

## CASE STUDY

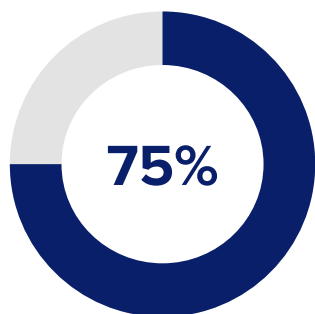
# U.S. Naval Academy Improves Midshipmen Resilience with NeuroFlow

## The Challenge

The U.S. Naval Academy (USNA) prepares roughly 4,500 Midshipmen to serve in the U.S. Navy and U.S. Marine Corps. A critical component of military readiness is ensuring Midshipmen are not only physically prepared to serve but also emotionally and mentally prepared for the challenges of deployment. However, addressing mental health concerns within military populations remains fraught with challenges, including stigma and fears of professional implications. With depression affecting nearly [one quarter of active military populations](#), and [rates of anxiety and depression soaring](#) among 18-24-year olds as a result of the COVID-19 pandemic, USNA identified the importance of equipping Midshipmen with behavioral health resources that empowered resilience while maintaining anonymity.

### PRIMARY OBJECTIVE

Instilling resilience in Midshipmen to better prepare them for service



75% of Midshipmen with low well-being scores experienced clinical-level improvement in 4-8 months

## At a glance:



Customer  
**U.S. Naval Academy**



Industry  
**Military**



Population  
**~4,500**



Location  
**Annapolis, MD**

## The Solution

USNA recognized that to support the behavioral health of Midshipmen it needed a holistic digital health solution that ensures the anonymity of users. USNA engaged [NeuroFlow](#) to provide validated mental health assessments, resilience techniques such as meditation and guided breathing, and self-guided curriculums and videos informed by cognitive behavioral therapy (CBT).

“It’s our goal to create an environment that recognizes the impact mental health has on overall health,” says Commander Randy G. Reese, MSC, USN, director of the [Midshipman Development Center](#) at USNA. “We’re always exploring new ways to support the overall wellness of students and proactively offer resources to those in need.”

*“In a stressful environment like the Naval Academy, mental health at times takes a back seat to things like academic and physical performance. NeuroFlow is great for Mids because it’s a quick tool to track the different aspects of our mental health and provide resources that help us handle our own problems.”*

- Midshipman in the U.S. Naval Academy

NeuroFlow utilized the World Health Organization 5 Well-Being Index (WHO-5) to measure Midshipmen well-being. The WHO-5 is a short self-assessment that evaluates wellness based on a 100-point scale, with a score of 100 representing the best possible well-being. While not a diagnostic tool, the WHO-5 is an effective screening tool for depression.<sup>1</sup>

NeuroFlow delivered WHO-5 assessments to Midshipmen upon registration and on a monthly cadence. At-risk Midshipmen received targeted CBT curriculum to help mitigate depression.

<sup>1</sup> <https://www.karger.com/Article/FullText/376585>

<sup>2</sup> <https://doi.org/10.1080/08039480601151238>

<sup>3</sup> For Midshipmen with an initial WHO-5 score of  $\leq 50$  points, there was a moderate level-log correlation between activities completed and change between first and last WHO-5 score. The linear correlation between log-transformed activities completed and score delta increased while the p-value decreased ( $r=0.327$ ,  $p<0.01$ ). Log-transformed activities completed predicted 10% of the variance in score deltas ( $r^2=0.107$ ).

Individuals who did not trigger at-risk alerts received resilience and wellness content, proactively engaging the population. Critically, NeuroFlow maintained individuals’ anonymity in order to earn Midshipmen buy-in and combat the stigma of mental health in the military.

## The Results

NeuroFlow conducted a level-log regression to evaluate the correlation between activities completed within the NeuroFlow app and WHO-5 score improvement. Included in the analysis were all Midshipmen in classes 2022-2025 with at least one completed activity and two completed WHO-5s during the 12-month period. All activities that could have had an impact on the score delta are counted in the analysis.

Midshipmen with likely depression (WHO-5 score 0-28) and poor mood (WHO-5 score 29-50) completing a minimum of 19 total activities within the study period reached a clinically significant improvement in wellness, with an **average improvement of 10 points**.<sup>2</sup> The most significant improvement was seen for those Midshipmen who completed a range of 58-111 total activities over 12 months, **demonstrating a 20.5 point increase**. Evaluating daily activity engagement revealed that as little as 1 activity every 2-3 days may result in clinical improvement in Midshipmen WHO-5 scores.<sup>3</sup>

“We’re very encouraged by the results we’ve seen so far, which is why we’re excited to expand our rollout of different resiliency resources at the start of the 2022-2023 school year,” says Commander Reese.

## Engaged Midshipmen See Improved Outcomes

