % of Youth



CAREGIVER ENGAGEMENT

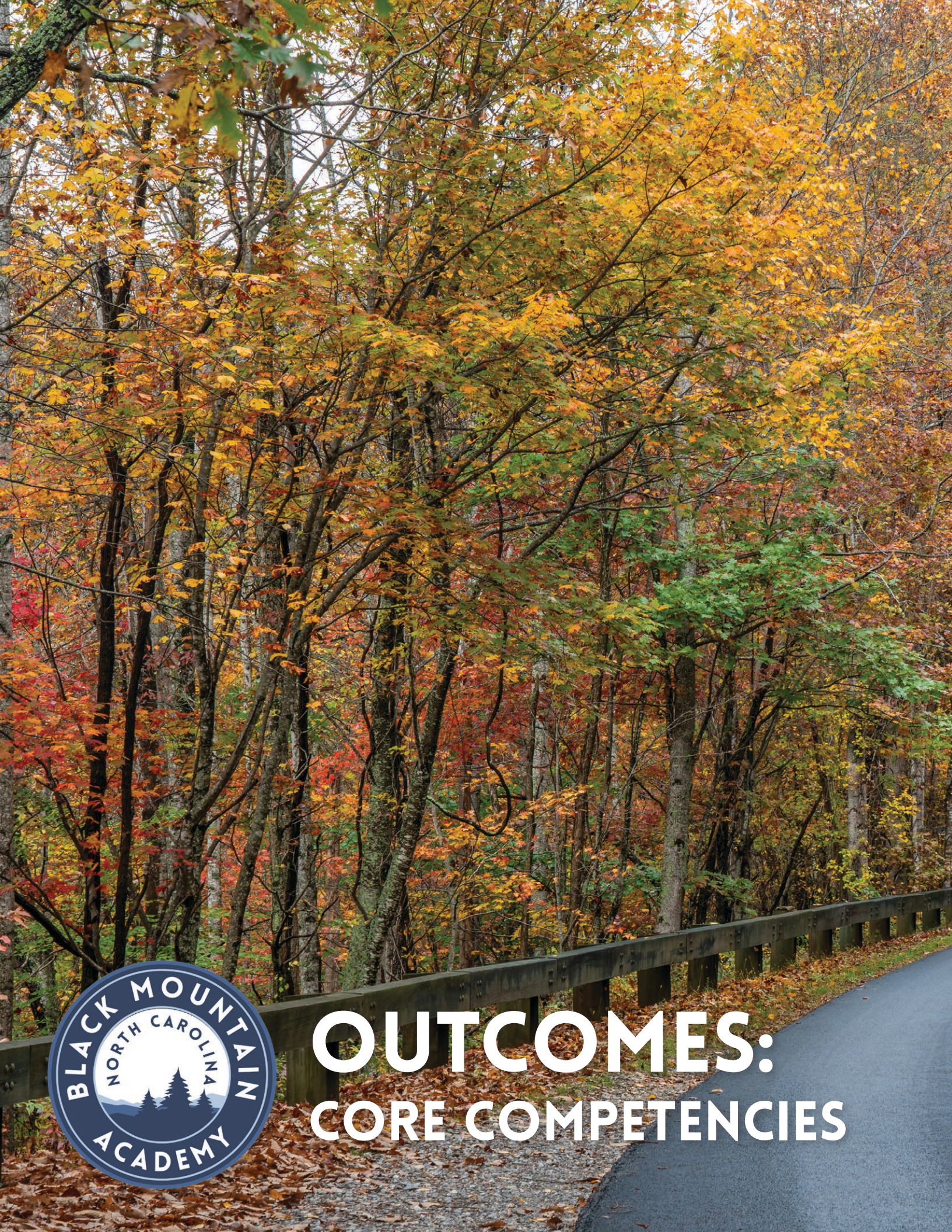
Caregivers and clinicians are in contact at least once per week (as reported by clinicians for 81% of students), and in some cases twice (for about 15% of students) or three times (for 4%) of students. In most cases (74%), calls with caregivers typically lasted one hour, but for some students (25%), calls were 90 minutes or more.

In addition to routine calls, caregivers typically visit the program. Indeed, 93% of caregivers had visited the program, and those who hadn't commonly had an adolescent who prematurely departed from the program. The number of visits varied greatly, from none to 24, with most caregivers visiting 10 times or fewer. Caregiver visits typically lasted three days, during which time they were likely to spend at least an hour or two in therapy with their child.

As a part of family therapy, caregivers are assigned 'homework' to bolster the impact of care on the client at the program. For 36% of caregivers, more than five assignments were given, 30% were given three to five assignments, and 33% were assigned between zero and two.

Clinicians rated caregivers on their effort in their own therapeutic work. Most caregivers were rated as giving high (37%) or exceptional (18%) effort. About a third (34%) were rated as giving moderate effort, and 11% were rated as giving low or no effort.





OUTCOMES: CORE COMPETENCIES



IT IS IMPORTANT TO NOTE THAT CAUTION MUST BE TAKEN WHEN INTERPRETING ASSESSMENTS COMPLETED BY NEURODIVERSE INDIVIDUALS.

Black Mountain Academy was advised to administer a collection of assessments that may not be well-suited for their population due to factors such as length, language level, or scoring procedures. One of the goals of this project was to audit evaluation procedures and make adjustments that resonate with Black Mountain Academy clients, their families, and the clinical team.



THE CORE COMPETENCIES

The Core Competencies are measured with a tool called the Pathways to Independence¹. This tool has 124 questions that assess Academic Skills, Emotion Regulation, Health & Wellness, Daily Living Tasks, Relationships, and Employability Skills. Students rate themselves from 1 (not applicable) to 4 (always or almost always). Higher scores suggest higher functioning, with the guidelines shown at right.

3.5 - 4.0	Secure
2.5 - 3.4	Proficient
2.0 - 2.4	Developing
1 - 1.9	Beginning

The Pathways to Independence has ‘face value’, meaning the questions tap into clinically relevant dimensions of client health and behavior. For example, a question in the Academic Skills domain is, ‘I plan an adequate amount of time to study for exams / tests’, and one for the Relationships domain is, ‘I respond to friends when they initiate contact’. The assessment, however, has not been tested for validity or reliability and is not standardized.

THIS SECTION ON OUTCOMES OF CORE COMPETENCIES INCLUDES CASE SUMMARIES OF REAL STUDENTS FROM BLACK MOUNTAIN ACADEMY. NAMES ARE FICTIONAL TO PROTECT CONFIDENTIALITY.

¹ Reardon, K. (2020). The pathway to independence inventory: A validity study of a transition assessment tool for postsecondary students with disabilities. [Doctoral Dissertation] University of Oregon



Academic Skills

‘LUIS’ BLACK MOUNTAIN ACADEMY JOURNEY & ACADEMIC TRANSFORMATION

When ‘Luis’ first arrived at Black Mountain Academy, he faced significant challenges, including escalating hostile behavior, excessive reliance on technology, and academic struggles that hindered his progress. His journey became a testament to resilience and transformation. Over the course of his time at the academy, he achieved remarkable growth in both academic skills and personal development, emerging as a confident and capable individual.

With consistent guidance from compassionate teachers and residential coaches, Luis cultivated essential life skills, learning to forge trusting relationships and establish healthy boundaries, and to navigate conflicts with empathy and understanding. Initially, feelings of shame, avoidance, and low motivation posed barriers when tackling challenging tasks. Through targeted support, he reshaped his mindset, embracing the value of sustained effort. This shift fostered stronger work habits, enabling him to remain engaged, regulated, and focused in the classroom while building confidence in his learning abilities.

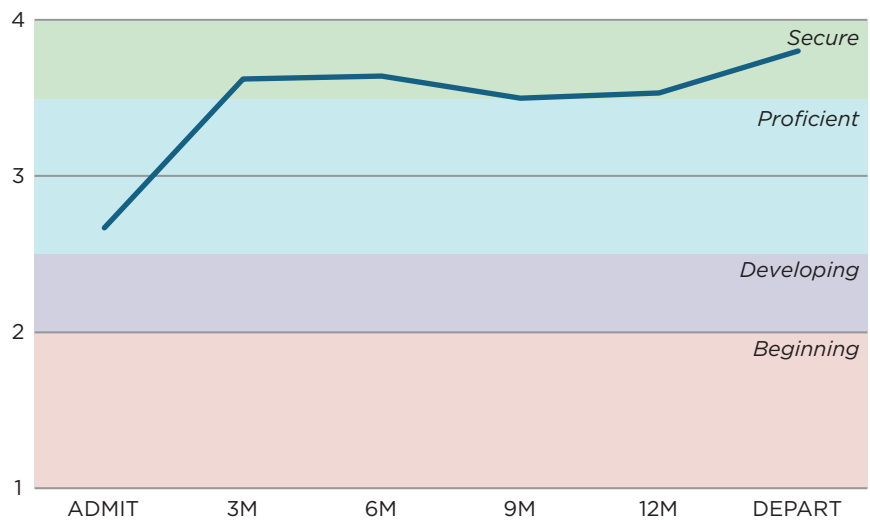
In the months leading to his graduation, Luis’ transformation was undeniable. He maintained unwavering focus, consistently completed his work, and graduated with a profound sense of pride in his accomplishments. This student’s journey at Black Mountain Academy reflects significant academic and emotional growth, equipping him with the tools and confidence to thrive in and beyond the classroom.

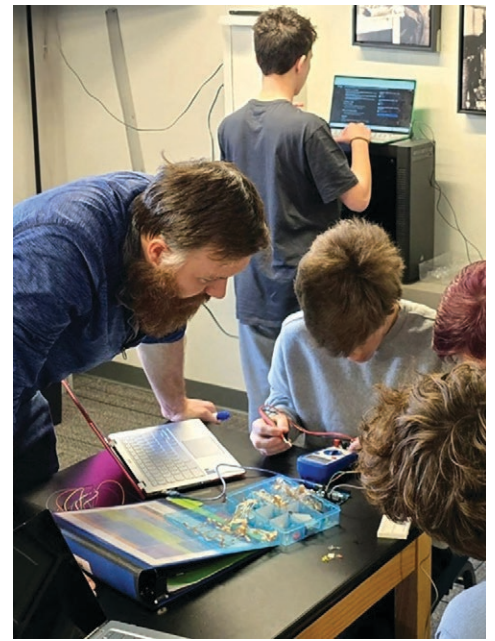
Luis’ capacity for successful academic engagement was measured with the ‘Pathways To Independence’ Academic Skills section, which includes questions such as ‘I make a study plan for exams’ and ‘I sustain attention during class’.

Luis’ Academic Skills scores are shown. At admission, his capacity was in the ‘Developing’ range. Within three months, his academic skills moved to the secure range, and this was sustained in this range throughout treatment.



Luis: Change in Academics at BMA



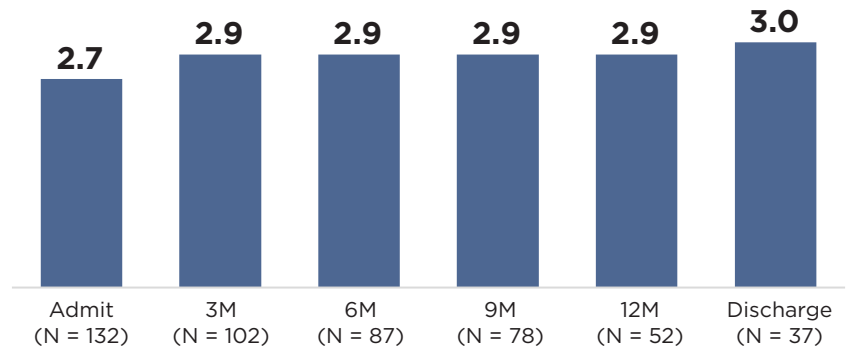


ACADEMICS FOR ALL BLACK MOUNTAIN ACADEMY STUDENTS

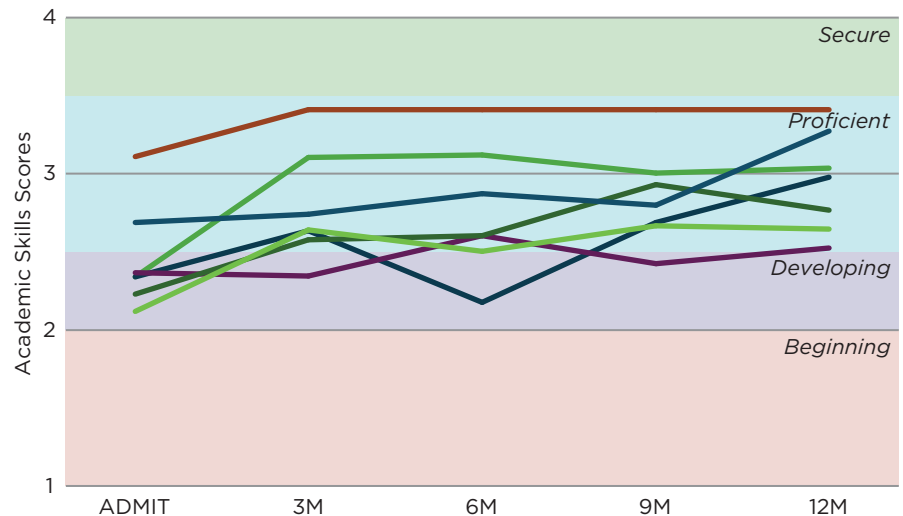
The average scores on Academic Skills for all Black Mountain Academy students are shown, indicating 'proficient' range at admission and throughout treatment. The difference in the average scores is statistically significant, but the magnitude of difference is small². (chart 3)

Although the size of the difference in scores is statistically small, it is important to note that in a sample of neurodiverse adolescents, small change may have meaningful clinical impact. Further, the average scores at each time point cannot capture the variability of change that individuals experience. For example, in the line chart, Academic Skill trajectories of a handful of Black Mountain Academy students is provided. This demonstrates that each student enters the program with different academic capacity, that change is experienced differently by each student, and that change is often not a linear process.

Average of Academic Skills for BMA Students During Treatment



One-Year Trajectories of Academic Skills for 7 BMA Students



² Difference in Academic Skills by Timepoint ($F(5,482) = 2.9, p = .014, \eta^2 = .03$).

Emotion Regulation

'RICK'S' BLACK MOUNTAIN ACADEMY JOURNEY & EMOTION REGULATION

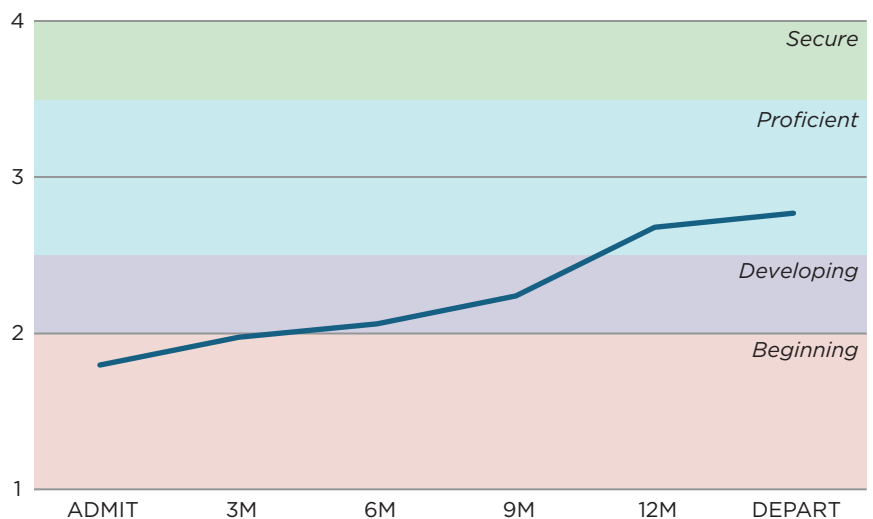
Upon enrolling at Black Mountain Academy, 'Rick' faced significant challenges, exhibiting defiance through verbal aggression and confrontational posturing at school and home. His journey, however, reflects a remarkable transformation, culminating in profound growth in emotional regulation and social connection. Initially marked by frequent emotional dysregulation and conflicts with peers, staff, and family, his early days were tumultuous. Through dedicated support and a nurturing environment, he gradually developed the tools to tolerate emotional discomfort constructively, transforming his approach to challenges.



Over time, he cultivated consistency in managing complex emotions, skillfully repairing relationship ruptures, and forging lasting bonds with peers, adults, and family members. His ability to navigate conflicts while maintaining meaningful connections showcases exceptional progress in emotion regulation and social functioning. This powerful shift from early struggles to a confident, connected graduate underscores the impactful growth he achieved at Black Mountain Academy, equipping him with the skills to thrive in relationships and beyond.

Rick's scores on Emotion Regulation are shown. At the time of admission, Rick self-reported scores in the 'beginning' range of capacity. Emotion Regulation showed a steady improvement over time, landing in the 'proficient' range by the time of Rick's departure.

Rick: Change in Emotion Regulation at BMA





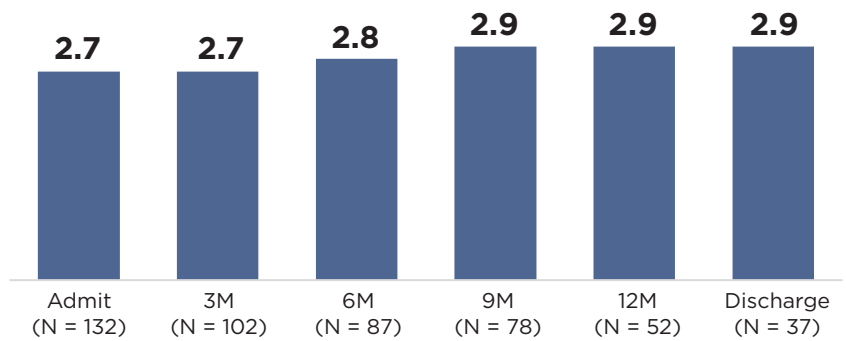
EMOTION REGULATION FOR ALL BLACK MOUNTAIN ACADEMY STUDENTS

The average scores on Emotion Regulation for all Black Mountain Academy students are shown, indicating an average ‘proficient’ range at admission and throughout treatment. The difference in the average scores is statistically significant, but the magnitude of difference is small³.

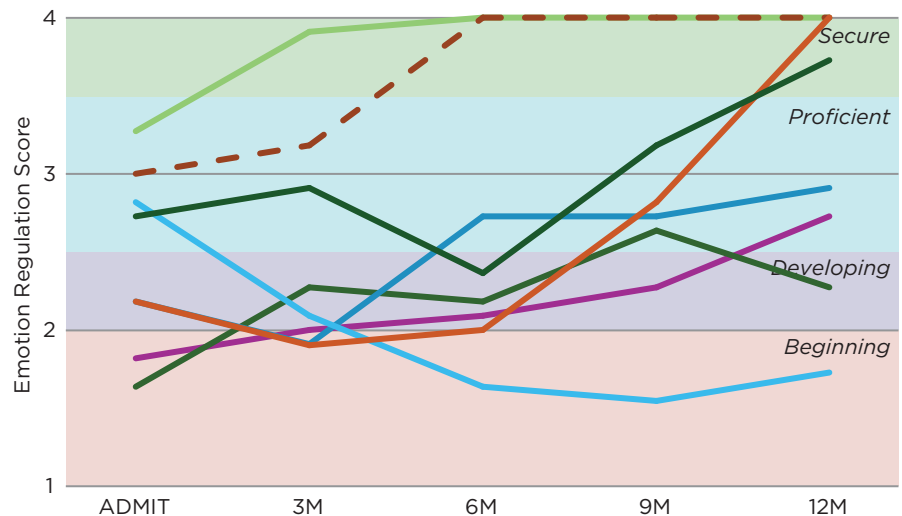
Once again, the average scores cannot capture the journeys of individual students, so a sample of 8 is provided below.

The individual trajectories demonstrate that students start with different capacities for Emotion Regulation, that some improve rapidly and sustain their gains, while some fluctuate over time. In one case, a student reported lower capacity for emotion regulation over the year at Black Mountain Academy.

Average of Emotion Regulation for BMA Students During Treatment



Emotion Regulation 1-Year Trajectories of 8 BMA Students



³ Difference in Emotion Regulation by timepoint ($F_{(5,484)} = 2.3, p = .05, \eta^2 = .02$).

Health & Wellness

'MIKE'S' BLACK MOUNTAIN ACADEMY JOURNEY & HEALTH & WELLNESS

When 'Mike' arrived at Black Mountain Academy, he was grappling with depression, anxiety, lack of motivation, feelings of worthlessness, and overuse of technology, all of which were entwined with his neglect of his own self-care and hygiene. His journey, however, became a powerful testament to resilience and growth.

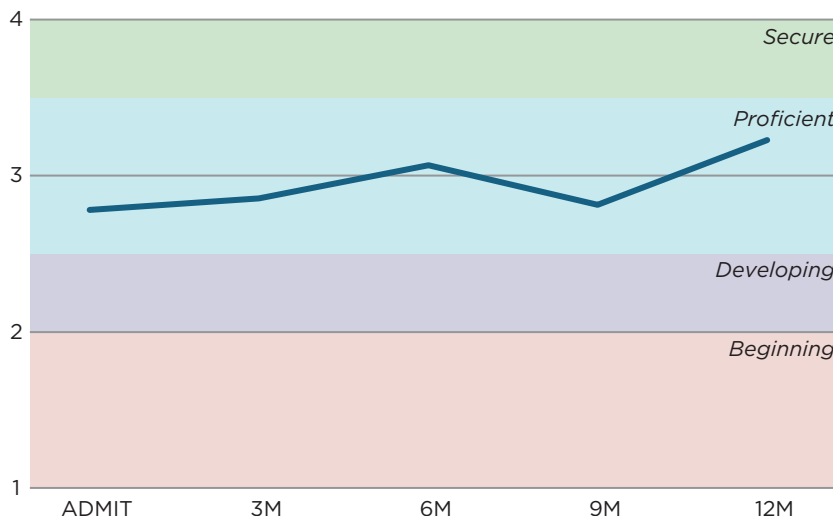
Through personalized therapy and wellness programs, Mike began to rediscover his sense of purpose and personal value. He worked closely with counselors to challenge negative self-perceptions, gradually building a stronger sense of self-worth. Group activities and peer interactions helped him develop empathy, allowing him to value others' perspectives and form meaningful connections.

As his motivation to care for himself grew, Mike embraced physical wellness, incorporating weightlifting, hiking, swimming, and running into his routines. By graduation, Mike was unrecognizable from the student who first arrived. He had achieved his health and wellness goals but also cultivated the confidence and independence to sustain these practices at home. Mike's transformation highlights the profound impact of Black Mountain Academy's holistic approach, proving that with support and dedication, meaningful change is possible.

Mike self-reported 'proficiency' in health and wellness at admission, and, with some ups and downs, experienced clinical growth in this area over the course of a year at Black Mountain Academy.



Mike: Change in Health & Wellness at BMA



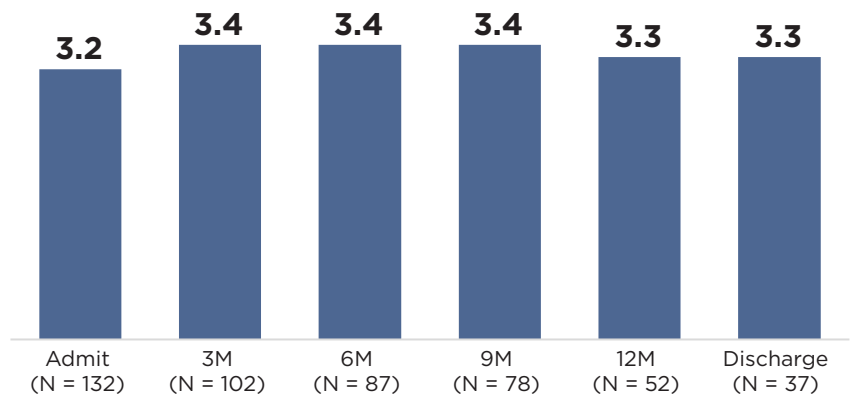


HEALTH & WELLNESS FOR BLACK MOUNTAIN ACADEMY STUDENTS

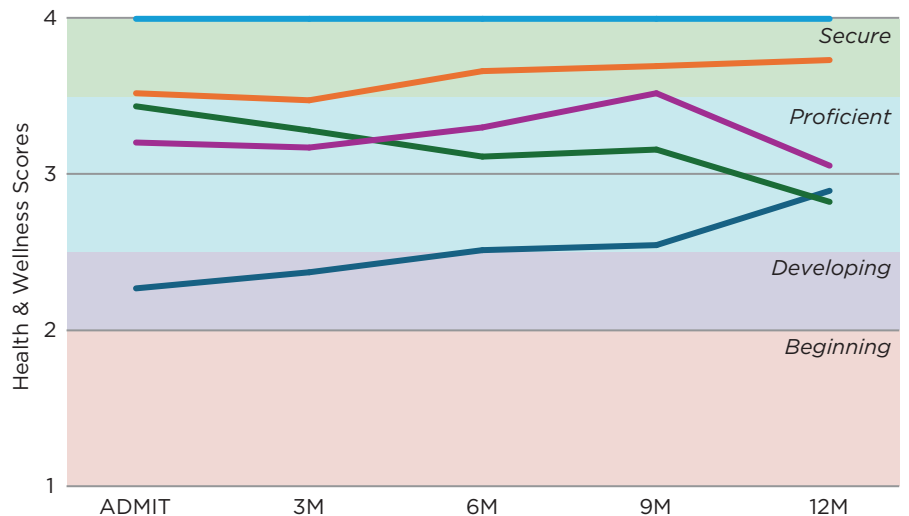
The average scores on Health & Wellness for all Black Mountain Academy students are shown, indicating 'proficient' range at admission and throughout treatment. The difference in the average scores is statistically significant, but the magnitude of difference is small⁴.

Trajectories of Health and Wellness for five Black Mountain Academy students is provided, demonstrating that students enter the program with differing perspectives of their own health and wellness, and each student has a different experience of change over a year at the program.

Average of Emotion Regulation for BMA Students During Treatment



Health & Wellness 1-Year Trajectories for 5 BMA Students



⁴ Difference in Health & Wellness by timepoint ($F_{(5,483)} = 2.8, p = .02, \eta^2 = .03$).

Daily Living Tasks

'MALIK'S' BLACK MOUNTAIN ACADEMY JOURNEY & DAILY LIVING TASKS

When 'Malik' enrolled at Black Mountain Academy, he was navigating a challenging year marked by isolation, panic attacks, school avoidance, and struggles at home. Excessive technology use disrupted his sleep and daily functioning, while poor self-care and eating habits compounded his difficulties.

Through consistent guidance, Malik established healthier routines, moving from school refusal to consistent engagement in academics. Positive peer relationships and reduced technology use supported this growth.

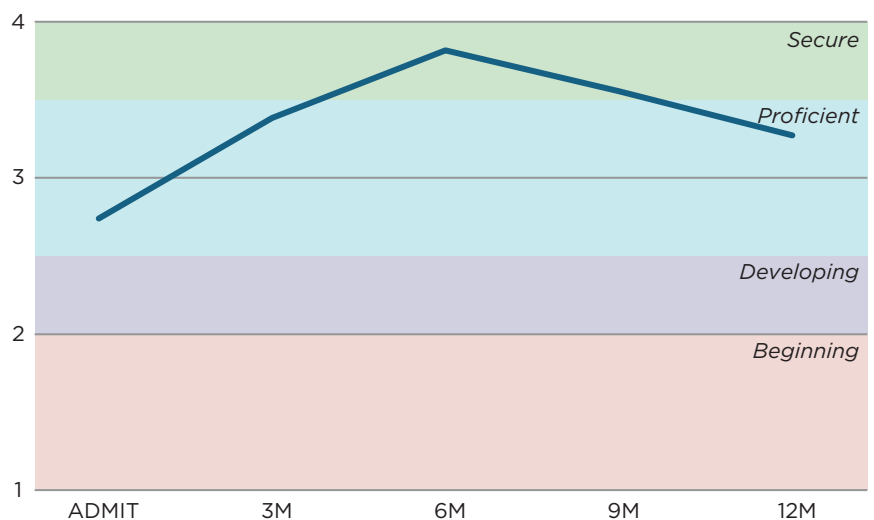
Malik embraced physical activity, working with a personal trainer to incorporate exercise into his routine. He also adopted a balanced diet and followed a personalized wellness plan, boosting his energy and confidence. Practical life skills became a cornerstone of his progress: Malik learned to cook nutritious meals, maintained consistent hygiene, held a part-time job, and practiced driving, all of which built his independence.

By graduation, Malik had transformed into a confident young man capable of managing daily tasks with ease. His newfound skills and resilience equipped him to return home prepared to continue his growth.

Malik's self-reported Daily Living Task scores are shown, with admission scores in the 'proficient' range, increasing to secure by six months, and then a slight reduction back to the higher end of the 'proficient' range at a year into the program.



Malik: Change in Daily Living Tasks at BMA



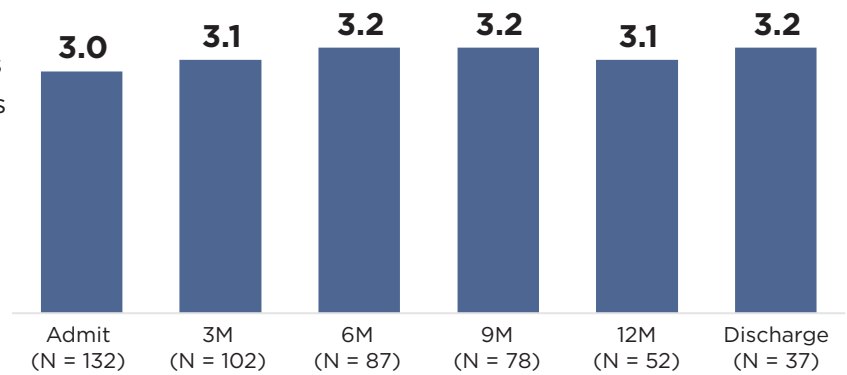


DAILY LIVING TASKS FOR ALL BLACK MOUNTAIN ACADEMY CLIENTS

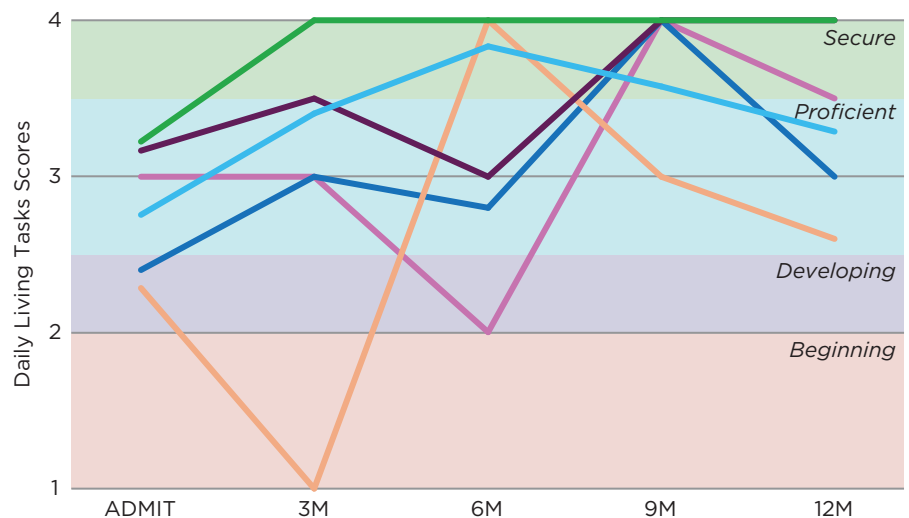
The average scores on Daily Living Tasks for all Black Mountain Academy students are shown, indicating 'proficient' range at admission and throughout treatment. The difference in the average scores is not statistically significant⁵.

There was a clear student-by-student variability in self-reported Daily Living Tasks at admission, as well as the trajectory of change over a year at Black Mountain Academy. The trajectory figure demonstrates this variability, showing that some students report rapid and sustained improvement, some experience non-linear change, and generally, students have higher scores at one year in treatment than they did at admission.

Average of Daily Living Tasks for BMA Students During Treatment



Daily Living Tasks 1-Year Trajectories for 6 BMA Students



⁵ Difference in Daily Living Tasks by timepoint ($F_{(5,459)} = 0.97, p = 0.4, \eta^2 = .01$).

Relationships

‘TIM’S’ BLACK MOUNTAIN ACADEMY JOURNEY & RELATIONSHIP HEALTH

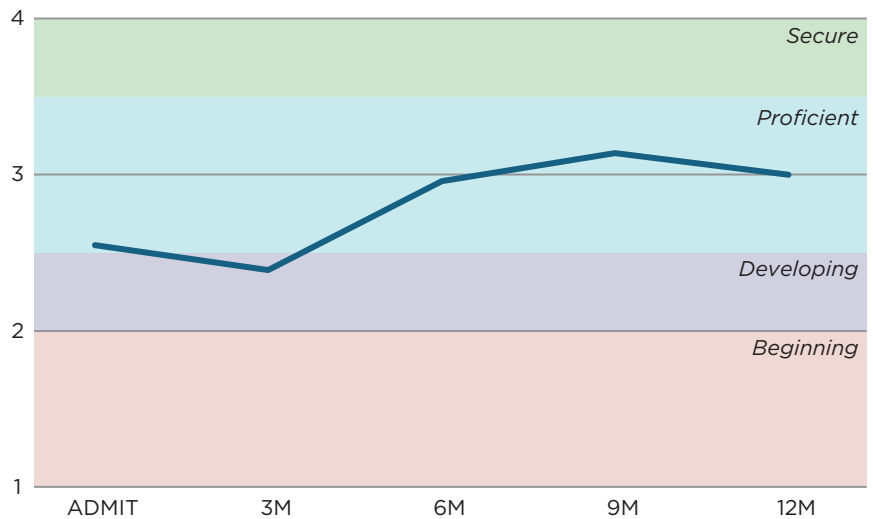
‘Tim’ was overwhelmed and hopeless when he joined Black Mountain Academy, sleeping excessively to avoid home and school. His verbal aggression and resistance to interventions strained family ties. Through his time at the academy, Tim’s growth in interpersonal relationships became a powerful story of renewal.



At admission, Tim struggled with emotional regulation, school refusal, and disconnection from family. The academy’s supportive environment helped him develop self-regulation skills, enabling re-engagement with academics and opening pathways to peer friendships. He gradually embraced activities he once avoided, like family visits and household responsibilities. Tim learned to channel his humor into positive connections, fostering warmth and camaraderie.

Through guided practice in relationship repair, he rebuilt trust with his family, adopting healthier communication patterns. By graduation, Tim was celebrated for his enthusiasm and thoughtful presence in the school community. His reduced emotional reactivity, increased tolerance for discomfort, and ability to maintain meaningful connections marked a profound shift, equipping him to nurture relationships at home with confidence and care.

Tim: Change in Relationship Health at BMA



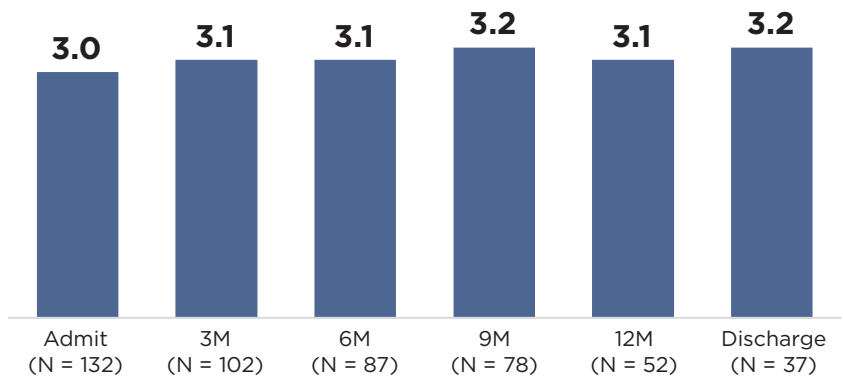


RELATIONSHIP HEALTH FOR ALL BLACK MOUNTAIN ACADEMY STUDENTS

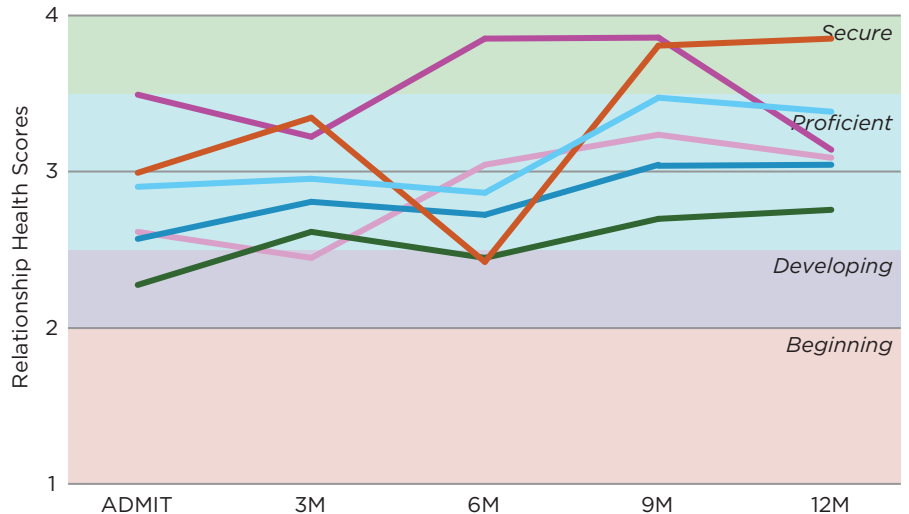
The average scores on Relationship Health for all Black Mountain Academy students are shown, indicating 'proficient' range at admission and throughout treatment. The difference in the average scores is not statistically significant⁶.

Individual score trajectories for six Black Mountain Academy students is shown in the figure, demonstrating varied capacity for relationships at admission, and different experiences of change during one year at Black Mountain Academy. Some students experienced slow and steady improvement, while others reported non-linear change. Generally, scores improve from the time of admission.

Average of Relationship Health for BMA Students During Treatment



Relationship Health 1-Year Trajectories for 6 BMA Students



⁶ Difference in Relationship Health by timepoint ($F_{(5,483)} = 0.89, p = 0.5, \eta^2 = .01$).

Vocational Skills

'TOM'S' BLACK MOUNTAIN ACADEMY JOURNEY & RELATIONSHIP HEALTH

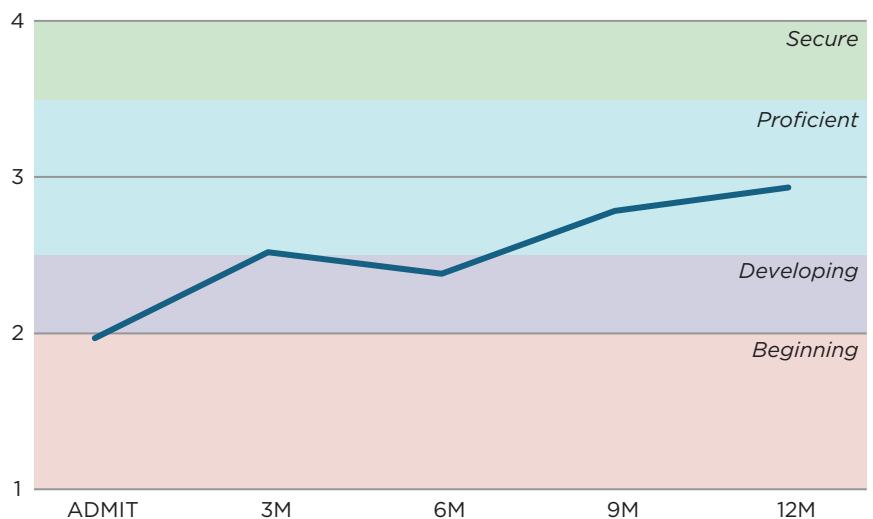
When 'Tom' arrived at Black Mountain Academy, he was struggling with aggression, refusing schoolwork, and shutting down communication. Easily overwhelmed, he faced challenges in high school and social settings. His time at the academy marked a transformative journey in vocational development and social skills.



Initially, Tom's resistance to academics and discomfort in new environments hindered his progress. With the academy's structured support, he diligently prepared for and passed his GED—a testament to his perseverance and commitment. Through tailored guidance, he gained confidence in navigating unfamiliar settings, learning to manage independently while seeking support from trusted peers and adults when needed.

Tom's growth extended beyond academics. By taking on a job and helping launch a student club, he developed a strong sense of competence, responsibility, and leadership. These experiences bolstered his social skills, enabling him to connect meaningfully with others. By graduation, Tom radiated confidence in his academic, social, and vocational abilities, leaving Black Mountain Academy equipped to thrive in new environments and pursue his goals with determination.

Tom: Change in Vocational Skills at BMA



Tom's self-reported scores on vocational skills suggest that initially, he was just developing this capacity. Slow and steady improvement over one year resulted in scores in the 'proficient' range.

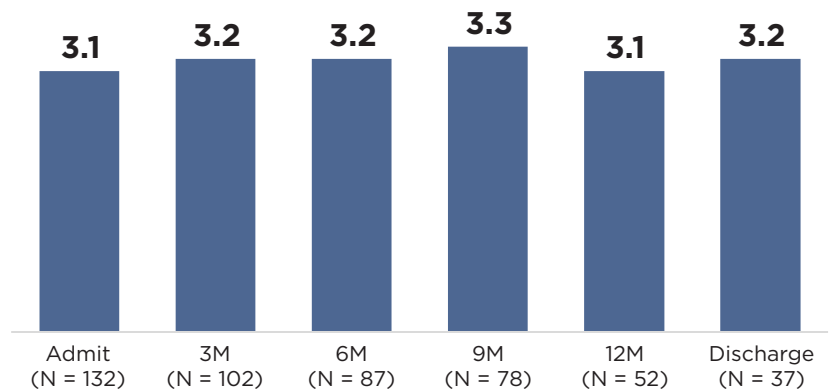


VOCATIONAL SKILLS FOR ALL BLACK MOUNTAIN ACADEMY STUDENTS

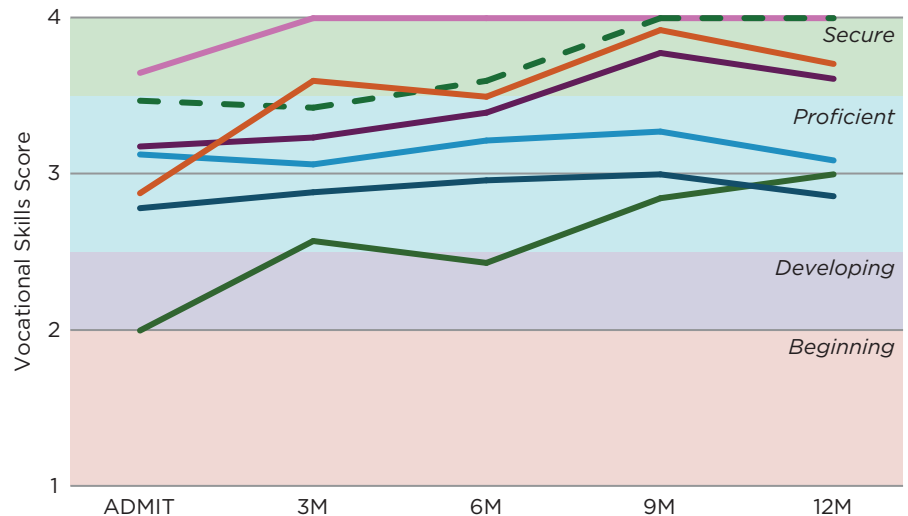
The average scores on Vocational Skills for all Black Mountain Academy students are shown, indicating 'proficient' range at admission and throughout treatment. The difference in the average scores was not statistically significant⁷.

The individual trajectories for six Black Mountain Academy students is shown in the figure, suggesting that students start with varied capacities for vocational skills and change differently over time. Some students experience immediate and sustained improvement while others report a non-linear progression, with some ups and downs over the span of a year. In most cases, the 1-year score is improved from the admission score.

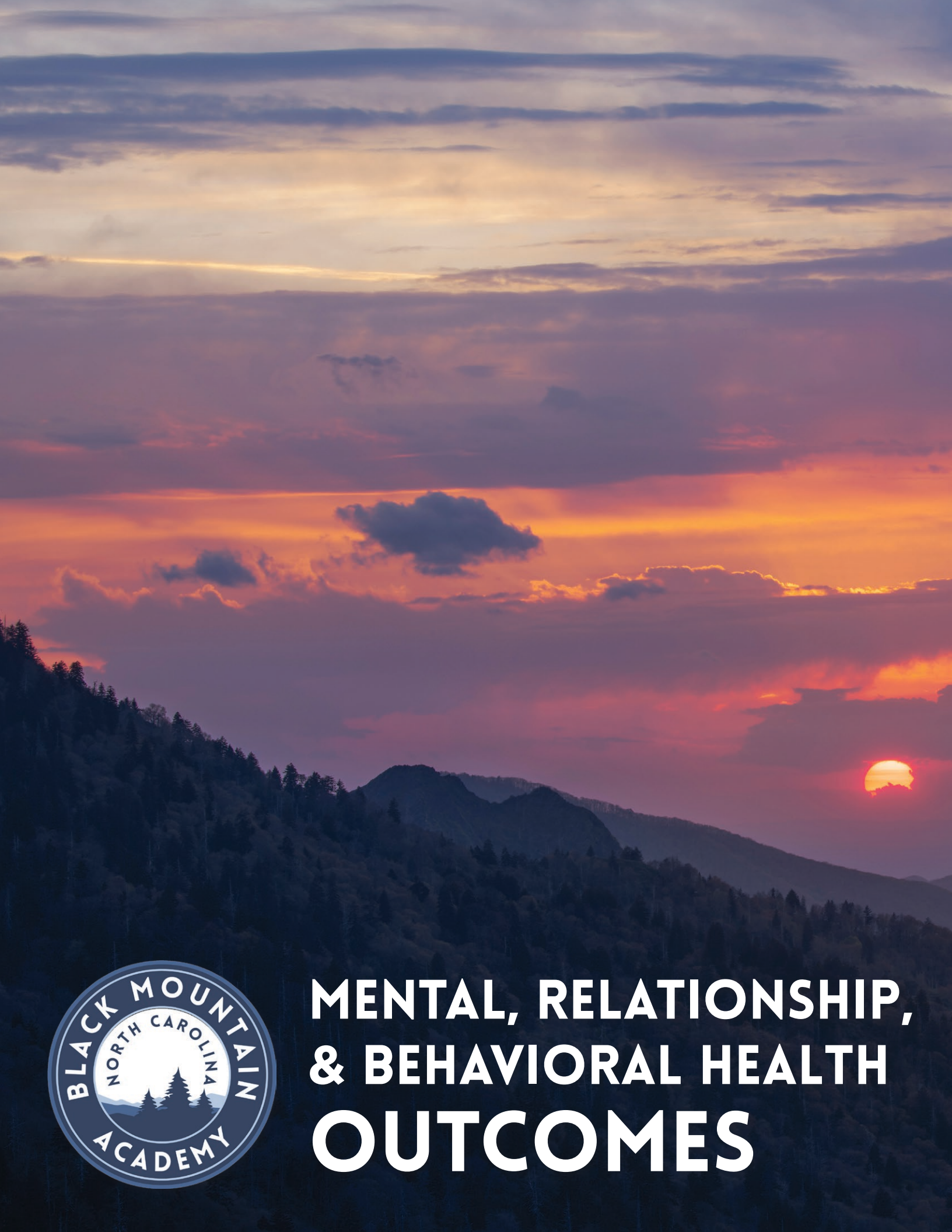
Average of Vocational Skills for BMA Students During Treatment



Vocational Skills 1-Year Trajectories for 6 BMA Students



⁷ Difference in Vocational Skills by timepoint ($F_{(5,483)} = 1.66, p = 0.14, \eta^2 = .02$).



**MENTAL, RELATIONSHIP,
& BEHAVIORAL HEALTH
OUTCOMES**



Mental, Relationship, & Behavioral Health

Black Mountain Academy measures the mental, behavioral, and social health of their students with the Youth Outcomes Questionnaire¹ (Y-OQ). The Y-OQ is a standardized tool designed to assess treatment progress. The Y-OQ is available in parent-report (Y-OQ 2.01) and self-report (Y-OQ SR 2.0). Students and their parents are asked to complete the Y-OQ at the time of admission, discharge, 6-months post-discharge, and 1-year post-discharge. The assessment includes 64 questions and takes about 8 - 10 minutes to complete.

Y-OQ Total score represents the constellation of: Mental Health Distress, Somatic Distress, Relationship Distress, Social Problems, Behavioral Dysfunction, and Clinically Critical Items.

Higher scores on the Y-OQ indicate more distress. Lower scores indicate better health.

The table below shows the average scores for caregivers and students who completed a survey at each time point.

Student scores suggest slight improvement from admission to discharge and a post-treatment return to approximately the same level of health as at admission.

Caregiver reports suggest dramatic score improvement from beginning to end of treatment, and an 'uptick' in symptoms post-treatment.

1 Burlingame, G., Cox, J., Wells, G., Latkowski, M., Justice, D., Carter, C., & Lambert, M. (2005). The administration and scoring manual of the Youth Outcome Questionnaire. Salt Lake City, Utah: OQ Measures.







Post-treatment symptom ‘uptick’ is typical for outcomes from many treatment modalities. Importantly, the difference from admission of 70.9 to post-treatment of 55.7 is profound. Matching a group of 40 caregivers who completed admission and post-discharge surveys shows a significant, moderately sized improvement over time².

These findings are important, and the discrepancy between caregivers and students is compelling. This type of work can help inform dialogue and knowledge about the interpretation of outcomes for neurodiverse treatment populations.

Y-OQ TOTAL SCORE AVERAGES AT EACH TIMEPOINT (NON-MATCHED SCORES)	Admission	Discharge	6 months - 1 year Post-Discharge
	Student Self-Reported	50.7 (n=141)	44.9 (n=87)
Caregiver Reported	70.9 (n=93)	42.5 (n=68)	55.7 (n=73)

Family Functioning

The McMaster Family Assessment Device³ General Functioning (FAD-GF) assesses the effectiveness of a family’s communication, problem-solving, and support. Higher scores indicate higher dysfunction. Scores of 2 or higher indicate problematic family functioning.

Students at admission rated their family health at 2.0, at the threshold of dysfunctional. Students report a healthier score at discharge of 1.9, in the functional range. Post-discharge, the average is 2.0. These average score differences are not significant⁴.

Caregiver FAD-GF scores show a small but significant difference overall⁵. Specifically, between admission and discharge, the improvement is significant ($p = .03$), and there is no difference between discharge and post-discharge ($p = .8$).

Y-OQ TOTAL SCORE AVERAGES AT EACH TIMEPOINT (NON-MATCHED SCORES)	Admission	Discharge	6 months - 1 year Post-Discharge
	Students	2.0 (n = 148)	1.9 (n = 79)
Caregivers	2.1 (n = 91)	1.9 (n = 67)	2.0 (n = 71)

2 Significant change from admit to post-discharge ($F_{(39)} = 7.0, p = 0.01, \eta^2 = .15$).

3 Epstein, N. B., Baldwin, L. M., & Bishop, D. S. (1983). The McMaster Family Assessment Device. *Journal of Marital and Family Therapy*, 9(2), 171-180. <https://doi.org/10.1037/t06314-000>

4 No difference in average scores across three times ($F_{(2,254)} = 1.8, p = 0.2, (ns) \eta^2 = .01$).

5 Significant difference in average scores across three times ($F_{(2,226)} = 3.6, p = 0.03, \eta^2 = .03$).



LEARNINGS & RECOMMENDATIONS





Black Mountain Academy

Student Treatment Outcomes

Black Mountain Academy initiated this project to quantify the impact of their work and ensure that they were measuring what matters to their clients and families.

ACROSS THE CORE COMPETENCIES OF ACADEMIC SKILLS, EMOTION REGULATION, AND HEALTH AND WELLNESS, BLACK MOUNTAIN STUDENTS REPORTED STATISTICALLY SIGNIFICANT DIFFERENCES IN THEIR SCORES AT ADMISSION, DURING TREATMENT, AND AT DEPARTURE.

For all three core competencies, the magnitude of difference across timepoints was small.

On Overall Health, students report slightly healthier scores at discharge than admission, and then post-discharge, scores were approximately the same as at admission. Caregivers reported clinically and statistically significant large improvement from admit to discharge and a slight uptick in symptoms post-discharge.

Students and caregivers rated their family functioning similarly: approximately at the threshold between healthy and dysfunctional at admission (caregivers slightly more dysfunctional), then healthier at discharge, then back to the threshold post-discharge.

These results merit discussion. First, any change might indicate a clinically meaningful or even profound impact among neurodiverse adolescents. This may be especially so when measured by tools that were not designed for neurodiverse populations. There is no existing literature that helps to understand how to interpret assessments completed by neurodiverse students that were developed, tested, and normed with neurotypical respondents. Second, the discrepancy between caregivers and students is compelling and warrants dialogue about who should assess neurodiverse clients and how to interpret score differences.

Key Recommendation

Audit current measures and consider implementing an evaluation framework designed specifically to measure outcomes that are key to the clients and accurately demonstrate the impact of the care at Black Mountain Academy.





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