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Summary of Well-being Assessment Technical Reports

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Reliability and validity summary

Reliability. We used omega to estimate reliability for each of the Well-being Assessment's factors, which ranged from .81 to .97. Guidelines for interpreting omega are the same as for interpreting alpha. Alpha has been criticized for being biased and failing to account for factor structure, which is why we used omega instead of alpha.

Validity. We used Messick's (1995) theory of validity to guide the development of the Well-being Assessment. Messick claims that all forms of validity are construct validity. He identifies six forms of validity: content, substantive, structural, generalizability, external, and consequential. We evaluated content validity through ongoing consultation with substantive experts to ensure that the Assessment measures key aspects of well-being. We evaluated substantive validity through multiple qualitative studies and structural equation modeling to ensure that participants understood the items as we intended them and that items related to each other appropriately. We evaluated structural validity by conducting multiple rounds of structural equation modeling and sum scores to identify the most effective scoring methods. We evaluated generalizability validity using measurement invariance analyses to ensure that items were not biased across demographic identity groups. We evaluated external validity using statistical modeling to ensure that item groups were discriminant and convergent, as expected. We plan to continue examining consequential validity throughout the lifespan of the measure to ensure that it supports well-being and does not propagate injustices.

Assessment Development: 2014 - 2019

For complete details, see the [Spring 2019 technical report](#), which includes detailed information about reliability, validity, and score development.

The Wellbeing Assessment (the Assessment) was developed at Wake Forest University (WFU) by a team of substantive and academic experts in wellbeing, student life, academic advising, psychology, philosophy, educational policy, and psychometrics, which included this author.

We developed the WBA using qualitative and quantitative methods guided by Messick's (1995) validity theory.

Our qualitative research included four rounds of cognitive interviews between Fall 2015 and Spring 2018. These interviews ensured that the Wellbeing Assessment items made sense to students, were unbiased, and measured the intended content. To maximize objectivity in the interviewing process, we used external contractors. They interviewed 92 students at six private and public Eastern higher education institutions.

Our quantitative research included five pilot administrations: two at WFU in Fall 2015 and Spring 2016 and three multisite administrations in 2017, 2018, and 2019. Over 27,000 students participated in these pilot administrations. After each survey administration, we conducted a series of analyses, including response frequencies, inter-item correlations, confirmatory factor analyses, and multiple indicators multiple cause (MIMIC) models.

Between 2015 and 2018, we integrated the findings from the qualitative and quantitative studies and recommendations from our team of substantive experts to identify the best sets of items. Our final model included 18 scorable, latent factor dimensions of well-being.

In 2019, we had a sufficiently large sample size that we were able to conduct measurement invariance analyses, which are quantitative confirmatory factor analytic models that test whether items are biased between groups of participants. With a clean sample size of over 11,000 students from 28 public and private institutions across the country, we were able to test for bias between race/ethnicity groups, gender identity, first-generation status, and sexual orientation identity. Even with this substantial sample, the complexities of measurement invariance testing meant that we could only test between two groups for any given identity, which was some version of the majoritized identity and a collapsed group of all other identities: race/ethnicity was White or not White, gender identity was female or other, first-generation status was first-generation or not, and sexual orientation identity was heterosexual or not.

The analyses in 2019 also confirmed the final set of 18 well-being dimensions that we could score using factor analysis models: happiness, anxiety, depression, loneliness, social anxiety, life satisfaction, self-esteem, optimism, perseverance, coping, activity engagement, academic engagement, belonging, friends, meaning, purpose, civic values—moral, and civic values—political.

The Wellbeing Assessment has more content areas than these 18 dimensions, but only these 18 dimensions can be scored.

Score Continuity: 2020

For complete details, see the [Spring 2020](#) and [Fall 2020](#) technical reports.

We administered the survey in both spring and fall of 2020. We conducted measurement invariance testing for both administrations and calculated linking formulas for the latent factor scores to ensure that the scores could be compared over time.

Transfer to ACHA: 2023

ACHA acquired the Wellbeing Assessment in 2023 and changed the name from *Wellbeing Assessment* to *Well-being Assessment*.

In response to concerns about survey response burden, we reduced the number of required scorable dimensions from 18 to 14 by removing the following four dimensions: perseverance, friendships, civic values—moral, and civic values—political. The current list of 14 scorable dimensions includes happiness, anxiety, depression, loneliness, social anxiety, life satisfaction, self-esteem, optimism, coping, activity engagement, academic engagement, belonging, meaning, and purpose.

Conversion to Mean Scores

For complete details, see the technical report [Converting WFU Wellbeing Assessment Factor Scores to ACHA Well-being Assessment Mean Scores](#).

To make scores more readily accessible to participating schools, we shifted our scoring from factor analytic modeling to mean scores. Factor analytic models are more accurate than mean scores. However, they are time-intensive and can only be performed once surveying is complete at all participating institutions, potentially months after the initial data are collected. The new mean scores can be generated immediately after an institution's survey is complete; we no longer have to wait for all the surveying to be complete.

We used correlations and difference scores to ensure that the mean scores accurately represented the original factor scores.

We also created a series of linking formulas so that institutions that participated in the Wellbeing Assessment in 2020 and earlier can convert their scores to the new mean scores and vice versa.