

# An Image-Based Method for Assessing Student Emotional Well-Being

Mohawk Valley Community College uses a new screening tool to support the complex realities of student needs.

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**T**HE CURRENT MENTAL HEALTH CRISIS ON COLLEGE campuses has reached alarming levels, with recent statistics highlighting the severity of the situation. According to the Centers for Disease Control and Prevention (CDC), the proportion of adults experiencing recent symptoms of anxiety or depressive disorders increased from 36.4% to 41.5% between August 2020 and February 2021, with the most significant increases among adults aged 18 to 29 years (Vahratian et al., 2021). This surge in mental health issues is mirrored in college populations, where the pressures of academic performance, social integration, and the transition to adulthood exacerbate these challenges. This situation necessitates the development of more engaging and less intrusive assessment methods that can effectively measure student emotional well-being.

Trustees can no longer ignore the magnitude of these issues. While the policy implications may vary, the allocation of resources and the need to support administration in prioritizing student well-being is paramount. Fundamental supports like on-campus mental health professional staff and telehealth solutions are necessary and useful strategies, but more intentional and creative solutions are needed to meet the moment of this complex reality our students face.

Despite the growing recognition of this crisis, effectively assessing and addressing emotional well-being on campuses remains a significant challenge. Traditional tools like the Patient Health Questionnaire-9 (PHQ-9) and the Generalized Anxiety Disorder-7 (GAD-7) are widely used but often perceived as intrusive and awkward by students, leading to low response rates and incomplete data.

### Challenges in Assessing Emotional Well-Being

The primary challenge in assessing emotional well-being lies in the reluctance of students to engage with traditional assessment tools. The PHQ-9 and GAD-7, while clinically validated, require students to reflect on and report their symptoms explicitly, which can be uncomfortable and stigmatizing. These tools also are not designed to capture the nuanced and dynamic nature of emotional well-being, leading to potential oversights in identifying students who need support.

In response to these challenges, there is a growing need for innovative assessment methods that students are more likely to engage with. A promising approach involves the use of an online, TikTok-like interface that presents assessments in a manner familiar and appealing to students. This approach leverages the principles of gamification — engineering assessments to feel fun like a game — to increase engagement and completion rates, providing more accurate and comprehensive data on student well-being.

### The Promise of AgileBrain (AB)

AgileBrain (AB) represents a novel approach to assessing emotional well-being that addresses many of the limitations of traditional tools. AB has a solid foundation in neuroscience, using rapid image selection to elicit affective responses, bypassing cognitive barriers, and reducing the influence of social desirability bias. This method is designed to be

brief, taking only about three minutes to complete, and is gamified to enhance user engagement.

Evidence from multiple studies demonstrates the validity of AB as a screening tool for general distress. In a series of large-scale studies involving over 3,500 participants, AB showed strong convergent validity with established measures of well-being, including the PHQ-9, CESD-10, GAD-7, and others (Pincus, 2024). These findings suggest that AB can effectively identify individuals experiencing compromised well-being, making it a valuable tool for campus mental health initiatives. Specifically, AB's ability to capture emotional activation (the intensity of emotion) and valence (the positivity / negativity of those emotions) provides a more nuanced picture of well-being, allowing for the identification of both high-risk individuals and those experiencing more subtle forms of distress.

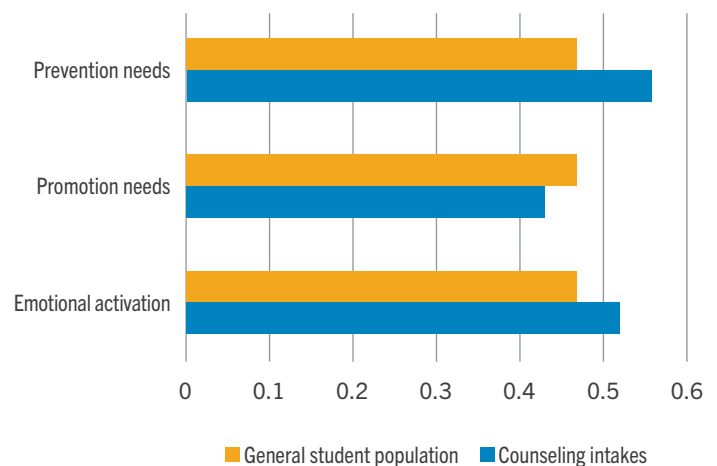
### Case Study: AB at Mohawk Valley Community College

Mohawk Valley Community College (MVCC) has implemented a multiple touchpoint strategy using AB to assess and improve student emotional well-being. This strategy involves integrating AB assessments into various student services to differentiate levels of distress, detect changes in distress over time, and characterize distinct sets of needs across different contexts. Providing students with a useful framework to better understand their emotions also gives them a greater sense of agency to manage their emotions and increase their overall well-being.

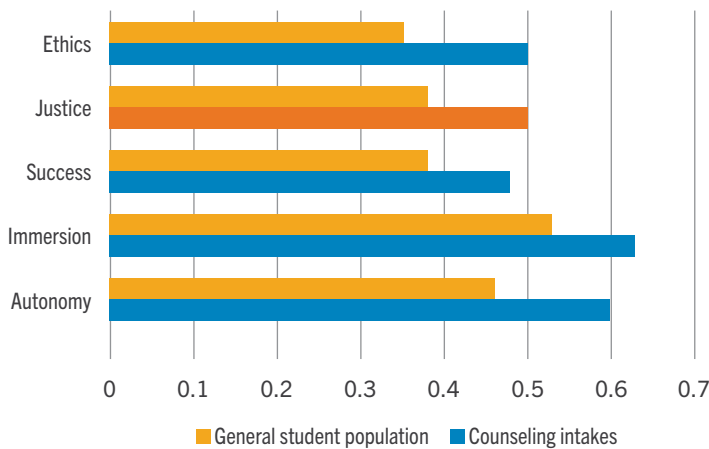
### Health Center Intakes

Health center intakes for new students at MVCC exhibited the highest level of emotional intensity among all groups. As Figure 1 below shows, these students had higher activation with significant negative emotional valence (prevention needs exceeded promotion needs). Specifically, 65% of these students reported feeling unsafe or anxious, 63% felt bored or unable to focus, and 72% felt scorned.

Figure 1: AgileBrain Metrics: Intake vs. General



**Figure 2: Largest Need Gaps: Intake vs. General**



And, as Figure 2 above illustrates, AB points to the specific needs to focus on: autonomy, immersion, success, caring, and justice for this population.

### Wellness Day Sample

The Wellness Day sample, serving as a proxy for the general student population, also showed high levels of emotional activation, albeit less distressed and more positive than the health center intakes. The primary needs identified in this group were potential, inclusion, immersion, and caring, reflecting a desire for personal growth, community inclusion, and emotional support. This group’s emotional profile underscores the importance of fostering an inclusive and supportive campus environment.

### Career Counseling

Students engaged in career counseling exhibited a pragmatic focus, with high needs for safety and success but lower needs for autonomy and ethics. This profile aligns with the practical considerations of job searching and employment, where the tradeoff between autonomy and financial security is a common theme.

### Graduation

Graduating students at MVCC displayed a different emotional profile, with reduced needs for immersion, inclusion, and caring, likely reflecting the completion of their academic journey and the celebratory nature of graduation. Their relative positivity fit the moment. However, their needs for potential and recognition remained significant, indicating a focus on future achievements and professional recognition.

### Change Over Time Results

The effectiveness of AB in detecting changes in well-being over time was further supported by findings from MVCC. Preliminary data suggest that AB can sensitively detect changes in student well-being following interventions, such as counseling sessions or participation in stress-reduction programs. This capability is crucial for monitoring the effectiveness of mental health initiatives and ensuring that students receive timely and appropriate support.

### Conclusion

The mental health crisis on college campuses demands innovative solutions. AgileBrain (AB) presents a promising approach with its engaging, gamified assessment method and personalized feedback. Both students and clinicians have reported positive experiences with AB, appreciating its quick and insightful evaluations. Evidence supports AB’s effectiveness, as seen in its initial launch and implementation at MVCC. As more institutions adopt AB, we can anticipate improved detection and management of student distress, fostering more effective solutions and healthier and more supportive campus environments.

### References

Pincus, JD (2024). Validation of a brief image elicitation task as an indicator of subjective well-being in the general population. *Frontiers in Public Health*. In review.

Vahratian A, Blumberg SJ, Terlizzi EP, Schiller JS. Symptoms of Anxiety or Depressive Disorder and Use of Mental Health Care Among Adults During the COVID-19 Pandemic — United States, August 2020–February 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:490–494. <https://www.doi.org/10.15585/mmwr.mm7013e2>



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