# Equity In Mental Health Evaluation

## Overview of Mental Health and Wellness Frameworks and Core Constructs

# University of California



An essential component of providing data-informed/data-enhanced behavioral health services is grounding these data upon an organized set of measurable social, emotional, and behavioral constructs that describe a shared vision of a healthy, successful UC student. This document describes frameworks and constructs related to students' behavioral and emotional health, well-being, and academic persistence and progress.

# FOREWORD

A recent report by Travia et al. (2022) [1] published in the *Journal of American College Health* investigated how various institutions of higher education (IHEs) define and measure well-being in the United States and Canada. This qualitative study conducted key stakeholder interviews and focus groups from 10 participating IHEs. Some of the questions that this group examined in the development of a resulting white paper were particularly relevant to the UC Equity and Mental Health Initiative. Key questions were:

- Does the social-ecological model, including the range of policies, practices, and programs, lead to greater well-being outcomes, and how do they differ for students and employees?
- In what ways are college well-being programs addressing health disparities across the various higher education sectors?
- What are the health outcomes of underrepresented student populations across the various educational sectors?
- What are the impacts of well-being initiatives on academic success?

Several themes emerged from the discussions across the ten institutions. Most institutions have moved towards using the "well-being" term to describe their global campus efforts to foster student development and mental health. Like most UC campuses, these institutions used some variation of the SAMHSA Dimensions of Well-Being (described in this report below) to comprise their well-being definition. Nonetheless, this study found that no universally accepted well-being definition has been adopted across these institutions. It is possible that given the demographic of each campus, campuses may want to define well-being as what they think is most meaningful in their unique context, which has implications for the measurement of well-being. Hence, in some cases, institutions are moving to develop their well-being measures, not necessarily grounded in a universally accepted well-being definition. Yet, at the same time, the institutions indicated that having a standard definition as a starting point would be helpful.

This report aims to inform those interested in better understanding the scope of student well-being conceptualizations, which will have implications for the assessment of students served under the Equity in Mental Health funding.

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[1] Travia, R. T., James, R. T., Larcus, G., Andes, T., & Gomes, P.G. (2022) Framing well-being in a college campus setting, Journal of American College Health, 70(3): 758-772.

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# EXECUTIVE SUMMARY

## Background

Under the Equity in Mental Health (EMH) funding plan, University of California (UC) campuses submitted funding proposals to support the strengthening and expanding of student behavioral health and wellness services, focusing on improving health equity. Allocated funds supported three distinct tiers of services, including universal prevention strategies (Tier III services), early intervention and collaborative well-being programs (Tier II services), and holistic treatment and recovery support programs (Tier I services). In the following deliverable, we provide an overview of mental health and wellness frameworks and core constructs to inform efforts to understand the BH&W of UC students.

The UC Equity in Mental Health Initiative has complementary foci related to:

- prevention and treatment support for students experiencing mild/moderate/severe mental health disorders and conditions (Tier I).
- prevention (resilience boosting) and supports to help students undergoing challenging life experiences (Tier II); and
- programs and supports for campus conditions that foster students' optimal, thriving behavioral health (Tier III).

Initially, the Equity in Mental Health Research and Evaluation team summarized the existing data indicators of students' behavioral health on UC campuses (*Narrative Description of Existing Behavioral Health and Wellness Data Across the University of California*). Among the findings of the earlier report was that there was little consensus about the essential student behavioral health indicators needed to identify, monitor, and evaluate student wellness. The National College Health Assessment (NCHA) has been the only available information source from all UC campuses for multiple years. As noted, this questionnaire began more than 20 years ago with a physical health focus, adopting a public health perspective. In 2019, the NCHA added 23 items that offer a broader behavioral health perspective (Diener Flourishing scale, Kessler 6 Symptom Screener, UCLA Loneliness Scale, and the Conner-Davidson Resilience scale). Despite including additional behavioral health items, the NCHA items are not grounded in a particular behavioral health or well-being conceptual framework.

## Main Findings

This present report aims to encourage and stimulate deeper thinking about essential indicators of a UC student's robust, flourishing behavioral health. To date, EMH indicators do not align with a framework/model or a set of hybrid frameworks/models that help conceptualize and describe optimal emotional and behavioral health among UC students. This lack of a conceptual framework likely contributes to the lack of clarity regarding uniform systemwide behavioral health indicators. Discussions about needed data sources or measures are facilitated by considering which frameworks/models best express a shared vision for EMH efforts. The primary aim of this report is to provide an overview of some frameworks and constructs relevant to the behavioral health and wellness of college students.

The California Youth (0-25) Behavioral Health Initiative is currently engaged in an ecosystem mapping process that will generate a theory of change expressing a shared consensus on the methods and contexts contributing to positive mental and behavioral health. Ideally, a conceptual framework, and a shared wellness vision, will inform UC's investment in an information/data system to inform EMH efforts. This data system should be able to efficiently report on the critical indicators of students' behavioral health and wellness,

linked to information about students' persistence and progress toward successful degree completion.

## Framework Focused on Student Persistence and Progress

First, we review an *a-theoretical framework* offered by a National Academy of Sciences, Engineering, and Medicine (NASEM) study group. This report, by a panel of national experts, examined empirical research to identify noncognitive factors most strongly associated with students' persistence and progress toward successful degree completion. Although this report is not focused primarily on students' mental health, it draws on the Big 5 personality factors [2] to identify student characteristics that facilitate their successful entry into and transition through the university.

## Guiding Organizational Mental Health and Wellness

Next, aligned with EMH aims, we review a framework focused explicitly on equity in mental health. The JED Foundation was founded in 1998 by Donna and Phil Satow, whose youngest son, Jed, died by suicide. This Foundation has programs supporting high school and college suicide prevention and related mental health initiatives, mainly focusing on the well-being of students of color. The programs and associated resources draw on a bioecological systems framework.

We also summarize the Okanagan Charter's call to action and guiding principles grounded in a bio-social ecological perspective that recognizes the importance of equity when accessing campus mental health and wellness services and resources.

## Perspectives Focused on Student Overall Well-Being

We then summarize six theoretically grounded frameworks that define and operationalize multidimensional health from positive developmental perspectives. These frameworks do not explicitly describe the mental health-related experiences of college students. Still, they are grounded in empirical research and conceptual models that describe positive human development. They also include ways to operationalize overall mental health and well-being. The frameworks/models are:

- Self-Determination Theory (SDT)
- Seligman's PERMA model (and variations)

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[2] For example, Mammadov, S. (2022). Big Five personality traits and academic performance: A meta-analysis. *Journal of Personality, 90*(2), 222-255 and Anglim, J., & Horwood, S. (2021). Effect of the COVID-19 pandemic and big five personality on subjective and psychological well-being. *Social Psychological and Personality Science*, 12(8), 1527-1537.

- The Organization for Economic Co-operation's Development (OECD) Social Emotional Learning Model
- The Dual-Factor Model (DFM) of Mental Health
- Keyes's Bidimensional Continuum Model (BCM) of Positive Mental Health
- Substance Abuse and Mental Health Services Administration (SAMHSA) 8 Dimensions of Well-Being

These six frameworks have broad, decades-long empirical research linking prevention and intervention strategies. They describe the core conditions associated with positive development and more optimal performance. Aligned with EMH efforts, these models are competence and asset based models.

## Related California K-12 Resilience/Wellness Framework

California has a rich history of progressive thinking and innovation. To assist EMH's examination of wellness frameworks and related constructs, we consider other California initiatives that developed frameworks to define and measure the health and well-being of children and adolescents. In addition, considering the statewide 0-25 age focus, this report summarizes information about the California Healthy Kids Survey (CHKS) system, with a well-developed theory of change model. Various validated questionnaire modules are aligned with and measure the CHKS conceptual model. The CHKS datasets include behavioral health and wellness-related information collected annually from more than 500,000 secondary students over 20 years. The CHKS datasets, of course, include responses from many future UC students and can inform the needs of incoming UC students.

## Conclusions

We presume that the UC Equity in Mental Health initiative, at the campus and systems levels, will want to consider various conceptual frameworks/models and perspectives that best encompass the overarching aims of the EMH initiative. This report describes core information about several key conceptual frameworks to stimulate thinking, evaluation, and discussion about the following questions:

- Is there a need for a UC systemwide theory of change expressing a shared consensus on the methods and contexts contributing to students' positive mental and behavioral health?
- Is there a need for a UC systemwide shared consensus about the core elements describing students' behavioral health and wellness?
- What frameworks/constructs and indicators are essential to assess student well-being that best represent the UC systems' aspirations for student, staff, and faculty well-being?
- What data are essential to monitor the UC Equity in Mental Health efforts?

The answers to these questions will guide the selection/creation of data sources and measures aligned with the preferred theory of change. This report provides information on several frameworks and helpful information to consider California's unique context.

# FRAMEWORK FOCUSED ON STUDENT PERSISTENCE AND PROGRESS

One approach to developing a theory of change is to examine empirical research identifying fundamental constructs associated with an agreed-upon desired outcome. A National Academies of Sciences, Engineering, and Medicine (NASEM) workgroup took this approach to address concerns about low college completion rates, particularly among underrepresented higher-education student groups. Specifically, this study group defined its charge to identify interpersonal, intrapersonal, and cognitive competencies associated with academic persistence and progress culminating in successful degree completion. Their approach was empirical, not organized around a specific conceptual framework. They identified competencies that, in their judgment, significantly linked to a higher success rate in college completion, as described in the following section.

## National Academies of Sciences, Engineering, and Medicine (NASEM)

The NASEM report, *Supporting Students' College Success: The Role of Assessment of Intrapersonal and Interpersonal Competencies*, examined how social-emotional health is associated with students' persistence and progress through postsecondary education (The National Academies Press, 2017).

## The Challenge: Degree Completion

Reflecting changes in U.S. demographics, enrollment in institutions of higher education (IHE) is changing. The student population is more diverse, with many of these students among the first in their families to attend college (Espinosa et al., 2019). IHEs are interested in better understanding factors that facilitate these students' successful, timely degree completion. The pathways from entering college toward degree completion are influenced by many personal, social, and institution-context factors that support degree attainment or, to the contrary, delay or curtail attainment. For the 2010 cohort of the 3 million students enrolling in four-year institutions, only 54.8% earned a first degree by 2016 (Shapiro et al., 2016). Increasing understanding of factors that inhibit/facilitate degree completion is of ongoing interest. Degree completion interest has risen because of considerations related to economic factors (e.g., an estimated 1.1 million shortage of B.A. degree workers in California in 2030; Johnson et al., 2015) and social equity and life opportunities (e.g., the University of California system has 42% of first-generation college students). Providing diverse groups of students access to four-year postsecondary institutions is one crucial first step, but without degree completion, it is an unfulfilled objective. In addition to increasing the number of students who eventually earn a degree, there is also interest in facilitating completion within four years to make optimal use of educational resources. For example, recognizing that the

California State University system (the largest four-year college system in the nation) has a four-year graduation rate of just 19% (compared with 34% nationally), the California Legislature created the Graduation Initiative 2025 to increase four-year graduation rates and to increase equity by closing the degree gap for underrepresented groups of students. These challenges are most prominent during the first year of entry into four-year colleges—first-year students entering from high school and juniors transferring from community colleges.

## NASEM Findings

The NASEM assessed interpersonal and intrapersonal competencies of undergraduate students that relate to persistence and success. Interpersonal competencies involve expressing information to others, interpreting others' messages, and responding appropriately. This study's intrapersonal competencies focused on self-management and regulating behavior and emotions to reach goals. The NASEM highlighted four constructs related to interpersonal and intrapersonal competencies: broad dispositions, beliefs, specific motivations, and future identity see Figure 1). Within the construct of **broad dispositions** is the Big Five framework consisting of conscientiousness, neuroticism, extraversion, openness to experience, and agreeableness. Under **beliefs** is a sense of belonging, influenced by social relationships and academic concerns, academic self-efficacy (student's belief that they can carry out actions that will lead to success in school), and growth mindset (the extent to which a person understands that they fixed vs. malleable capacities). For **specific motivations**, students determine what interests them and what they value most to assess their future trajectory. The following construct, **future identity**, refers to a person's overall conception of self within the broader world context, making college a primetime for identity development. Students identify who they are and who they want to become under this construct. An idea of a future self can help organize and give meaning to a person's goals. Overall, the following eight categories are related to persistence and success in undergraduate education: behaviors related to conscientiousness, sense of belonging,



Figure 1. NASEM Noncognitive Competencies

academic self-efficacy, growth mindset, utility goals and values, intrinsic goals and interests, prosocial goals and values, and positive future self.

The NASEM committee highlighted intra- and inter-personal competencies essential to higher education persistence and success: ethics, lifelong learning/career, orientation, intercultural/diversity competence, civic engagement/citizenship, communication, and teamwork.

## The Role of Social Emotional Measurement in Addressing These Challenges

Little debate exists about the need for a validated measure of college students' positive psychological skills and mindsets. The empirical evidence supporting the conclusions and recommendations emerging from the NASEM and related reports are grounded in studies that have examined the associations between specific academic mindsets and college persistence and progress, such as College Academic Self-Efficacy Scale (Solberg et al., 1993), Overall Sense of Belongingness Scale (Johnson et al., 2007), Motivated Strategies for Learning Questionnaire (Pinturich & De Groot, 1990), and Grit-Perseverance of Effort Subscale (Duckworth et al., 2007). The Gates Foundation and NASEM reports identified factors empirically linked to student success (Berman et al., 2018; Gutman & Schoon, 2013). Other existing measures (e.g., College Persistence Questionnaire; Davidson et al., 2015) assess some relevant psychological mindsets (e.g., social integration, motivation to learn, collegiate stress, and academic self-efficacy) but are too long for practical use as a universal assessment across many institutions. There is a pressing need for high-quality measures of noncognitive factors related to students' social and emotional health and academic persistence and success.

Most K-12 schools report implementing programs and services that foster students' social-emotional mindsets, skills, and development (Hamilton et al., 2019). Despite this broad interest, Taylor and Hamilton (2019) caution that there is a pressing need for additional research to carefully validate measures of inter/intra-cognitive traits, with unstandardized behavioral observations reported as being the most used form of assessment. Even less research has been conducted at the IHE level to develop and validate measures, despite the need for developmentally appropriate measures. Supported by the Aspen Institute's call for enhanced social-emotional learning (SEL) assessment resources, the RAND Corp. developed the Education Assessment Finder (EAF). Among the cataloged measures, only five EAF measures are appropriate for postsecondary education: Clifton Strengths Finder, Multidimensional Self-Concept Scale (MDSCS), Personal Skills Map, Sedcaek Noncognitive Questionnaire, Bar-On Youth Version, and the Well-being Indicator Tool for Youth. None of these measures provide IHEs with what they need—an efficient, comprehensive estimate of

students' strengths validated with the same sample. The Clifton (177 items) and Personal Skills Map (244 items) are too long. The Bar-On (short, 30 items) and MDSCS (29 items) have fewer items, but they are not in the public domain. These assessments do not provide comprehensive coverage for postsecondary students, are not validated for diverse samples to predict persistence and progress, and do not provide information at the institution system level (e.g., climate indices). Again, validating noncognitive factors measures is essential for UC's unique, diverse student body.

## NASEM Comment

The NASEM committee report does not explicitly focus on emotional and behavioral health factors. However, it does have a grounding in the Big 5 personality factors, and its focus on student academic persistence and progress would appear to be a central aspect of a comprehensive understanding of a UC student's overall health and well-being. The NASEM focus on noncognitive factors provides a framework is relevant to all UC students because its core components are relative to the success and wellness of every student.

## NASEM Reference

National Academies of Sciences, Engineering, and Medicine. (2017). *Supporting students' college success: The role of assessment of intrapersonal and interpersonal competencies*. National Academies Press. https://nap.nationalacademies.org/catalog/24697/supporting-students-college-success-the-role-of-assessment-of-intrapersonal

## Equity in Mental Health Framework (EMHF)

### EMHF Foundation Bioecological Perspective

The Equity in Mental Health Framework (EMHF), created by the Steve Fund and the JED Foundation, incorporates four stages: Needs Assessment, Implementation, Program Evaluation, and Dissemination. The EMHF aims to guide colleges and universities to effectively develop, implement, and refine on-campus programs to support the mental health and emotional well-being of students of color across postsecondary education.



Figure 2. Bioecological Systems Approach

### EMHF Stage 1, Needs Assessment

The EMHF utilizes Bronfenbrenner's bioecological systems development theory to describe contextual factors contributing to the mental health of students of color (see example in Figure 2). The bioecological systems approach consists of the microsystem (e.g., peers; parents; college campus community), exosystem (e.g., health care system; higher education system; mass media), and macrosystem (e.g., economy; politics; culture) and how these systems interact with the individual. At the core of the EMHF approach, colleges and universities support students of color by investing in a proactive assessment of mental health and emotional well-being at the individual level. Within an individual's microsystem, peers, parents, and other college community members affect the individual. Within the macrosystem lies cultural issues or current events affecting students of color's well-being. Campuses are encouraged to examine student demographic characteristics to identify discrepancies between identities represented in the student body and critical roles on campus. The broader community is also part of an individual's social exosystem. However, students struggle or rarely engage with off-campus support. Therefore, colleges are encouraged to identify liaisons between campus and the community that can support the mental health and well-being of students of color. The EMHF recommends colleges and universities develop opportunities to engage students in the broader community around cultural issues affecting their lives.
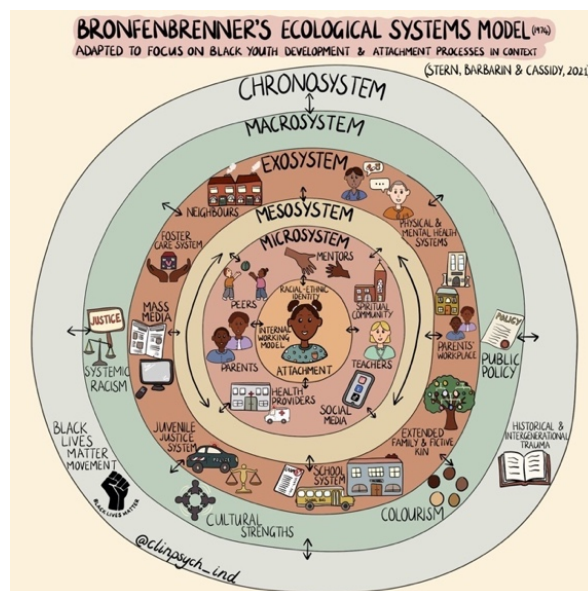
## EMHF Stage 2, Implementation Approach

Several recommendations (see Figure 3) guide efforts to optimize program implementation to support mental health and emotional well-being in students of color:

- Actively recruit, train, and retain diverse and culturally competent faculty and professional staff.
- Create opportunities to engage around national and international issues and develop events for students of color.
- Provide dedicated roles to support the well-being and success of students of color. There should also be accessible, safe communication with campus administration with an efficacious response system that best supports individual concerns and incidents.



Figure 3. JED Strategic Planning Components

- Offer a range of supportive programs and services in various formats accessible and feasible for all identities and backgrounds.
- Proactively inform about programs and services by advertising and promoting through multiple avenues.

## EMHF Stage 3, Program Evaluation

Evaluating a program, especially for students of color, is imperative for any new initiative. Scientific evidence on the various programs and services created to support well-being among students of color is sparse. The Steve Fund and JED National Survey have identified nationwide programs accessible for students, faculty, and staff of color. The EMHF approach recommends that colleges and universities identify and utilize culturally relevant and promising programs and practices and collect data on their effectiveness. EMHF also recommends creating evaluation plans for new programs, gathering data during on-campus programs, inviting student ideas on what should be changed, linking mental health and well-being data to other important outcomes, and evaluating programs regularly for efficacy and refinement when needed.

## EMHF Stage 4, Dissemination

Dissemination involves sharing transactional information and knowledge across colleges and universities, blending prevention science and clinical practice contributions. Colleges and universities are encouraged to participate in resource and information sharing within and between schools. This collaborative effort can include partnering with student leaders to co-

host programs, forming formal, interdisciplinary work structures, supporting faculty and staff to attend conferences, and participating in consortia designed to share information on best practices.

## EMHF Comment

The JED foundation equity and mental health framework is grounded in Bronfenbrenner's general theory that proposes supportive social systems are essential for flourishing human development. As such, it does not describe specific strategies or interventions that could promote emotional and behavioral health. In addition, it does not identify essential elements/indicators of flourishing mental health and well-being. However, the JED model provides a process through which campuses and universities can carefully consider creating social environments that optimally support and promote student well-being. As such, employing this approach would need to be integrated with or complemented by another well-being model.

## EMHF References

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## Okanagan Charter Model

The [Okanagan Charter](#) was a product of the 2015 International Conference on Health Promoting Universities, and Colleges held at the University of British Columbia's Okanagan campus. The Charter's aspirational call to action had the input of 605 professionals from 45 countries.  The purpose of the Okanagan Charter was to provide a framework that guides and inspires action as pertinent to the Health Promoting Universities and Colleges movement, generate dialogue and research that permeates campuses and local, regional, and national networks, and lastly, create meaningful action for the integration of health-forward policies and practice. The Okanagan Charter calls upon IHEs to embed health across campus culture, administration, and academics. Specifically, campuses are called (see Figure 4) to: embed policies (see Figure 5) that devote specific attention to health, well-being, and sustainability; create supportive campus environments that support health; generate thriving communities and a culture of well-being across campuses; support personal development by providing life-enhancing skills; and create or re-orient campus services to support equitable access. Some challenges of incorporating the Okanagan charter include translating theory to action across campus, gaining support from senior academics, increasing demands on staff, financial pressure, growth of multiple campuses, and developing e-learning and short courses.



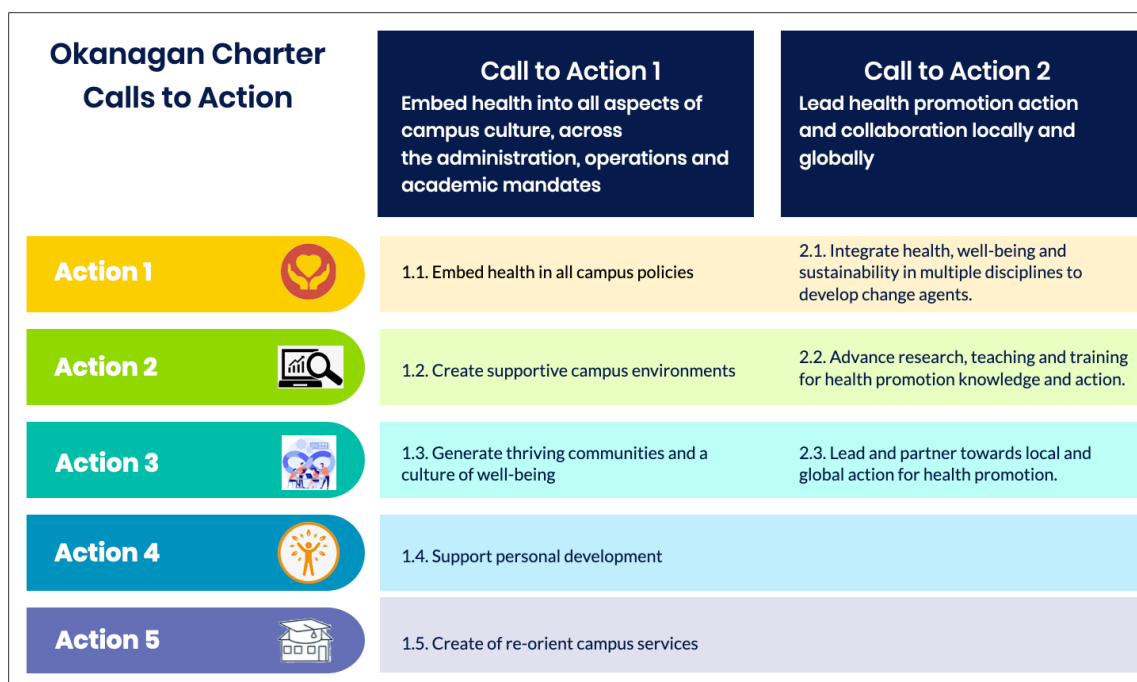| Okanagan Charter Calls to Action | Call to Action 1 Embed health into all aspects of campus culture, across the administration, operations and academic mandates | Call to Action 2 Lead health promotion action and collaboration locally and globally |
|---|---|---|
| Action 1 | 1.1. Embed health in all campus policies | 2.1. Integrate health, well-being and sustainability in multiple disciplines to develop change agents. |
| Action 2 | 1.2. Create supportive campus environments | 2.2. Advance research, teaching and training for health promotion knowledge and action. |
| Action 3 | 1.3. Generate thriving communities and a culture of well-being | 2.3. Lead and partner towards local and global action for health promotion. |
| Action 4 | 1.4. Support personal development | |
| Action 5 | 1.5. Create of re-orient campus services | |

Figure 4. Okanagan Core Implementation Actions

## Canadian Campus Wellbeing Survey (CCWS)

Following the 2015 international conference on health-promoting universities and colleges in the Okanagan Charter development, researchers from the University of British Columbia and the University of Toronto developed the Canadian Campus and Wellbeing Survey (CCWS). In many ways, the need for developing this survey parallels ongoing discussions about the UC Equity and Mental Health Initiative data needs. Previously, some Canadian colleges in universities used the US-based National College Health Assessment (NCHA). The NCHA was seen as being long and cumbersome, with over 300 items. Limitations of the NCHA measures were noted and many of the NCHA questions were not seen as a priority by Canadian stakeholders. A final consideration is that the NCHA is not coordinated with Canadian research and data and provided limited opportunities for institutional comparisons to identify these practices.

There was an expectation that the CCW would move away from a mental illness model to one that operationalizes mental health as symptoms of positive feelings and functioning (a salutogenic perspective). This conceptualization contrasted with the NCHA and other international college assessment mental health assessments. The development of the CCW took into consideration other mental health and well-being surveys that have been used or are currently being used in Canada and other national contexts so that comparisons could be made to those samples.
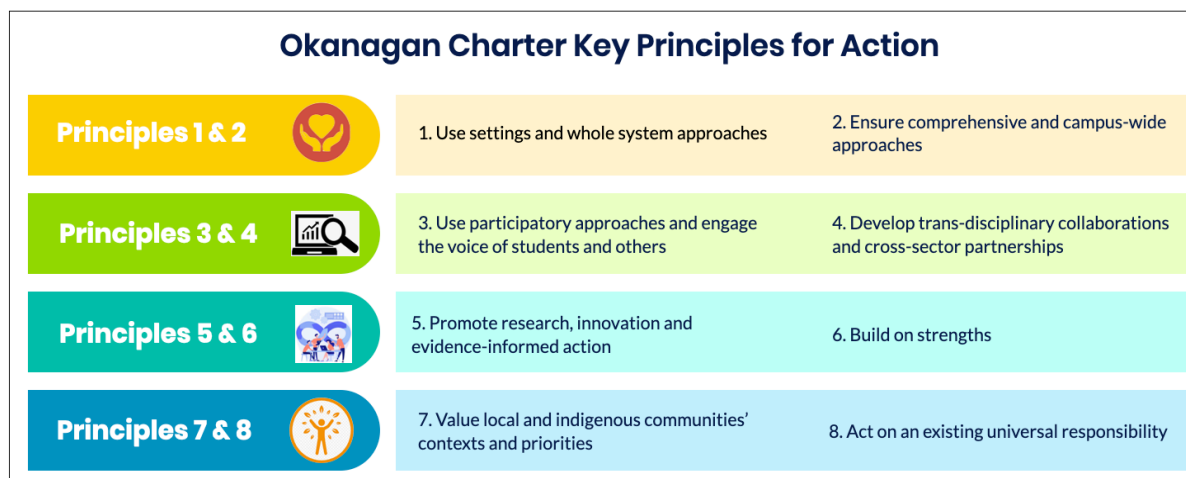


## Okanagan Charter Key Principles for Action

| Principles 1 & 2 | 1. Use settings and whole system approaches | 2. Ensure comprehensive and campus-wide approaches |
| --- | --- | --- |
| Principles 3 & 4 | 3. Use participatory approaches and engage the voice of students and others | 4. Develop trans-disciplinary collaborations and cross-sector partnerships |
| Principles 5 & 6 | 5. Promote research, innovation and evidence-informed action | 6. Build on strengths |
| Principles 7 & 8 | 7. Value local and indigenous communities' contexts and priorities | 8. Act on an existing universal responsibility |

Figure 5. Okanagan Charter Principles

The development interest behind the CCW was "creating an agile Canadian health and wellness survey surveillance system that will serve the critical knowledge exchange"– the survey should take no more than 20 minutes to complete and used existing measures. Hence, the CCWS approach did not develop new measures but organized available measures in a

way that fits with the wellness domains that Canadian universities saw as priorities. The development approach first engaged an expert panel in a Delphi survey. Three waves of Delphi questionnaires identified key areas for the inclusion of content in the proposed wellbeing surveillance survey. A group consensus process ranked the need/importance of Delphi-proposed survey content area. As a result of this process, the following areas were identified as essential to include in the CCWS: mental health assets, student experiences, mental health deficits, health service utilization help seeking, physical health/health behaviors, academic achievement, substance use, food security, and sexual health behavior (see Appendix).

## CCWS Comment

The principal value in reviewing and considering the development of the CCWS is that it is illustrative of how to develop a wellness surveillance survey quickly and efficiently for administration across multiple institutions. The content of the CCWS is not particularly innovative as it has drawn primarily upon existing instruments. Creating it was efficient but inclusive as it worked to develop consensus about student well-being's essential components. After critically considering the expert panel's suggestions, a working group selected the CCWS core constructs, which, in effect, operationally define Canadian students' well-being. Although the subscales have not undergone rigorous psychometric evaluation, the developers created the resources necessary to efficiently administer, process, and report the survey results. The resulting survey resources are decentralized, allowing each institution to brand it as theirs. The already-available Tableau dashboard makes the survey results quickly available to each institution so that the institution can use that information for program planning and evaluation. As evident on CCWS institutional websites, institutions use them to disseminate infographics informing their community about students' well-being.

## Okanagan and CCWS References

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## PERSPECTIVES FOCUSING ON OVERALL STUDENT WELL-BEING
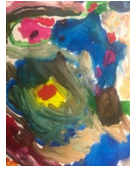
### Self-Determination Theory (SDT)

Created by Edward Deci and Richard Ryan in 1985, self-determination theory (SDT) proposes that an individual "*possesses an active tendency toward psychosocial growth and integration*," which then leads the individual to be naturally motivated to self-improve dependent on their environment (Deci & Ryan1985; Goldman et al., 2017; Ryan & Deci, 2002, p.3). This type of motivation is better known as intrinsic, dependent on three basic psychological needs: autonomy, competence, and relatedness (Deci & Ryan, 1985; Ryan & Deci, 2002; see Figure 6). **Autonomy** refers to our need for independence and freedom in choosing certain behaviors rather than those influenced by external factors (Graham & Vaghan, 2022). **Competence** is the concept that when faced with a task, we can perform this task at varying degrees of difficulty while feeling



Figure 6. SDT Theory Components

in control, capable, and effective (Graham & Vaghan, 2022). Specifically, when encountering a challenge, one feels most competent when their actual capacities are expressed (Deci & Ryan, 1985). Lastly, **relatedness** refers to the ability to connect with others, which helps individuals develop a sense of belonging with others they respect (Ryan & Deci, 2009). Vallerand et al. (1992) describe intrinsic motivation as one of education's most important psychological concepts. It is essential for students to feel engaged in activities that interest them and help them learn, develop and expand their thinking (Ryan & Deci, 2000).

SDT has been instrumental in clarifying academic and mental health outcomes for college students. For example, students with intrinsic motivation experience more outstanding academic achievement and have higher retention rates throughout college than extrinsically motivated students (Miserandino, 1966; Vallerand et al., 1997). In similar studies, students' perceived self-determination accounted for more than half of the variance in their
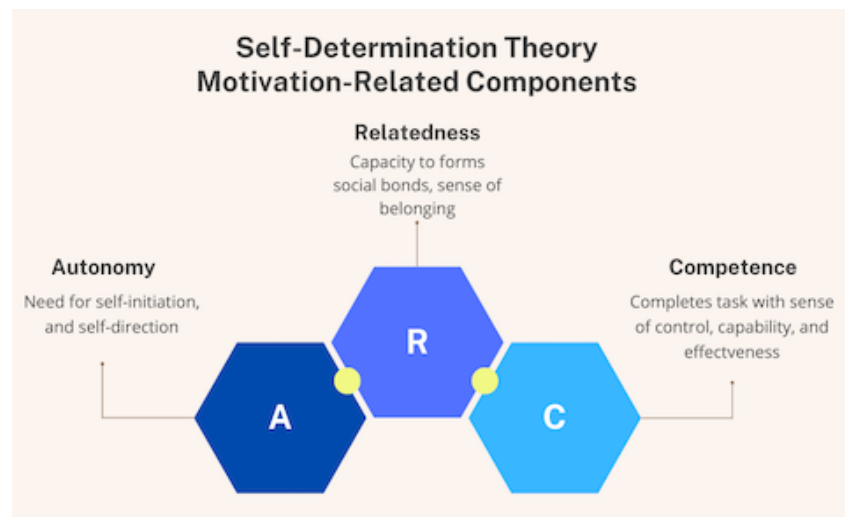
life satisfaction in college (Graham & Vaghan, 2022; Jenkins-Guarnieri et al., 2015). In a study examining Canadian students, researchers found that intrinsic motivation was associated with psychological well-being, separate from academic performance (Burton et al., 2006). College students who reported higher autonomous self-regulation for learning a specific subject (e.g., organic chemistry) reported higher perceived competence, interest, and enjoyment in the subject matter and lowered anxiety (Black & Deci, 2000).

## SDT Assessment

The Center of Self-Determination Theory website posts various measures suitable for college students to assess autonomy, competence, relatedness, and motivations relevant to the UC EMH Initiative. (https://selfdeterminationtheory.org/questionnaires/)

- Aspirations Index (AI)
- Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS)
- Basic Psychological Need Satisfaction Scales (BPNSS)
- Emotion Regulation Scales (ERI)
- General Causality Orientations Scale (GCOS)
- Index of Autonomous Functioning (IAF)
- Intrinsic Motivation Inventory (IMI)
- Mindfulness Attention Awareness (MAAS)
- Perceived Choice and Awareness of Self Scale (PCASS)
- Perceived Competence Scales (PCS)
- Self-regulation questionnaires (SRQ)
- Subjective Vitality Scales (SVS)

## SDT Comment

Self-determination theory is particularly relevant to considering university students' general well-being. It is fundamentally a simple framework with three primary elements describing basic psychological needs that are important to the positive development of any human being. Of relevance to the considering university students' mental health and well-being is that SDT also provides a way to incorporate motivation's role in a student's life. SDT's focus on intrinsic motivation is particularly relevant to students' persistence and progress toward degree completion while maintaining robust flourishing mental health. Self-determination theory also has an extensive and rich research foundation. A Google Scholar search returns more than six million citations for "self-determination theory." In addition, there is a comprehensive set of assessment resources and descriptions of interventions designed to support individuals' development of autonomy, competence, and interpersonal relationships.

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## Seligman's PERMA Model (and variations)
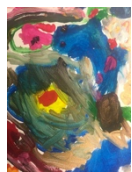
Well-being theory (WBT) consists of five multifaceted dimensions that Seligman considered intrinsically rewarding for individuals worldwide: positive emotions, engagement, relationships, meaning, and achievement (PERMA). These five constructs distinguish WBT from other well-being theories because it includes both eudemonic (i.e., happiness) and hedonic (i.e., pleasure) aspects along with unique components (e.g., engagement, achievement) that are not typical in well-being research (see Figure 7). Each WBT element works together to construct well-being that has predicted flourishing in multiple settings. For example, PERMA is significantly and positively associated with school employees' physical health/vitality, life satisfaction, job satisfaction, and organizational commitment (Kern et al., 2014).



**POSITIVE EMOTIONS** — Hope, interest, joy, love, compassion, pride,gratitude

**ENGAGEMENT** — Living in the present moment, focusing on the task on hand

**RELATIONSHIPS** — Focus on the pattern and feel of your breath as you inhale and exhale

**MEANING** — Sense of belonging, serving something greater than oneself

**ACOMPLISHMENT** — Working toward, reaching goals, mastering and finishing endeavors

**Seligman's PERMA Model**

Figure 7. PERMA Model Components

It is essential first to delineate each component of the PERMA model. Seligman describes *positive* **emotions** as the good things we feel happiness, hope, and joy (Seligman, 2011). Research has shown that positive emotions are a vital indicator of well-being and are positively associated with life satisfaction, resilience, mindfulness, social rewards, work outcomes, and physical health (Coffey et al., 2014, 2016; Cohn & Fredrickson, 2009). The following construct is *engagement*, which is becoming highly absorbed, interested, or focused on life activities (Coffey et al., 2016; Csikszentmihalyi, 1988). Literature has shown that engagement is positively related to life satisfaction, satisfaction in work and leisure, increases in positive affect after experiencing engagement, growth in academic commitment and achievement, and end-of-semester academic performance (Carli et al., 1988; Coffey et al., 2016; Engeser et al., 2005; Han, 1988; Lefevre, 1988; Rogatko, 2009). *Relationships* (i.e., mutually satisfying) are another critical indicator of well-being positively associated with self-esteem and happiness (Bagwell et al., 2005; Coffey et al., 2016; Diener & Seligman, 2002; Diener & Oishi, 2000). Next is the concept of *meaning*, defined as having a sense of purpose derived from something viewed as more significant than oneself (Seligman, 2011). Meaning

is associated with other aspects of well-being throughout the lifespan, greater life satisfaction, higher rates of happiness, and fewer psychological problems (Chamberlain & Zika, 1988; Coffey et al., 2016; Debats et al., 1993; Steger et al., 2009).
Lastly, *accomplishment* is a well-being indicator described as the persistent or determined drive to pursue, master, and accomplish personal goals (Seligman, 2011). Accomplishment encompasses people's desire to achieve personally valued goals. PERMA's five elements offer a well-being model applicable across settings—in K-12 and higher educational institutions. It is essential to note actual achievements do not always predict well-being. Still, perseverance is related to educational attainment, GPA, life satisfaction, and participation in extracurricular activities (Coffey et al., 2016; Duckworth et al., 2007; Duckworth & Quinn, 2009; Grant & Dweck, 2003; Peterson et al., 2007).

   The South Australia government has adopted the PERMA model requiring that its wellness components be considered for all public works initiatives, analogous to requiring environmental review. Proposed projects and expenditures of public funds must complete a review of the project's impacts on South Australian people's well-being (e.g., South Australia State of Wellbeing, 2016). The Wellbeing SA Strategic Plan 2020-2025 (see Figure 8) provides an example of a compressive wellness initiative including the PERMA model aligned with a wellbeing index that includes the components in the following graphic.
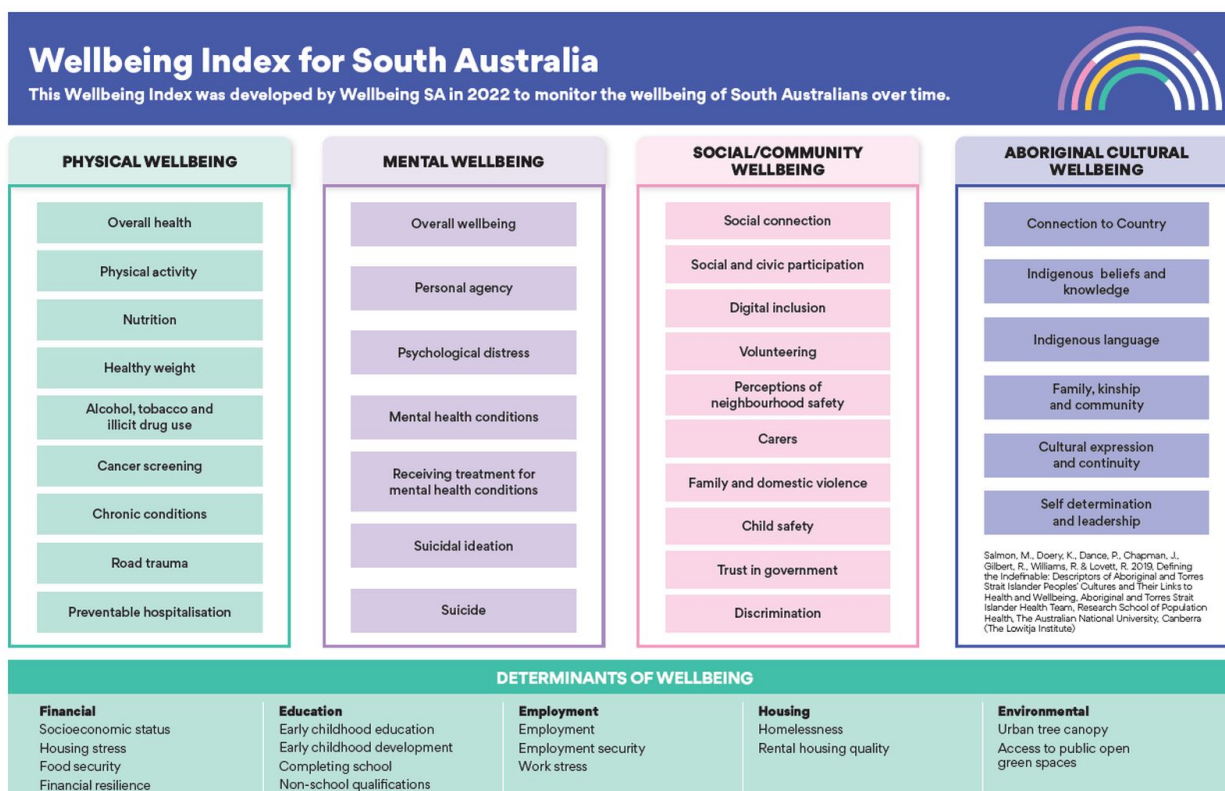


Figure 8. South Australia Wellbeing Index Components, Informed by the PERMA Framework

Various educational institutions in Australia and New Zealand have adopted the PERMA framework as an overall wellness being model and to organize their counseling and guidance services. For illustration here a couple of examples: St. Andrew's College and Geelong Schools.

## PERMA Assessment

The PERMA-Profiler has 23 items measuring the five PERMA constructs, negative emotions, and health. For positive emotions, the PERMA-Profiler considers both positive and negative emotions.[3] For positive emotions, the PERMA-Profiler measures advancements toward feeling contentment and joy. In contrast, for negative emotions, feelings of sadness, anxiousness, and anger are measured. For engagement, the PERMA-Profiler examines high engagement levels, also known as a state, called "flow." A person in **flow** is deeply absorbed in an activity; they lose track of time. Relationships are measured through positive relationships with others as an essential part of life. For meaning, the PERMA-Profiler looks at an individual's sense of purpose in life, whether the individual finds life value and worth, and if the individual is connecting to something greater in life. The PERMA-Profiler measures accomplishment through subjective feelings of accomplishment and staying on top of responsibilities. Lastly, even though it is not considered part of the PERMA model, health is examined as another vital aspect of well-being and is measured by the PERMA-Profiler.

In South Australia proposed projects and expenditures of public funds must complete a review of the project's impacts on South Australian people's well-being (e.g., South Australia State of Wellbeing, 2016). The PERMA measure is used for a South Australia Wellbeing Survey (Iasiello et al., 2017).

## PERMA at UC San Diego

Within the UC system, UCSD, the Tritons Flourish Initiative infuses the PERMA framework to organize information about student resources and activities to foster well-being, such as, iFlourish (see Figure 9).

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[3] Ryan, J., Curtis, R., Olds, T., Edney, S., Vandelanotte, C., Plotnikoff, R., & Maher, C. (2019). Psychometric properties of the PERMA Profiler for measuring wellbeing in Australian adults. *PloS one*, *14*(12), e0225932.
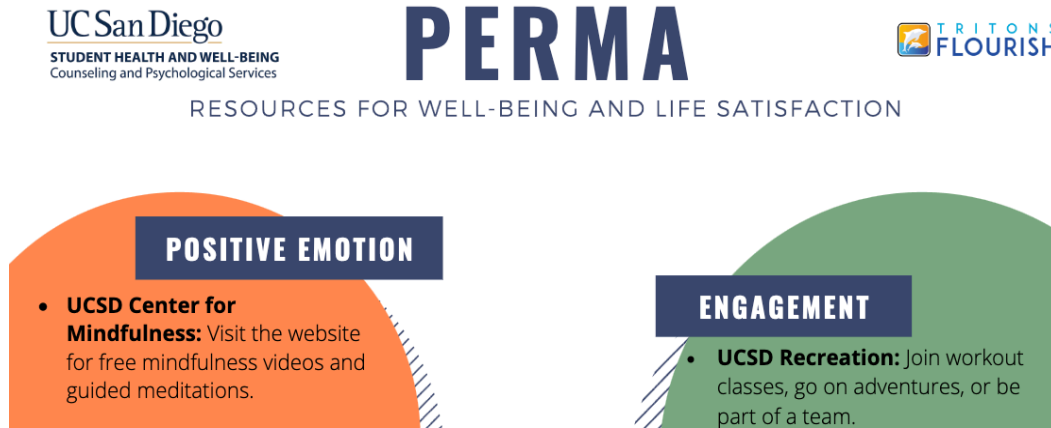
Figure 9. UCSD iFlourish and PERMA

## PERMA Variations

### PERMA-V

Recently Seligman expanded the core PERMA model to include the **vitality** construct (PERMA-V). This component recognizes that flourishing well-being also incorporates physical well-being, energy, and health elements. When considered within a university student's life context, this merges the crucial aspects of maintaining healthy sleep patterns, eating a healthy diet, and engaging in healthy exercise. These are essential components of building the capacity to experience life challenges and respond to experienced adversity.

### PERMA+4

Seligman and colleagues first offered the PERMA as a framework of core elements associated with individuals obtaining a positive psychological state of happiness with three fundamental building blocks: pleasure, meaning, and engagement. This builds upon



Figure 10. Donaldson's PERMA+4 Model Components

traditional philosophical thinking related to hedonism and eudaimonia. Subsequent consideration and research findings suggested that these three conditions alone were
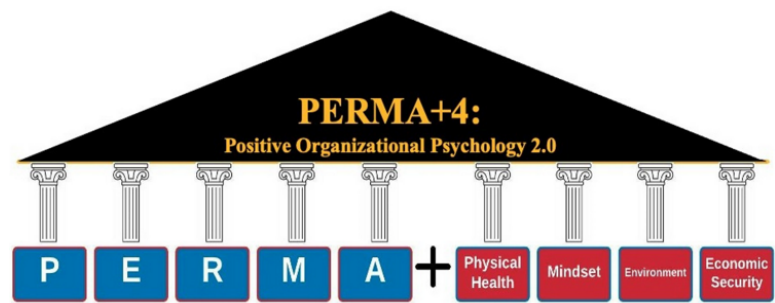
insufficient for sustainable well-being. Seligman later indicated that authentic happiness also includes positive relationships in attaining meaningful accomplishments.

In response to Seligman's call for researchers to identify additional building blocks of individuals well-being, Donaldson et al. (2022) propose four additional components to consider (see Figure 10).

*Physical Health.* A combination of high levels of biological, functional, and psychological health assets. This component includes indicators such as physical fitness, heart rate variability, pulse, blood pressure and so on.

*Mindset.* A growth mindset includes optimism, a future-oriented view of life, and setbacks seen as opportunities for growth–psychological capital, perseverance, and grit. In this context, psychological capital could consist of hope, efficacy, resilience, and optimism. This area was built on research by Dweck, Duckworth, and others who identified the characteristics of individuals who generally have a growth orientation to life (i.e., they see themselves as having the capacity to learn new things when challenged, they also see themselves psychologically as having the capability for personal and interpersonal growth and development).

*Work environment.* The quality of the physical work environment includes spatial-temporal elements such as access to natural light, fresh air, physical safety, and a positive psychological climate, which align with the preferences Tabof the individual.

*Economic security*. Perceptions of the financial security and sustainability needed to satisfy one individual's needs. This component in the university context relates to students having substantial financial resources for their financial obligations and caring for their essential needs.

*PERMA+4 Assessment*

The PERMA+4 components were proposed to consider influences on worker well-being, not student well-being. This framework could provide perspectives of the campus's broader educational and work environment, particularly as it applies to university staff. A 27-item Positive Functioning at Work Scale measures the nine PERMA+4 domains. This scale was carefully developed and validated and might offer ideas for staff well-being considerations.

## *PERMA+4 Items*

| Dimension | Sub-Dimension | Items | Label |
|---|---|---|---|
| **Positive Emotions** | Future-Oriented and Affective | 1. I feel joy in a typical workday<br>2. Overall, I feel enthusiastic about my work<br>3. I love my job | P1<br>P2<br>P3 |
| **Engagement** | Absorption | 4. I typically become absorbed while I am working on something that challenges my abilities<br>5. I lose track of time while doing something I enjoy at work<br>6. When I am working on something I enjoy, I forget everything else around me | E1<br>E2<br>E3 |
| **Relationships** | Giving<br>Perceived<br>Shared Compassion<br>Psychosocial | 7. I can receive support from coworkers if I need it<br>8. I feel appreciated by my coworkers<br>9. I trust my colleagues<br>10. My colleagues bring out my best self | R1<br>R2<br>R3<br>R4 |
| **Meaning** | Transcendent<br>Meaning<br>Greater Good Motivations | 11. My work is meaningful<br>12. I understand what makes my job meaningful<br>13. The work I do serves a greater purpose | M1<br>M2<br>M3 |
| **Accomplishment** | Goals<br><br>Prove (Performance Goal) Orientation | 14. I set goals that help me achieve my career aspirations<br>15. I typically accomplish what I set out to do in my job<br>16. I am generally satisfied with my performance at work | A1<br>A2<br><br>A3 |
| **Physical Health** | Biological<br><br>Functional<br>Psychological | 17. I typically feel physically healthy<br>18. I am rarely sick<br>19. I can typically overcome sources of physical distress (e.g., insomnia, injuries, and vision issues)<br>20. I feel in control of my physical health | H1<br>H2<br>H3<br>H4 |
| **Mindset** | Growth Mindset<br><br>Prospection | 21. I believe I can improve my job skills through hard work<br>22. I believe my job will allow me to develop in the future<br>23. I have a bright future at my current work organization | MI1<br>MI2<br>MI3 |
| **Environment** | Physical | 24. My physical work environment (e.g., office space) allows me to focus on my work<br>25. There is plenty of natural light in my workplace<br>26. I can conveniently access nature in my work environment (e.g., parks, oceans, and mountains) | EN1<br>EN2<br>EN3 |
| **Economic Security** | Income<br>Medical Spending<br>Financial Savings | 27. I am comfortable with my current income<br>28. I could lose several months of pay due to serious illness, and still have my economic security<br>29. In the event of a financial emergency, I have adequate savings | ES1<br>ES2<br>ES3 |

Response set ranged from 1 (Strongly Disagree) to 7 (Strongly Agree).

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## Organization for Economic Co-operation & Development (OECD) Model

The Organization for Economic Cooperation and Development (OECD) created the Study on Social and Emotional Skills, an international survey that assesses 10- and 15-year-old children worldwide. Research on the project began in 2017, with data first available in 2020. The study draws mainly from the Big Five model, which contains the following categories with OECD's naming in parentheses: openness to experience (open-mindedness), conscientiousness (task performance), emotional stability (emotional regulation), extraversion (engaging with others), and agreeableness (collaboration). Along with the Big Five model, the study also contains "compound" skills, which are a combination of two or more individual skills helpful in describing and



Figure 11. OECD Social-Emotional Learning Model Component

understanding specific aspects of a child's behavior. The OECD model has 15 social and emotional skills distributed across its six domains (see Figure 11).

Under the *task performance* (conscientiousness) domain are the following skills: achievement orientation, responsibility, self-control, and persistence. Achievement orientation is a child setting high standards for themselves and working hard to meet them. Responsibility is the ability to honor commitments and to be punctual and reliable. Self-control is avoiding distractions and focusing on the current situation to achieve personal goals. Lastly, persistence is the ability to persevere in tasks and activities until they get done. Under the domain of *emotion regulation* (emotional stability), stress resistance is the ability to modulate anxiety and calmly solve problems effectively, optimism is having positive

expectations for self and life, and emotional control is the process of engaging in practical strategies to regulate temper, anger, and other emotions when dealing with frustrations. *Collaboration* (agreeableness) consists of empathy which is the ability to be kind and caring for others and their well-being, and trust, which is assuming that others have good intentions and forgiving those who have done wrong. And cooperation is living in harmony with others and valuing interconnectedness among individuals. Under the domain of *open-mindedness* (openness to experience), curiosity is interest in ideas and learning. Tolerance is the ability to be open to different points of view. Creativity is the opportunity to generate novel ways to do or think about something through exploration and failure. *Engagement with others* (extraversion) consists of sociability, which is the ability to initiate and maintain connections with friends and strangers, and assertiveness is the ability to voice opinions, needs, and feelings. And lastly, energy is the ability to approach daily life with excitement and spontaneity. Lastly is the domain of compound skills. *Compound skills* consist of self-efficacy, the strength of an individual's beliefs in executing a task or completing a goal, and critical thinking or independence, which is the ability to evaluate information effectively, independently, and unrestrainedly. Self-reflection or meta-cognition is awareness of inner processes and subjective experiences.

The Big Five framework has been studied across multiple settings, showing its importance in school achievement, job performance, and personal well-being. For example, the domains of conscientiousness and openness to experience are significant and positive predictors of student years in school. Conscientiousness predicts course grades nearly as well as cognitive ability, and these results are not affected when controlling for cognitive ability. Openness to experience and agreeableness were also related to course grades in a smaller magnitude. Social and emotional skills are also essential when it comes to occupational outcomes. For example, conscientiousness predicts performance and wages across various occupations, while extraversion predicts future earnings, employment status, and performance for those in professions relating to sales and management. Emotional stability is essential for those with tight deadlines and high-stress levels, openness to experience is crucial in occupations relevant to investigative and scientific positions, and agreeableness is critical in customer relations. Lastly, it is essential to highlight how social and emotional skills are necessary for those with low cognitive skills. In one study, social and emotional skills were 2.5 to 4.0 times more important than cognitive ability for people with the lowest incomes. Regarding personal well-being, the Big Five domains correlate positively with longevity. Additionally, a much stronger relationship exists between life satisfaction and social and emotional skills than between cognitive and life satisfaction.

## OECD Assessment

Figure 12 shows the Big 5 related constructs comprising the OECD framework.[4]

| DOMAINS | SKILLS | DESCRIPTION | BEHAVIOURAL EXAMPLES |
|---------|--------|-------------|----------------------|
| OPEN-MINDEDNESS (Openness to experience) | CURIOSITY | Interested in ideas and love of learning, understanding and intellectual exploration; an inquisitive mindset. | Likes to read books, to travel to new destinations. Opposite: Dislikes change, is not interested in exploring new products. |
| | TOLERANCE | Is open to different points of view, values diversity, is appreciative of foreign people and cultures. | Has friends from different backgrounds. Opposite: Dislikes foreigners or people from different backgrounds. |
| | CREATIVITY | Generates novel ways to do or think about things through exploring, learning from failure, insight and vision. | Has original insights, creates valued artworks Opposite: Acts conventionally; not interested in arts. |
| TASK PERFORMANCE (Conscientiousness) | RESPONSIBILITY | Able to honour commitments, and be punctual and reliable. | Arrives on time for appointments, gets chores done right away. Opposite: Doesn't follow through on agreements/ promises. |
| | SELF-CONTROL | Able to avoid distractions and sudden impulses and focus attention on the current task in order to achieve personal goals. | Postpones fun activities until important tasks are completed, does not rush into things. Opposite: Is prone to say things before thinking them through. Binge drinking. |
| | PERSISTENCE | Able to persevere in tasks and activities until they get done. | Finishes homework projects or work once started. Opposite: Gives up easily when confronted with obstacles/distractions. |
| ENGAGING WITH OTHERS (Extraversion) | SOCIABILITY | Able to approach others, both friends and strangers, initiating and maintaining social connections. | Skilled at teamwork, good at public speaking. Opposite: Can struggle in working with a larger team, avoids public speaking. |
| | ASSERTIVENESS | Able to confidently voice opinions, needs, and feelings, and exert social influence. | Takes charge in a class or team. Opposite: Waits for others to lead the way; keeps quiet when disagrees with others. |
| | ENERGY | Approaches daily life with energy, excitement and spontaneity. | Is always busy; works long hours. Opposite: Gets tired easily without physical cause. |
| COLLABORATION (agreeableness) | EMPATHY | Understands and cares about others, and their well-being. Values and invests in close relationships. | Consoles a friend who is upset, sympathises with the homeless. Opposite: Tends to misinterpret, ignore or disregard other person's feelings. |
| | TRUST | Assumes that others generally have good intentions and forgives those who have done wrong. | Lends things to people, avoids being harsh or judgmental. Opposite: Is secretive and suspicious in relations with people. |
| | CO-OPERATION | Lives in harmony with others and values interconnectedness among all people. | Finds it easy to get along with people, respects decisions made by a group. Opposite: Is prone to arguments or conflicts with others; does not tend to compromise. |
| EMOTIONAL REGULATION (emotional stability) | STRESS RESISTANCE | Effectiveness in modulating anxiety and able to calmly solve problems (is relaxed, handles stress well). | Is relaxed most of the time, performs well in high-pressure situations. Opposite: Most of the time worries about things, difficulties sleeping. |
| | OPTIMISM | Positive and optimistic expectations for self and life in general. | Generally in a good mood. Opposite: Often feels sad, tends to feel insecure or unworthy. |
| | EMOTIONAL CONTROL | Effective strategies for regulating temper, anger and irritation in the face of frustrations. | Controls emotions in situations of conflict. Opposite: Gets upset easily; is moody. |
| ADDITIONAL INDICES | ACHIEVEMENT MOTIVATION | Sets high standards for oneself and works hard to meet them. | Enjoys reaching a high level of mastery in some activity. Opposite: Lack of interest in reaching mastery in any activity, including professional competencies. |
| | SELF-EFFICACY | The strength of individuals' beliefs in their ability to execute tasks and achieve goals | Remains calm when facing unexpected events. Opposite: Avoids challenging situations. |

Figure 12. Description of the OECD SEL Model Constructs

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[4] Kankaraš, M., & Suarez-Alvarez, J. (2019). Assessment framework of the OECD Study on Social and Emotional Skills. *OECD Education Working Papers*, No. 207, OECD Publishing. https://doi.org/10.1787/5007adef-en

## OECD Comment

The development collaborators created the OECD social-emotional learning framework to study cross-national samples of 10-year-olds and 15-year-olds. Nevertheless, the OECD framework is the most rigorously developed and validated of the various frameworks and models within the broader realm of positive psychology and social-emotional learning. It represents the collaboration of an international network of scholars that carefully formulated a conceptual framework, grounding it upon the Big 5 personality model. The many Big 5 personality studies inform the OECD model of positive emotional and behavioral health. Furthermore, since this is a recently developed framework, its development considered the scope of research conducted in the past 20 years that has focused on positive strength-based assessment and flourishing development. A valuable aspect of this framework is that, by design, the intent was to create a framework and to create a set of valid measures. Based on the OECD technical reports developed over the past five years, transnational assessments of the conceptual framework are available. Despite the rigor of developing the framework and its measures, the OECD model focuses primarily on adolescents, not necessarily college-age students. Nonetheless, the OECD model's components may have some transferability to college-age populations and provide a valuable perspective about a comprehensive set of emotional and behavioral health indicators that could be relevant within the UC context.

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## Dual-Factor Model (DFM) of Mental Health

The conceptualization of a bi-dimensional mental health model has been applied most often with adolescents, but its use has been explored with college samples.

### DFM Conceptualization

The perspective that mental health encompasses a balance of wellness-health and distress-illness has deep historical roots in applied psychology. Johoda (1958), widely cited, made prescient observations more than 60 years ago discussing *positive psychology* and noting that mental health is a human value and right. Some 40 years ago, Veit and Ware (1983) operationalized this concept in the *Mental Health Inventory* as a measure of psychological distress and well-being intended for use with general, not clinical, populations. Ryff's (1989) vital contributions formulated a subjective well-being (SWB) model that incorporated hedonic (emotional) and eudemonic (psychological and social) dimensions. Following these pioneering efforts and building on Seligman and Csikszentmihalyi's (2000) positive psychology resurgence in the late 1990s, Greenspoon and Saklofske (2001) contributed the paper, *Toward an Integration of Subjective Well-Being and Psychopathology*, that inspired essential, meaningful research under the mental health *dual-factor system* concept. Building on this research, Suldo and Shaffer (2008) further explored the dual-factor system and contributed the paper, *Looking Beyond Psychopathology: The Dual-Factor Model of Mental Health in Youth*. This research specialization is uniquely pertinent to educational practices grounded in positive psychology (Seligman et al., 2009) and positive education principles (Waters & Loton, 2019). It recognizes the value of a balanced mental health conceptualization and, at its inception, considers life-span developmental perspectives.

As Seligman and Csikszentmihalyi (2000) called to expand positive psychology research and practice, efforts to evaluate balanced mental health paradigms advanced. Greenspoon and Saklofske (2001) articulated a mental health approach considering co-distributions of well-being levels and psychopathology symptoms. Complete mental health balances high life satisfaction and low mental ill-health symptoms in their model. In adapting what Greenspoon and Saklofske named a *dual-factor system,* Suldo and Shaffer (2008) used the term *Dual-Factor Model* (DFM), which has been used in most subsequent research (Antaramian et al., 2010; Grych et al., 2020; Kelly et al., 2012; Lim et al., 2021; Lyons et al., 2012, 2013; Zhou et al., 2020.

## DFM Assessment

Suldo and Shaffer (2008) provided meaningful, substantial contributions by expanding on Greenspoon and Saklofske's (2001) pioneering work. They proposed and tested an integrated DFM that simultaneously created and contrasted all four prototypic groups as illustrated in Figure 13. A subjective well-being index (Student Life Satisfaction Scale and Positive and Negative Affect Scale) comprised the wellness factor and the
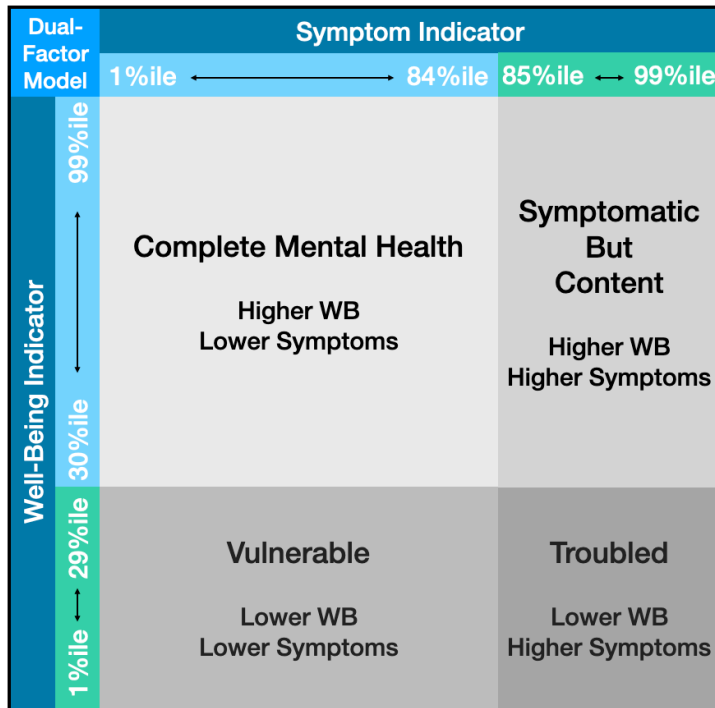


Figure 13. Dual-Factor Model Mental Health Quadrants

Achenbach Rating Scales identified individuals with lower (1st-84th percentile) and higher (85th-99th percentiles) internalizing and externalizing symptoms. The sample-specific subjective well-being distribution defined a cut-score to create a lower (1st-29th percentile) and higher (30th-99th percentile) group. The optimal (or "Complete Mental Health") group had higher well-being and lower symptoms (group in the upper left quadrant of Figure 13). The suboptimal or "Troubled" group had lower well-being and elevated symptoms (Group in the lower right quadrant of Figure 13).

Following the Suldo and Shaffer (2008) analysis, an impressive research body has further examined the DFM (e.g., Antaramian et al., 2010; Grych et al., 2020; Kelly et al., 2012; Lyons et al., 2012, 2013; Zhou et al., 2020). These studies contribute to the proof of concept of the value of considering symptoms and wellness, which provide researchers and practitioners with a richer understanding of an individual's psychosocial development. Differences among dual-factor mental health groups have been identified across developmental periods (e.g., children [Smith et al., 2020], adolescents in middle [e.g., Antaramian et al., 2010] and high school [Suldo et al., 2016], and adults [e.g., Renshaw & Cohen, 2014]) and quality of life indicators. Across investigations, individuals with high well-being and low psychopathology (complete mental health) experience the most favorable outcomes. For example, adolescents with complete mental health had superior engagement (Antaramian et al., 2010; Lyons et al., 2013; Smith et al., 2020), academic achievement

(Antaramian et al., 2010; Lyons et al., 2013), social skills (Suldo et al., 2016), physical health (Suldo & Shaffer, 2008; Suldo et al., 2016), identity development (Suldo et al., 2016), and social support (Smith et al., 2020). Individuals with complete mental health experienced more positive outcomes than vulnerable individuals suggesting that the absence of psychopathology is insufficient in realizing positive outcomes (e.g., Antaramian et al., 2010). Further, in the presence of distress, research has indicated that well-being can protect against adverse outcomes—individuals with symptomatic but content mental health experience more favorable outcomes than youth with troubled mental health (e.g., Grych et al., 2020; Lyons et al., 2013; Suldo et al., 2016; Smith et al., 2020).

## DFM Comment

Overall, a variety of DFM studies show robust differences in outcomes between groups with similar pathology levels but different levels of subjective well-being. Additionally, this approach's prototypical complete mental health and troubled groups significantly differ on numerous quality-of-life indicators. As proof of concept, a good body of knowledge supports the core DFM principle that an optimal assessment of mental health is grounded by simultaneously considering distress and wellness factors. Another observation is that UC EMH could use Diener's Flourishing and Kessler's Symptoms items in the NCHA to create a DFM complete mental health index.

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## Keyes Bidimensional-Continuum Model (BCM) of Positive Mental Health

### BCM Conceptualization

The dual-continua conceptualization of positive mental health is multidimensional (see Figure 14). It comprises subjective well-being's emotional, psychological, and social dimensions (Keyes, 2002, 2005). *Emotional well-being* refers to the perception of positive affect and life satisfaction over time. The other two aspects underscore the human potential to attain positive functioning. This *psychological well-being* definition includes six components (self-acceptance, personal growth, purpose in life, positive relations with others, autonomy, and environmental mastery), collectively indicating individuals' pursuit to maximize their potential (Keyes, 2002). *Social well-being,* capturing individuals' perception of their relationship with and engagement in society (Keyes, 1998, 2016), is represented by five components: social integration, social contribution, social coherence, social actualization, and social acceptance. Individuals have positive mental health when their well-being profile suggests frequent weekly or daily experiences of positive psychological experiences, with few indications of mental distress symptoms (Keyes, 2005, 2006).



Figure 14. MHC-SF BCM Complete Mental Health Groups

### BCM Assessment

The Mental Health Continuum-Short Form (MHC-SF) is part of Keyes's Bidimensional Continua Model (BCM) of positive mental health, which considers the correlated but distinct influences of an ill-being continuum and a subjective well-being continuum. The *ill-being continuum* is grounded in the Diagnostic and Statistical Manual, Third Edition (DSM-III; American Psychiatric Association, 1987) criteria for major depressive episodes, in which diagnosis requires symptoms of anhedonia and malfunctioning. The *well-being continuum* considers the presence of hedonic experiences and eudemonic positive psychological functioning (Keyes, 2002).

The Mental Health Continuum-Short Form (MHC-SF; Keyes, 2005) measures emotional, psychological, and social well-being. Adapted from the 40-item MHC-Long Form (MHC-LF; Keyes, 2002, 2005), the MHC-SF includes the 14 MHC-LF items that best represented each construct under three dimensions of well-being: *emotional* (EWB; i.e., life satisfaction, positive affect, negative affect), *psychological* (PWB; i.e., autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance), and *social* well-being (SWB; i.e., social integration, social acceptance, social contribution, social actualization, and social coherence; Keyes, 2005). Example items are: How often did you feel satisfied with life? (EWB), How often did you feel that the way our society works made sense to you? (SWB), and How often did you feel confident to think or express your own ideas and opinions? (PWB). The MHC–SF asks students to report on past-month experiences using a six-point response scale (1 = *never*, 2 = *once or twice*, 3 = *about once a week*, 4 = *two or three times a week*, 5 = *almost every day*, and 6 = *every day*). The MHC-SF has shown acceptable internal consistency and discriminant reliability among adolescents and adults across countries (e.g., Joshanloo, 2019; Söderqvist & Larm, 2021; Zemojtel-Piotrowska et al., 2018). See Figure 15 for NHC-SF scoring procedures.

Studies with college student samples support the MHC-SF's three-factor structure (Foster & Chow, 2019; Robitschek & Keyes, 2009). The factors include emotional, psychological, and social well-being (Robitschek & Keyes, 2009). One study reported gender invariance in two samples of college students (*N* sample 1 = 234, *N* sample 2 = 233) enrolled at a southwestern U.S. university. Furthermore, students' self-reported personal growth initiative significantly predicted psychological ($R^2$ sample 1 = .38, $R^2$ sample 2 = .55), social ($R^2$ sample 1 = .25, $R^2$ sample 2 = .27), and emotional ($R^2$ sample 1 = .18, $R^2$ sample 2 = .21) well-being (Robitschek & Keyes, 2009).

The MHC-SF was also administered to a separate sample of undergraduate and graduate students (N = 5,689) as part of the 2007 Healthy Minds Study (Keyes et al., 2011). A total of 13 colleges participated in the study, with at least two from each US census region and 34% of participants identifying as nonwhite. In addition to the MHC-SF, students reported symptoms of depression and anxiety, suicidal ideation and behavior, and perceived academic performance. Results indicated that 49.8% of students meeting the criteria for languishing mental health also met the criteria for major depression, compared to 11.6% of moderately mentally healthy and 1.7% of flourishing students. Among all students, suicidal ideation and academic impairment were lowest for students who met the criteria for flourishing mental health, followed by moderately mentally healthy, and the time of survey administration, flourishing students were significantly less likely to report academic impairment and suicidal ideation than moderately mentally healthy and languishing students,

suggesting that the absence of mental illness does not imply the presence of mental health and well-being.

| Emotional (EWB) | Social (SWB) | Psychological (PWB) | Well-Being Components |
|---|---|---|---|
| 3 items<br><br>Positive Affect, Quality of Life<br><br>…happy<br>…interested in life<br>…satisfied with life | 5 items<br><br>Social Acceptance, Social Growth, Social Contribution, Social Coherence, Social Integration<br><br>…that our society is a good place, or is becoming a better place, for all people. | 6 items<br><br>Self-Acceptance, Personal Growth, Purpose in Life, Environmental Mastery, Autonomy, Positive Relations with Others<br><br>…that your life had a sense of direction to meaning to it. | Mental Health Continuum-Short Form (MHC-SF) |

During the past month, how often did you feel the following ways:

| Never | Once or Twice | About Once a Week | 2-3 Times a Week | Almost Every Day | Every Day | Response Format |
|---|---|---|---|---|---|---|

| Minimum 1 EWB item and 6 of 11 PWB & SWB items | Responses not fitting Languishing or Flourishing Profiles | Minimum 1 EWB item and 6 of 11 PWB & SWB items | Criteria |
|---|---|---|---|

| Languishing | Moderate Mental Health (MMH) | Flourishing |
|---|---|---|

Low ◄───────── Mental Health Continuum ─────────► High

Health and Illness Continua Considered Together

If mental illness continua is low (e.g., no DSM diagnosis or *T*-score below 60 on a symptom screener) then use well-being classification: Languishing, Moderate Mental Health, or Flourishing. Some MMH and Flourishing could have elevated mental illness.

Languishing & Elevated Mental Illness Continuum

Low ◄───────── Mental Illness Continuum ─────────► Elevated

*Note.* MHC-SF description, items, and scoring available at: https://www.aacu.org/sites/default/files/MHC-SFEnglish.pdf. The cell sizes in Mental Health Continuum (see, Keyes, 2006) and Mental Illness (see, Kessler et al., 2007 ) rows illustrate the proportion of adolescents reported in each classification.

Figure 15. MHC-SF Scoring Procedure

## BCM Comment

Multidimensional well-being measures, such as the MHC-SF, might be helpful for universal mental health screening and monitoring within the UC system. With multifaceted content and only 14 items, it could be incorporated into, for example, a systemwide mental health surveillance survey of students entering the UC system. Uniquely, the MHC-SF offers a criterion-referenced classification to assess the well-being continuum. This standardized approach means individuals can be placed into its three broad categories (i.e., Flourishing, Languishing, and Moderate Mental Health) with 100% accuracy without reference to normative responses and across all campuses. This MHC-SF could provide information about positive psychosocial development for *all* students. The MHC-SF may give helpful information to support students in the *middle* subjective well-being zone whose mental health programs might be overlooked. Consistent with the EMH focus on universal services characteristic of preventative mental health paradigms, universities need to help *all* students thrive (Author et al., 2021a; Keyes, 2005, 2006), not only the smaller percentage of students who experience psychological distress.

Even though students in the Moderate Mental Health group are proportionately substantial, they are often overlooked in mental health prevention, and there is limited knowledge of their characteristics. Considering the full range of subjective well-being is necessary because individuals with MHC-SF Moderate Mental Health range responses are at higher risk of reporting mental illness symptoms and nonoptimal functioning than those in the Flourishing group (Keyes, 2007, 2016). In a longitudinal study of a nationally representative sample of U.S. adults, Keyes showed that participants who stayed or moved to the Moderate Mental Health group were 3-4 times more likely to develop a mental illness than individuals in the Flourishing group. Participants who moved to or stayed as Flourishing had the lowest probability of developing mental illnesses. Promoting students' progression in the Moderate Mental Health group towards Flourishing via mental wellness programs appears to be one way to reduce the number of students experiencing future mental illness (Costello et al., 2003; Keyes, 2016). In sum, using efficient measures like the MHC-SF could increase the relevance and utility of wellness surveys for all students. A final advantage is that it asks about current (past month) experiences and could be helpful in a pulse survey used multiple times during the academic year.

## BCM References

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## SAMHSA 8 Dimensions of Well-being [5]

### SAMHSA Conceptualization

SAMHSA's interest to expand the conversation about mental health to include broader aspects of individual well-being was motivated in part by data showing that individuals with serious mental illness have higher rates of early morbidity and other ill physical health characteristics. SAMHSA encouraged communities to embrace a broader view of well-being when considering the mental health of their citizens. This public health initiative (see Figure 1) borrowed from the wellness approach that Swarbrick presented in the opinion piece in which she discussed her own experiences coping with mental health issues while growing up in high school, and the role that broader wellness approaches (including exercise) played a role in her maintaining her mental health challenges. The 8 dimensions of wellness are described as: social, emotional, spiritual, intellectual, physical, environmental, financial, and occupational.
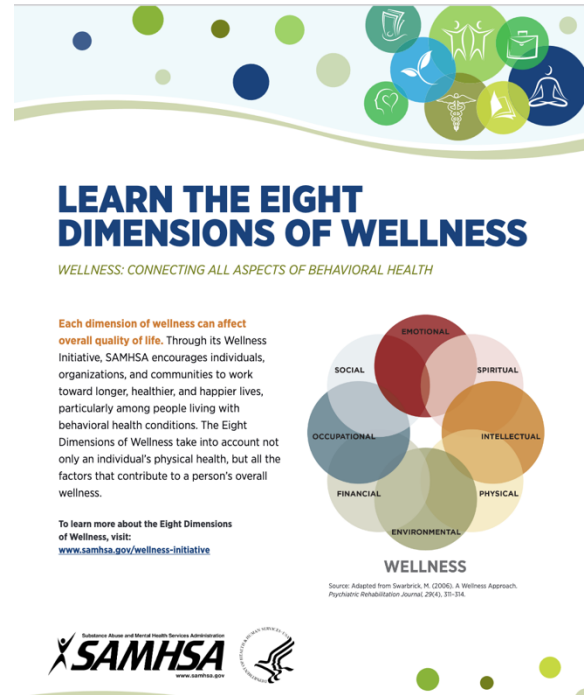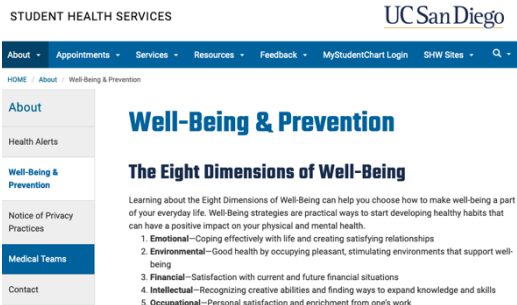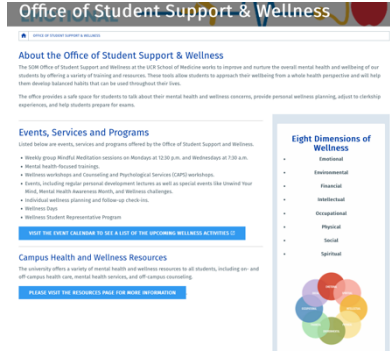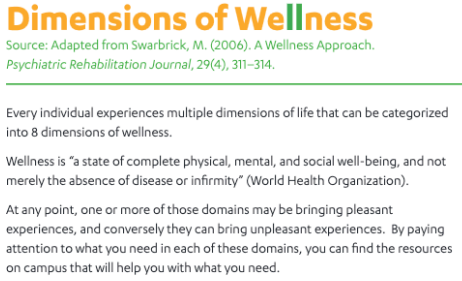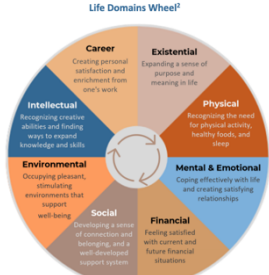


Figure 16. SAMHSA 8 Well-Being Dimensions Poster
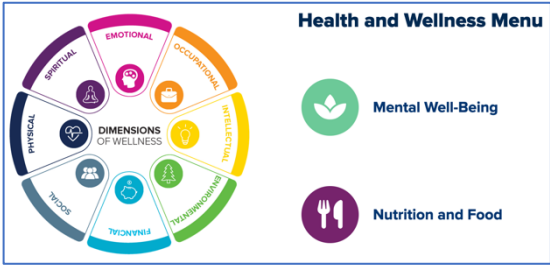
### SAMHSA Dimensions in the UC System

Most University of California campuses incorporate the SAMHSA dimensions into their program descriptions, as indicated by the website links below. Does the alignment with the SAMHSA dimensions represent a shared definition of well-being across the UC campuses? If yes, which of these eight dimensions encompass the core EMH wellness domains that align with the interests/needs to assess and monitor the well-being of the UC community?

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[5] Swarbrick M. (2006). A wellness approach. Psychiatric rehabilitation journal, 29(4), 311–314. https://doi.org/10.2975/29.2006.311.314

## UC Campuses Wellness-Related Websites Referencing the SAMHSA 8 Wellness Dimensions

| UC San Diego *(Link)* | UC Riverside *(Link)* |
|---|---|
|  |  |
| UC Los Angeles Bruins Rise (Link) | UC Los Angeles Bruins Rise |
|  |  |
| UC Santa Cruz Areas of Focus (Link) | UC Santa Cruz Life Domains Toolkit (Link) |
|  |  |

| UC Berkeley Student Learning Center (Link) | UC Davis Student Health & Counseling (Link) |
|---|---|
|  |  |

## SAMHSA Informed Assessment: Perceived Well-Being Survey

The SAMHSA 8-dimension wellness rubric is, of course, not a comprehensive mental health and well-being framework. It defines core wellness elements to encourage aligning services with the essential wellness needs, and could identify core measurement well-being domains. One of Swarbrick's students, Adams (1997), developed and created the Perceived Well-Being Survey, a self-perception wellness measure aligned with 6 of the 8 SAMHSA wellness domains. This 36-item instrument assessed six wellness domains: psychological, emotional, social, physical, spiritual, and intellectual. This scale has undergone little subsequent evaluation of its psychometric principles and has been used sporadically in the research. Harari et al. (2005) examined the responses of 317 university students and found some potential utility to the scale. Still, there was insufficient evidence for the existence of separate subscale dimensions.

## Pitt Wellness Scale [6]

A recent attempt to measure SAMSHA-like well-being dimensions was initiated researchers at the University of Pittsburgh who employed a crowdsourcing procedure to ask participants, to rate the importance of critical well-being elements.[7]

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[6] Zhou, L., & Parmanto, B. (2020). Development and Validation of a Comprehensive Well-Being Scale for People in the University Environment (Pitt Wellness Scale) Using a Crowdsourcing Approach: Cross-Sectional Study. *Journal of medical Internet research*, *22*(4), e15075. https://doi.org/10.2196/15075

[7] Although not directly molded by or linked to the SAMHSA dimensions of well-being, the overlap is substantial.

The percentages listed below show the ratings assigned to each of seven domains taken from Linton et al.'s (2016) critical review of 99 adult well-being measures.[8]

- Physical wellness      98
- Emotional wellness      95
- Financial wellness      72
- Social wellness      65
- Occupational wellness      64
- Spiritual wellness      47
- Intellectual wellness      46

The participants were also asked to express their opinion about the essential subdomains for each major domain. The percentages listed below show which subdomains the participants consider to be the most essential. For example, in the Physical Wellness Domain, Physical Activity and Nutrition (93%) were rated most vital. For Emotional Wellness Stress (80%) and Positive Attitude (75%) were the highest rated subdomains.

**Physical Wellness Domain**
- Physical Activity      93
- Nutrition      93
- Sleep      90
- Overall health      79

**Emotional Wellness Domain**
- Stress      80
- Positive attitude      75
- Anxiety      71
- Resilience      59
- Depression or bipolar disorder      58

**Social Wellness Domain**
- Relationship with family, friends, and colleagues      94
- Connection with others      82
- Social participation      66

**Financial Wellness Domain**
- Preparedness for short-term and long-term financial emergency      84
- Skills for financial management      82
- Income level      53

**Spiritual Wellness Domain**
- Purpose of life      60
- Satisfaction with the current belief system      51
- View of the world      50

**Occupational Wellness Domain**
- Job satisfaction      94
- Job security      78
- Career development opportunities      70

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[8] Linton M-J, Dieppe P, Medina-Lara A. Review of 99 self-report measures for assessing well-being in adults: exploring dimensions of well-being and developments over time. BMJ Open 2016;6:e010641. doi:10.1136/bmjopen-2015-010641

- Job stress                                                                                     63
<span style="color:blue">Intellectual Wellness Domain</span>
- Capacity for thinking and acquiring knowledge                                 88
- View on life-long learning (burden, part of life, or enjoy)               75

A third step was then to identify which items administered to university faculty, staff, and students best assessed the psychometric characteristics of the derived domains. As a result, they created a 44-item instrument with items assessing the following domains: Physical, mental, social, financial, spiritual, occupational, and intellectual. The resulting data analysis suggested that the measure had adequate internal consistency, but the confirmatory factor analysis results were marginal. Another limitation is that the validation sample included only 11.4% of students—most of the respondents were university staff, 68%. Hence, its applicability for students is not yet thoroughly tested. We provide a list of the Pitt Wellness Scale to give another example of items included in wellness measures.

## *Pitt Wellness Scale Items*

The Pitt Wellness Survey items were adapted from open-access adult well-being measures and are examples of statements in such instruments. These items are listed here to provided concrete examples of the types of items being proposed to assess various well-being dimensions.

### Physical
P1. I feel rested when I wake up in the morning.
P2. Each week, I exercise moderately for at least 30 minutes (for instance, walking briskly, bicycling slower than 10 miles per hour, playing tennis, and ballroom dancing).
P3. Because of my health status, I am physically able to exercise as much as I would like to.
P4. I usually have enough energy for everyday activities.
P5. My chronic pain level is (0=no pain, 10=most severe pain ever).
P6. My appetite has been good recently.
PO. My overall physical health is (1=excellent, 5=terrible).

### Mental
M1. I am generally satisfied with my quality of life.
M2. I am generally self-accepting.
M3. I feel hopeful about the future.
M4. I feel that I have control over my emotions.
M5. I believe that life is what you make it.
M6. I am open to new opportunities if my first plan does not work out.
MO. My overall mental health is (1=excellent, 5=terrible).

### Social
S1. I am living in a safe community.
S2. When something good happens to me, I share the experience with my family and/or friends.
S3. I am satisfied with my ability to meet the needs of people who depend on me.
S4. I am satisfied with my current level of social activities.
S5. I have people in my life who care about me.
SO. My overall social wellness is (1=excellent, 5=terrible).

### Financial

F1. If I incur an unexpected above average expense, I would still be stable financially.
F2. I have someone to help with my financial affairs, if needed.
F3. I am saving for retirement and for emergencies.
F4. My income is adequate for my current needs.
FO. My overall financial wellness is (1=excellent, 5=terrible).

### Spiritual

SP1. I feel that my life is meaningful.
SP2. I feel inner and/or spiritual strength in difficult times.
SP3. I have a sense of direction for my life.
SP4. I know what is really important in my life.
SP5. My personal beliefs (religious or not) help me to cope with difficulties in life.
SPO. My overall spiritual wellness is (1=excellent, 5=terrible).

### Occupational

O1. I feel I have input on deciding how my job gets done.
O2. I am satisfied with the amount of time required by my job duties.
O3. My employer provides me many career development opportunities.
O4. I feel comfortable working with my colleagues.
O5. My work and life are well-balanced.
O6. My job security is high.
OO. My overall occupational wellness is (1=excellent, 5=terrible).

### Intellectual

I1. I am satisfied with the quality of my work.
I2. I am aware of my intellectual strengths.
I3. I can rely upon my talents and skills to handle unexpected situations.
I4. I am satisfied with my ability to make decisions.

## SAMHSA Comment

These examples illustrate how researchers, program developers, and higher education institutions are trying to consider which wellness dimensions are the most critical in their institutional context. They also show how IHEs are approaching the development of wellness assessments. However, such approaches do not link with a specific theoretical or conceptual approach to fostering human flourishing and well-being. For example, these approaches do not look at constructs such as those in the PERMA model or self-determination theory or measure personal and social resources, which are the foundation of flourishing human development. Although such measures could provide well-being indicators, they do not assess the human characteristics and experiences that foster positive wellness indicators, which might be of interest in some contexts.

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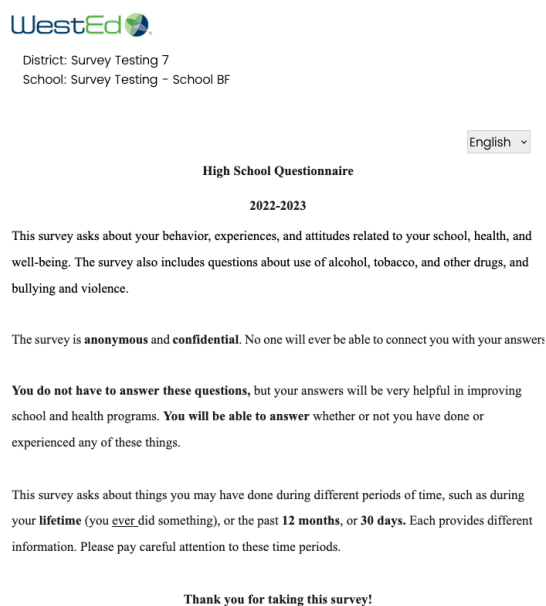
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# OTHER CALIFORNIA CENTRIC RESOURCES

In this section, some conceptual models and associated assessments providing behavioral health-related information about California adolescents are provided. We reason that as future UC students, at a minimum, there is value in being aware of and knowledgeable about California's adolescents. This awareness could provoke thinking about the advantages of alignment of a theory of change, assessment, and services from high school into college. At a minimum, UC student affairs staff and behavioral health providers should be aware of California secondary school students' social and emotional health self-reported information.



Figure 17. Example CHKS Online Survey Introduction

## California Healthy Kids Survey

The [California Healthy Kids Survey](https://) (CHKS, see Figure 17) is a comprehensive youth risk behavior and resilience data collection service available since 1998 to all California local education agencies. The CHKS provides local schools and communities with data to identify youth needs and guide efforts to meet those needs. Funded by the California Department of Education, every school district in California must survey to comply with the No Child Left Behind Act, Title IV.

## CKHS Core Module

The most comprehensive surveillance survey of its kind in the U.S., the CHKS required core module includes 139 items concerning:
- Alcohol, tobacco, and other drug use.
- School safety, harassment, and violence.
- Nutrition and physical health.
- Sexual behavior and attitudes (secondary school only).
- Suicide and gang involvement (secondary school only).
- Youth resilience and developmental supports.

- School connectedness, truancy, and self-reported grades
- Social-emotional health (life satisfaction and emotional distress).

## CHKS Theory of Change Components

### California Healthy Kids: Resilience Youth Development Model



**External Supports Protective Factors**
- Caring Relationships
- High Expectations
- Participation Opportunities
- Contribution Opportunities

Supports meet basic needs

**Fundamental Needs**
- Safety
- Love/Belonging
- Respect
- Autonomy/Power
- Challenge/Mastery
- Meaning

Meeting needs builds assets

**Internal Assets Resilience Traits**
- + Connectedness
- + Engagement
- + Resilience Strengths
- + Social Competencies
- + Emotional Competencies
- - Risk-factor vulnerability

Results in positive outcomes

**Outcomes**
- + Academic progress
- + Social health
- + Emotional health
- + Behavioral health

Figure 18. CHKS Theory of Change Resilience Model

Drawing on the pioneering research of Werner's Kauai Longitudinal Study and Masten's developmental trajectory, "ordinary magic" research, Bonnie Benard created a theory of change framework for the CHKS. This model includes research-identified constructs that distinguish youth who generally had positive developmental outcomes despite having four or more childhood developmental risk experiences. Benard considered resilience/recovery a capacity for healthy development and successful learning innate to all people. The Resilience Youth Development Model's (RYDM) premise is that the processes associated with successful youth development assist in meeting each's child's needs for love, belonging, respect, identity, power, mastery, challenge, and meaning. Figure 18 illustrates that home, school, community, and peer environments saturated with proven developmental supports and opportunities (external supports/protective factors) of caring relationships, high expectations, and opportunities for meaningful participation and contribution help to satisfy fundamental developmental needs. With these needs managed, youth naturally develop the individual characteristics (internal assets or resilience traits) that facilitate successful learning—social competence, problem-solving, autonomy and identity, and a sense of purpose and future. The alignment of external supports, fundamental needs, and individual characteristics protects against involvement in health-risk behaviors such as alcohol, tobacco, and other drug abuse and violence *and* fosters successful learning. Although the RYDM focuses on the influences of resilience/recovery during childhood and adolescence, this model's dynamic approach is relevant when considering human development into, during, and beyond the college context.

## CHKS How California School Use It

California schools have administered the CHKS to millions of students since 1998. The now well-developed, coordinated administration procedures include a detailed memorandum of understanding between WestEd, which manages the CHKS for the California Department of Education, and each participating school district. Three regional centers provide comprehensive technical assistance on survey administration and the use of results.

Each district identifies a coordinator to plan and oversee the survey administration. The district coordinator accesses a district-specific online portal early in the academic school year (September) to initiate survey administration planning and to monitor progress toward finishing the survey. The coordinator identifies a school site coordinator and provides training and related materials. The site coordinator offers training to teachers and school staff who administer the survey in a standard classroom setting. Each district identifies the optimal dates for survey administration. Generally, schools identify dates in the fall or spring terms. School districts avoid survey administration after a long break (e.g., after winter break, during special events, or on poor attendance days such as a Friday before a Monday holiday). All students can complete the CHKS, with schools aiming for 70+ percent providing usable responses. Parents can refuse permission for their child not to take the survey, and students can decline to participate. A school-specific URL link employing the Qualtrics® survey platform presents the CHKS items. Students' responses are anonymous. Upon survey administration completion, districts administering the core surveys online, reports and password-protected data dashboard results are available within one week.

## CHKS Research

The CHKS has supported behavioral and emotional health initiatives over the past 20 years to make its reports available for research and special reports employing its datasets of millions of California adolescents. More than 90 peer-reviewed articles in PsycINFO used a CHKS data set, many authored by UC faculty. Another CHKS contribution is that the size of its data sets supports reports examining students' responses that consider their various identities: gender, transgender, ethnicity, sexual orientation, home language, living circumstances, etc. Because the CHKS datasets are large, it is possible to consider student responses for a variety of student subgroups, for example:

- Understanding the Experiences of LGBTQ Students in California,
- Substance Use Among Transgender Students in California Public Middle and High Schools,

## Recently Added CHKS Wellness Items

### CHKS Brief Multidimensional Life Satisfaction Scale (BMSLSS)

In principle, a dual-factor approach to mental health does not require any specific wellness factor measure. Past DFM research with adolescents used Huebner's (1991) *Student Life Satisfaction Scale* (e.g., Antaramian et al., 2010; Lyon et al., 2012; Suldo & Shaffer, 2008; Suldo et al., 2016) and Diener et al.'s (1985) *Satisfaction with Life Scale* (e.g., Grych et al., 2020; Xiong et al., 2017). In the context of universal DFM monitoring, the CHKS followed Greenspoon and Saklofske's (2001) original approach and used the multidimensional life satisfaction measure, in this instance, the *Brief Multidimensional Students' Life Satisfaction Scale* (BMSLSS; Huebner et al., 2006). The rationale is that the BMSLSS (a) is brief (6 items) and (b) touches on multiple life domains, not just global life satisfaction. The BMSLSS assesses satisfaction for five general life domains: *friends, family*, *self, living environment*, and, most relevant to universal screening within this context, *school*. Research evidence supports its internal consistency among high school students ($\alpha$ = .81; Zullig et al., 2001). Convergent validity is documented with the *Multidimensional Students' Life Satisfaction Scale* (*r* = .69, Seligson et al., 2003, 2005; *r* = .62). Factor analyses support a single factor structure (Seligson et al., 2003, 2005). In the current application, as part of the CHKS, the response options were: 0 = *strongly dissatisfied*, 1 = *moderately satisfied*, 2 = *mildly dissatisfied*, 3 = *mildly satisfied*, 4 = *moderately satisfied,* and 5 = *strongly satisfied*. Sum scores range from 0 to 25, with higher scores indicating greater life satisfaction (see Figure 19).

*CHKS BMSLSS Items*



Figure 19. CHKS Online BMSLSS Item Presentation

*CHKS BMSLSS References*

Huebner, E. S., Suldo, S., Valois, R. F., Drane, J. W., & Zullig, K. (2004). Brief Multidimensional Students' Life Satisfaction Scale: Sex, Race, and Grade Effects for a High School Sample. Psychological Reports, 94(1), 351–356. https://doi.org/10.2466/pr0.94.1.351-356

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## CHKS Social Emotional Distress Scale (SEDS)

The SEDS asks students to rate internal psychological experiences related to sad (e.g., *in the past month, I felt sad and down*) and anxious (e.g., *I was scared for no good reason*) emotional experiences (see Figure 20). Consistent with a screening efficiency principle, the SEDS assesses overall emotional distress to prioritize and identify students for follow-up assessment and support services. To develop the tool, the clinical literature and longer measures of distress (e.g., Depression, Anxiety, and Stress Scales-21; Lovibond & Lovibond, 1995) were examined to capture internalizing, as opposed to externalizing

behaviors (Dowdy et al., 2018) as they are often more difficult to detect within school settings (Kamphaus et al., 2014). The SEDS includes fewer items than existing pathology-focused screening measures, and the language is appropriate for adolescent students. Additionally, the tool asks about recent (i.e., past month) emotional experiences, as opposed to general life experiences, to support progress monitoring of functioning throughout a given school year. An initial study supported a unidimensional factor structure. Convergent validity was documented with significant positive relations between the overall SEDS score and anxiety and depression symptoms as measured by the Generalized Anxiety Disorder -7 scale (Spitzer et al., 2006) and the Patient Health Questionnaire-9 (Kroenke et al., 2001) respectively (Dowdy et al., 2018). A second study with a diverse sample of California high school students ($N$ = 72,740) replicated a one-factor structure with strong reliability ($\alpha$ = .93 and $\Omega$ = .95; Furlong et al., 2020). Sum scores for the SEDS range from 0 to 30, with higher scores indicating more significant distress.

## CHKS SEDS Items



Figure 20. CHKS Online SEDS Item Presentation

## CHKS SEDS References

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Dowdy, E., Furlong, M. J., Nylund-Gibson, K., Arch, D., Hinton, T., & Carter, D. (2022). Validating a Brief Student Distress Measure For Schoolwide Wellness Surveillance. Assessment for Effective Intervention, 48(3). https://doi.org/10.1177/15345084221138947

Rodríguez-Jiménez, T., Vidal-Arenas, V., Falcó, R., Moreno-Amador, B., Marzo, J. C., & Piqueras, J. A. (2023). Validating the brief Social Emotional Distress Scale-Secondary as a measure of psychological distress in Spanish adolescents. Under review.

## CHKS Social Emotional Health Module (SEHM)

The SEHM core assesses students' social-emotional health using the 36 items from the Social Emotional Health Survey-Secondary (SEHS-S). Seven additional items assessing growth mindset and learning orientations are included in this Module.

### Social Emotional Health Survey–Secondary

The SEHS-S wellness model includes core social and emotional skills, such as empathy and emotional competence, and psychological dispositions, such as gratitude and persistence. The hypothesis is that internal assets exert their primary effects by fostering an upward positive developmental spiral in the quality of youths' interpersonal transactions. The SEHS-S model proposes that flourishing development occurs by nurturing various core dispositions (i.e., the sum is greater than its parts). The primary effects of these dispositions emerge via the day-to-day transactions a youth has with the adults, family, and peers in their immediate social ecosystems. With educators immersed intimately in youths' social circles, they play an essential role in fostering these psychological dispositions in children. Positive developmental outcomes increase when youth possess the internal dispositions and skill sets to influence the quality of their daily interpersonal interactions. This conceptualization draws upon the positive youth developmental perspective, and as in self-determination theory, by emphasizing the importance of creating conditions that empower youth to make things happen rather than passively letting them happen.



Figure 21. SEHS Domains and Subdomains

### What Does the SEHS-S Measure?

Drawing from a psychological strength perspective, the SEHS-S measures the covitality latent trait. Covitality refers to the co-occurrence of positive, healthy characteristics. It embodies the synergistic effects of positive mental health from the interplay among multiple positive-psychological building blocks. The SEHS-S has 12 subscales representing unique positive social-emotional health constructs associated with four general positive social-emotional health domains (see Figure 21). The first domain, *belief in self*,
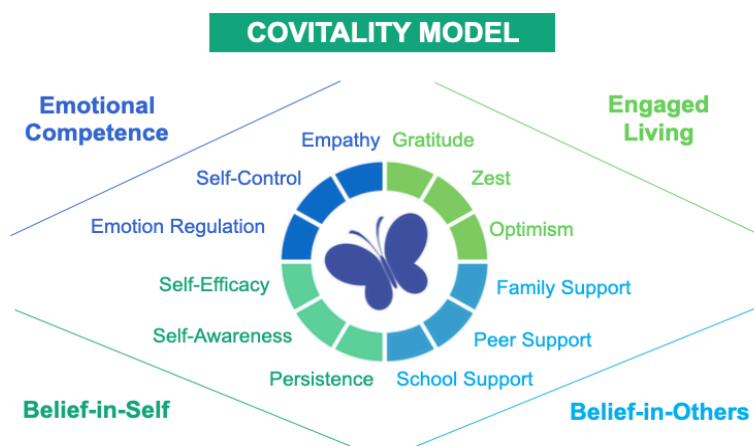
consists of three subscales grounded in social-emotional learning (SEL) and self-determination theory (SDT) literature constructs: self-efficacy, self-awareness, and persistence. The second domain, *belief in others*, has three subscales derived from constructs found in the childhood resilience literature: school support, peer support, and family support. The third domain, *emotional competence*, consists of three subscales based on constructs drawn from the SEL scholarship: emotional regulation, empathy, and behavioral self-control. *Engaged living*, the final domain, comprises three subscales grounded in constructs derived from the positive youth psychology literature: gratitude, zest, and optimism. Renshaw et al. (2014) provide a detailed review of these scales and their associated constructs, a description of the conceptual rationale underlying the SEHS-S, and a discussion of the empirical merit of the 12 positive psychological dispositions.

## *SEHS-Secondary References*

These key studies describe the development, validation, and uses of the SEHS-Secondary.

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Furlong, M. J., Paz, J. L., Carter, D., Dowdy, E., Nylund-Gibson, K. (2023). Extending validation of a covitality social emotional health measure for middle school students. Contemporary School Psychology, 27,92–103. https://doi.org/10.1007/s40688-022-00411-x

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Furlong, M. J., Fullchange, A., & Dowdy, E. (2017). Effects of mischievous responding on the results of school-based mental health screening: I love rum raisin ice cream, really, I do! School Psychology Quarterly, 32, 320–335. https://www.ncbi.nlm.nih.gov/pubmed/27441548

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## Social Emotional Health Survey-Higher Education (SEHS-HE)

The SEHS-Higher Education form is a companion measure of the SEHS-Secondary grounded in the same conceptual structures and assessing the domain constructs. Although the SEHS-HE is not part of the CHKS, we describe it here to explore possible advantages of alignment of key performance indicators across the 0-25 age range focus of the Children and Youth Behavioral Health Initiative.

### SEHS-HE Theoretical Grounding

The SEHS-HE model proposes that as the lifelong developmental process unfolds, people build core self-other cognitive dispositions, fostering positive development and protecting against psychological distress. In addition, the SEHS-HE model hypothesizes that these dispositions enable higher coping, adaptation, and well-being. The SEHS-HE model conceptually links with self-determination theory, which proposes that development is a "natural, active process characterized by (an)…organic integration process" (Deci & Ryan 2014, p. 41). Individuals are active creators and participants in their psychological development and the shaping of their social cognitive strengths. The premise of the SEHS-HE model is that these human strengths do not work in isolation but that just as combining steel with concrete strengthens the foundations of a building, a combination of these strengths is needed to enhance well-being and help resist some of the common issues of modern life. The SEHS-HE model hypothesizes that this developmental process is life-long, emerging in childhood and continuing through adolescence into the transition age of college students. The SEHS-HE assesses psychosocial strengths using a hypothesized higher-order model with four latent traits, which load onto a higher-order latent construct (Covitality):

1. **Belief in Self** domain (subdomains: self-efficacy, persistence, self-awareness),
2. **Belief in Others** domain (subdomains: family support, institutional bonding, peers support),
3. **Emotional Competence** domain (subdomains: cognitive reappraisal, empathy, self-regulation), and

4.  **Engaged Living** domain (subdomains: gratitude, zest, optimism),

The SEHS-HE model is grounded in research showing that wellness indicators cluster such that a greater number of social cognitive strengths across more domains are associated with fewer risk behaviors (e.g., less substance use), higher performance (higher GPA), and higher subjective well-being.

## SEHS-HE Items

| Subscale | Item |
| --- | --- |
| Self-Efficacy | Generally, I feel capable of overcoming obstacles. |
| | I will be able to achieve most of the goals that I have set for myself. |
| | I will be able to successfully overcome many challenges. |
| Persistence | I do not stop my work even if it is very difficult. |
| | I persist on tasks that I cannot immediately complete. |
| | I stay focused while studying despite distractions. |
| Self-Awareness | I am able to identify the motivations behind my actions. |
| | I recognize my moods and feelings. |
| | I have a good sense of why I have certain feelings most of the time. |
| Family Coherence | My family continues to love and support one another in tough situations. |
| | There is a sense of togetherness within my family. |
| | My family gets along well with each other. |
| School Support | Outside of my friends, there are other people on campus who care about my well-being. |
| | I feel like there is a strong feeling of togetherness on my campus. |
| | I feel like I belong at this university. |
| Peer Support | I have a friend at my college or university who cares about me. |
| | I have a friend who gives me the emotional support I need. |
| | I can talk to my friends about pretty much anything. |
| Cognitive Reappraisal | When I feel down, I try to focus on the positives. |
| | I can lift my mood by redirecting my thoughts to positive ideas. |
| | I am able to think about the alternatives to a problem under stressful situations. |
| Empathy | I am aware of others' hardships. |
| | I feel bad when my friends are put down. |
| | I feel bad for my friends who are afraid or nervous about graduating. |
| Self-Control | I think about potential consequences before I act. |
| | I can wait for what I want. |
| | I think before I act. |
| Gratitude | I appreciate the relationships I have developed throughout my life. |
| | I appreciate those who are close to me. |
| | When I reflect on my life, there is much to be grateful for. |
| Zest | My friends describe me as full of life. |
| | I approach life with excitement and energy. |
| | I feel energetic in my life right now. |
| Optimism | I am able to stay positive even when facing uncertain situations. |

Each day I look forward to having a lot of fun.
I usually expect to have a good day.

## SEHS-HE References

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# REPORT SUMMARY

An essential phase of the UCOP EMH evaluation will be identifying fundamental student behavioral health indicators needed to monitor and evaluate student wellness. Examining and considering various conceptual frameworks and models may assist in deciding which constructs/indicators are most critical to assess. This report does not provide an exhaustive list of frameworks or models but includes core information regarding viable approaches to understanding student mental health. We highlighted frameworks designed to focus on equity and for use within the California context. Another emphasis is balancing positive mental wellness and attending to distress symptoms within bi-dimensional models. The information presented within this report is aligned with SMHOC Data Analytics subcommittee recommendations (see Appendix), and may help inform efforts to develop a common, shared behavioral health vision. A shared vision regarding the core elements describing students' behavioral health and wellness will illuminate the data needed to evaluate EMH efforts and efforts to help all students thrive within the UC system.

# APPENDIX

## UC Systemwide Wellbeing Initiative (Link)

This is the link to UCOP systemwide faculty and staff wellness initiative.

## Screening Resources

We searched each campus website using the term "well-being" producing the following main links to online mental health and wellness information.[9]

### UC San Diego iFlourish (Link) (Link)



### UC Riverside (Link)



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## UC Irvine (Link)



## UCLA Screening (Link)



## UC Berkeley (Link)

## Canadian Campus Wellbeing Survey (CCWS) Content

The CCWS includes the following content.

*Mental Health Assets*
- Resilience (self-control, self-efficacy, coping)
- Psychological (well-being, self-rated mental flourishing)
- Life satisfaction and Happiness
- Sense of Meaning/Purpose

*Student Experiences*
- Perceptions of campus climate (supportive, learning environment, mental health, support, equity and inclusion, safety, institutional cares for student well-being)
- Overall social experience and social connectedness (meaningful connection to healthy relationships and social support)
- Sense of belonging to any campus context (clubs, residences, sports team, conversely, social, isolation, and loneliness
- Negative experiences (sexism, racism, violence, discrimination)

*Mental Health Deficits*
- Kessler psychological symptom scales (anxiety, depression)
- Distress sources coupled with the extent of impact (this is to distinguish it from the experience of stress that is distress is stress that is having a negative impact)
- Suicidal tendencies (planning, not ideation)

*Health Service Utilization Help Seeking*
- Modified items from the JED Healthy Mind Student Survey asking students about knowledge of mental health services on/off campus and perceptions of support systems on campus.

*Physical health/health behaviors*
- Sleep related items from a Canadian Public Health Surveillance Surveys and others from the National Health and Nutrition Examination Survey administered by the Centers for Disease Control.
- Sleep (sleep difficulties)
- Physical activity/sedentary behavior
- Perceived health status
- Overall well-being
- Screen time/social media (influence on social norms and self-perceptions)

*Academic Achievement*

This section of the questionnaire focused on three items related to students' assessment of institutional learning environment and one item that assessed their overall academic self-efficacy.
- Current academic grade point average issues affecting academic performance (academic barriers).
- Overall academic experience (satisfaction of academic achievement and performance)
- Experiences with faculty, TA, sessional instructors
- Experiences with academic support services.
- Academic accommodations (well-being issues and academic concessions).

*Substance Use*

This section asked about past month binge drinking, tobacco use, cannabis use, and other drug use and use of stimulants.
- Use alcohol, marijuana, drugs, opioids, study, drugs, Adderall, Ritalin, and use of another person's, prescription medication).

- Perception of risk and social norms for substance use (drinking and driving substitutes use liturgy, harm reduction, tobacco, use, nutrition).

*Food Security*

- Accessing affordable and nourishing food, alignment with eating habits and preferences.
- Consumption of fruit and vegetables.
- Consumption of sugar, sweetened beverages.
- Another section about food security and this section is under development.

*Sexual Health Behavior*

- Sexual health questions focused on students' use of contraception and a global inventory of sexual certification.
- Safe, sex practices (contraception use).
- Sexual satisfaction.

Canadian Campus Wellbeing Survey Resources (link)

- Student Survey
- Staff Survey
- Sample Service Agreement
- 2023-24 Information Package
- Communications Toolkit
- Brand Guidelines (Logos, Social Media, Poster Template)