Preliminary Description and Validation of the University of California Student Wellness Survey

Executive Summary

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Key Terms

To help you review the information in this report more efficiently, we have provided descriptions of four acronyms used throughout this document.

University of California Student Wellness Survey (UCSWS)

The UC Student Wellness Survey comprises 30 items designed to briefly assess various multidimensional aspects of student well-being. This report focuses on the development and validation of this survey.

University of California Student Wellness Index (UCSW Index)

The UCSW Index serves as a summary metric based on items in the UCSWS, with scores ranging from 0 to 100, which represent the overall wellness of students. A key aim of this report is to examine the reliability and validity of the UCSW Index, thereby providing the UC community with insights necessary to evaluate its potential applications.

Patient Health Questionnaire-4 (PHQ4)

The UCSWS includes the Patient Health Questionnaire (PHQ4), which consists of four items that assess symptoms of anxiety and depression. In this report, the PHQ4 is used in various validity analyses to evaluate whether there is a negative correlation between the UC Student Wellness Index and items assessing anxiety and depression, as would be expected (i.e., higher wellness is associated with lower anxiety/depression).

National Academies of Science, Engineering, and Medicine (NASEM) Student Competencies

The UCSWS includes 15 items that assess five key NASEM competencies: conscientiousness, optimism, self-efficacy, intrinsic motivation, and institutional belonging. In 2017, NASEM published a comprehensive report that summarized research on the interpersonal and intrapersonal competencies positively associated with college students' persistence and progress toward degree completion. In this report, these competencies are used in concurrent validity analyses to examine the relationship between wellness and interpersonal and intrapersonal competencies associated with persistence and progress toward degree completion.

Executive Summary

UCSWS Sample Characteristics

The samples were adequate for assessing the UCSWS's psychometric properties, but they were limited to students from UC Santa Barbara, including two opportunity samples. Although the sample sizes provided sufficient statistical power, they did not effectively capture the diversity of the UC student population. Notably, the UCSB random sample included graduate students who reported lower levels of wellness.

To properly evaluate the UCSWS's validity, it is crucial to obtain more diverse and representative samples. Future validation should collect data from all UC campuses, ensuring representation across various demographic characteristics and student subgroups.

Summary of UCSWS Descriptive and Psychometric Information

Approximately 48% of students reported overall satisfaction with their life and minimal emotional distress on the UCSWS, while about 14% experienced lower satisfaction and moderate to severe distress. About one-third of students have little to no anxiety or sadness in the past two weeks but still report lower life satisfaction, highlighting a group that traditional mental health screening may overlook.

The UCSW Index values ranged from 69 to 74 on a 100-point scale, aligning with other wellness evaluations.

We analyzed students' responses to the PHQ4. In random and nonrandom samples, 78.0% and 84.4% of students reported none or mild symptoms, while 3.5% and 6.1% reported severe symptoms. The higher incidence of severe symptoms in the random sample indicates that graduate students may experience greater distress than undergraduates.

The students' UCSW Index and PHQ4 responses showed expected alignment. In the random sample, students with severe (48.9) and moderate (61.5) PHQ4 scores had lower UCSW Index means than those with mild (66.3) or no symptoms (77.0). Negative correlations in the samples ranged from -0.44 to -0.57, supporting a linear relationship (i.e., higher symptoms of anxiety/depression associated with lower wellness). Each one-point increase in the PHQ4 was associated with a reduction in the UCSW Index.

The internal consistency reliability across all measures was acceptable.

Analysis revealed considerable variability in students' responses, allowing for the preliminary identification of UCSW Index score ranges associated with varying levels of student wellness. Students in the lower quartile (i.e., lowest wellness scores) had Index scores below 60, while those in the upper quartile (i.e., highest wellness scores) had Index scores ranging from 80 to 100.

Latent profile analysis examined variations in student wellness scores and identified four groups: lower, lower mid, upper mid, and high wellness profiles. This method provided an alternative classification to simple quartiles.

A confirmatory factor analysis of the UCSW Index identified two main clusters of wellness dimensions. The first cluster, encompassing both emotional and social dimensions (with correlations of 0.72 and 0.64), also included environmental, physical, existential, spiritual, and cultural dimensions. The second cluster consisted of intellectual and academic dimensions.

Summary of UCSWS Stability Analyses

We analyzed the temporal stability of student responses to the UCWS Index and PHQ4, which is essential for assessing changes in student wellness within the UC system. Overall, the UCWS Index demonstrated consistency over time while also allowing for some variation to indicate changes effectively.

The UCSW index showed a significant correlation between the administrations at Time 1 and Time 2, indicating a stability coefficient of .63 over a period of 9 months. Overall, students' global life satisfaction remains stable over time, though there is enough variation to assess changes in their wellness satisfaction.

The correlation between the various SAMHSA wellness dimensions ranged from .39 to .56, with the financial dimension at .56 and the emotional dimension at .51, indicating the highest stability.

The stability of students' responses is demonstrated by the UCSW Index mean scores, which were nearly unchanged from time 1 (70.7) to time 2 (70.5). The distribution of responses at both time points was almost identical, with about 50% differing by only 5 to 7 points. Additionally, 34.4% of students' responses changed by ±10 points or more, suggesting that the UCSW Index is sensitive to shifts in students' overall sense of wellness.

The PHQ4 stability coefficient of 0.53 from Time 1 to Time 2 indicates both stability and emotional experiences among students, allowing for flexibility in assessing changes over time.

Among students with no or mild distress at Time 1, 87% maintained their level at Time 2. In contrast, only 54% of those with moderate or severe distress at Time 1 remained at the same level, while 46% reported no or mild distress. This finding indicates an overall trend of improvement in students' reported mental health.

Students experiencing no or mild distress at both Time 1 and Time 2 had the highest average UCSW Index score of 74, while those with moderate or severe distress at both time points had the lowest average Index score of 57. Those with changes in distress levels—either an increase (average score of 65) or a decrease (average score of 68)—were in between.

Summary of Concurrent Validity Analyses

The UCSW Index's psychometric characteristics include its concurrent validity and relationships with indicators expected to correlate positively with students' evaluations of life satisfaction. Overall, UCSW Index scores were positively correlated with scales identified by NASEM to be associated with progress and persistence in college, and the PHQ4 scores were negatively correlated with these scales.

The alpha coefficients indicated sufficient reliability for the NASEM scales, with optimism (.81), intrinsic motivation (.85), and institutional belonging (.81) demonstrating adequate reliability. However, conscientiousness (.59) and self-efficacy (.68) fell below optimal levels.

The correlations between NASEM competencies and the UCSW Index are positive, indicating a moderate relationship, whereas those with the PHQ4 are negative, with small effect sizes. This suggests a stronger association between the positive competency measures and the UCSW Index compared to the PHQ4.

We evaluated whether mean NASEM competency scores differed based on overall UCSW Index ratings. Findings indicated significant concurrent validity, as students in the lowest first quartile scored notably lower, with a large effect size, than those in the upper wellness quartile.

The student strengths-focused NASEM measures demonstrate promising psychometrics but require refinement, particularly for the conscientiousness and self-efficacy subscales, which exhibit insufficient reliability and structural loadings. Revising these subscales and re-evaluating the UCSWS structural validity is essential.

UCSWS Recommendations and Possibilities

Based on analyses to date, the UCSWS appears to be a promising tool to quickly assess student wellness and distress but would benefit from larger, more representative samples

UCSWS Recommendations and Possibilities

To maximize the validity and usability of the UCSWS, the following essential steps involve obtaining a large, stratified, random sample from across the UCs for final psychometric analyses. Additionally, it is necessary to examine its effectiveness for diverse students within the UC system. To achieve this goal, there are two apparent pathways to consider:

1. **Systemwide effort.** Coordinate efforts through the UCOP office to manage a systemwide survey; work with IRAP to build upon this preliminary report and standardization of the measure and evaluate its use across the UC system. A key advantage of this approach is that it would facilitate the collection of Human Subjects across campuses and approximate a random, stratified sample of UC students, resulting in a more accurate assessment of student needs. A key disadvantage would be that this approach would occur at a top-down level, and campuses may not be fully engaged in considering the use of the UCSWS.

2. **Campus-by-campus effort.** A campus-by-campus approach would involve collaborating with individual campuses to gather a sample of around 1,000 students from each one, including graduate students. To ensure we have sufficient data for a valid analysis of different subpopulations, we would likely need to include at least four campuses. One key advantage of this decentralized strategy is that the participating campuses are more likely to be interested in adopting the UCSWS in the future. However, a potential downside is that this approach may not provide a representative sample of UC students across all campuses. Coordinating efforts may be more challenging, and systemwide initiatives might not be aligned effectively.

Following systemwide or campus-by-campus efforts, additional steps are necessary to enhance implementation, better understand the utility of student wellness screening initiatives, and maximize the benefits for students. To achieve this goal, we suggest the following next steps:

1. Facilitate meetings with wellness coordinators, staff, and other interested personnel to review and discuss relevant topics. Consider the range of ways students may be able to respond to the UCSWS and campuses would have mechanisms to learn about student wellbeing, and to provide students with the opportunity to express their needs. Coordinate with UC Davis to improve access to services and explore pathways to care.

2. Given the strong associations between the UCSWS and indicators of progress and persistence in college, engage and explore with academic community ways in which the UCSWS could be used to help support the UC's academic mission. Among various uses, the UCSWS may be helpful: to assess the needs of new students entering the university during student orientation meetings or freshman seminars designed to orient and help students become successful; as a resource for EOP, Dreamers, other various programs, and/or residence halls so they can attend to and monitor their students' wellness throughout their academic career; explore ways in which the UCSWS may be included in department program reviews as a resource to help them attend to and keep track of their students wellbeing.

3. Provide UCSWS results and discuss how to utilize and enhance the use of wellness data. Gather ideas from campuses on what would be helpful to strengthen implementation and usage across the UC system.

4. Develop efficient instructional materials to inform campuses about the content and purpose of the UCSWS (e.g., using Articulate Rise 360).