ACHA Well-being Assessment Pathways and Outcomes

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Contents

Chapter 1: Introduction to the ACHA Well-being Assessment's Conceptual Model

Why do we need a conceptual model?

Well-being is a complex subject with a history that spans thousands of years. Most of the theories of well-being we know in the United States can trace their roots back to Aristotle's *Nichomachean Ethics*, written around 350 BCE. Twenty-three hundred years later, we are still trying to figure out how to define and support people's well-being. Along the way, voluminous critical theories were developed, many of which are referenced in the *[Inter-Association Definition of Well-being](#)*.

To account for all these theories of well-being, we needed a flexible model to help arrange their components and adapt to institutions' differing needs. We adopted the Engine of Well-being model (Jayawickreme et al., 2012) into a conceptual model that includes *dimensions, pathways,* and *outcomes.*

Figure 1 on the following page displays our model. As we will discuss later in this document, there are other ways to arrange the dimensions, pathways, and outcomes included in the ACHA Well-being Assessment (the Assessment.)

In the remaining sections of Chapter 1, we describe the Assessment's conceptual model, as pictured in Figure 1. Chapter 2 reviews our research on dimension-specific pathways that can inform programs, policies, and practices to support students' well-being.

Because well-being is so complex, no assessment–the Assessment or any other–can capture all possible aspects of well-being. The Assessment focuses on aspects of well-being that we believe the higher education setting can influence. Even within this limited scope, well-being is too vast to be entirely encompassed in one measure. As you read this document, we encourage you to consider adaptations to the model and the content that would suit your institution's needs, interests, and values. You may need to add, remove, or rearrange pathways, outcomes, and dimensions to fit your institution's approach to well-being.

Well-being remains an active area of research. We will continue to update this document as we learn more.
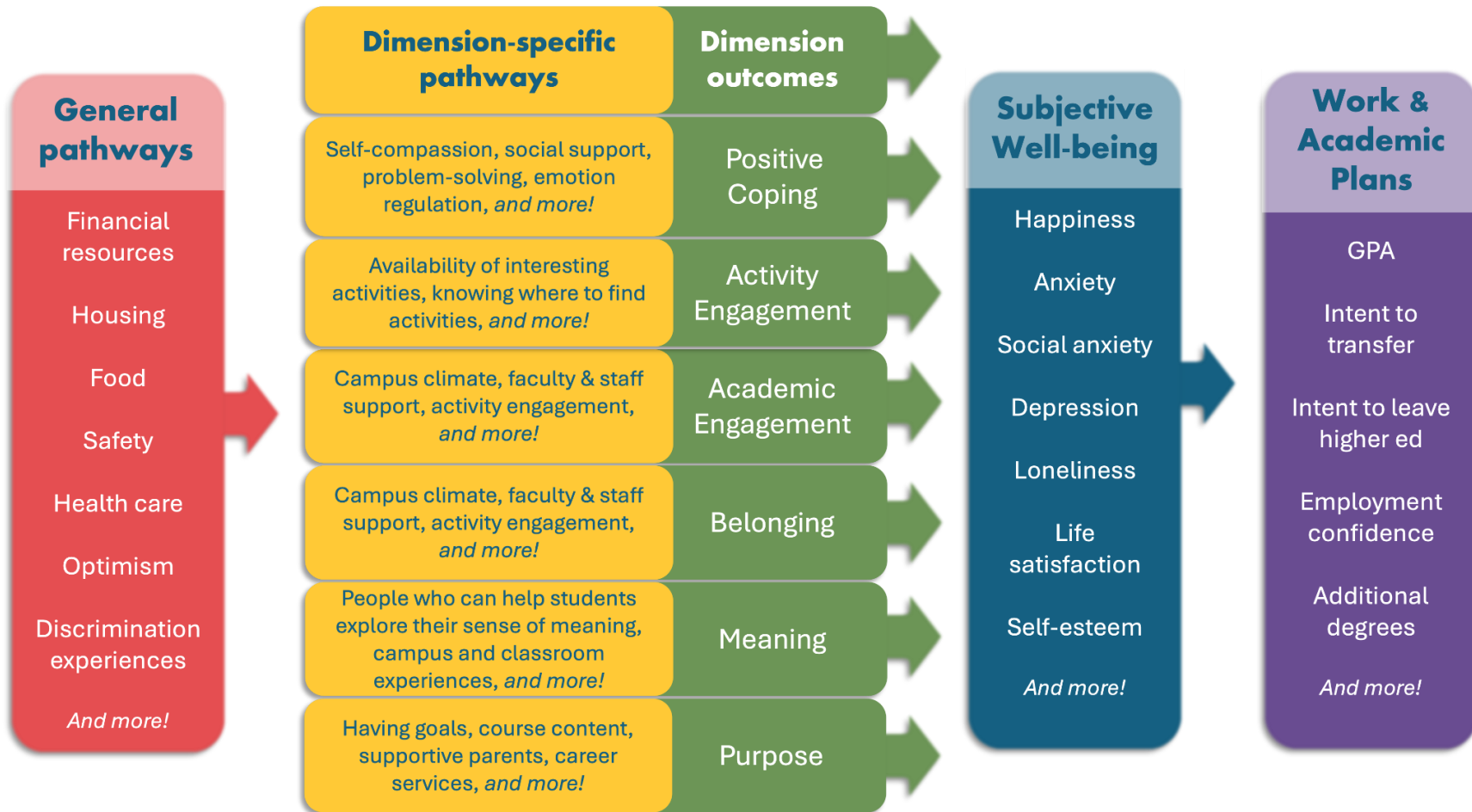
Figure 1. ACHA Well-being Assessment Pathways and Outcomes diagram. This diagram includes samples of ACHA WBA content. The components in this diagram can be expanded to include many other well-being content from the ACHA Well-being Assessment and other sources.

What are well-being dimensions?

Dimensions is our name for the different sections of the ACHA Well-being Assessment (i.e., the things in the Assessment's table of contents). That is the only defining characteristic they share. Otherwise, they vary widely. Some dimensions are scored, some include pathways and outcomes, some are treated as general pathways, and some are treated as general outcomes.

The table below lists the dimensions in the order in which they appear in the Assessment. The table indicates which dimensions are scored, which include pathways and outcomes, which dimensions are treated as general pathways, and which dimensions are treated as general outcomes.

Table 1. ACHA Well-being Assessment Dimensions

	Scored	Includes Pathways & Outcomes (Green & yellow column in Figure 1)	Dimension is treated as a general pathway (Red column in Figure 1)	Dimension is treated as a general outcome (Blue and purple columns in Figure 1)
Happiness	x			x
Anxiety	x			x
Depression	x			x
Loneliness	x			x
Social Anxiety	x			x
Demographics			x	
Financial Resources			x	
Work & Academic Plans				x
Life Satisfaction	x			x
Self-esteem	x			x
Optimism	x		x	
Positive Coping	x	x		
Activity Engagement	x	x		
Academic	x	x		

Engagement				
Belonging	x	x		
Meaning	x	x		
Purpose	x	x		
Basic Security Needs			x	

What are pathways and outcomes?

Using an adaptation of the Engine of Well-being model (Jayawickreme et al., 2012), the Assessment utilizes a conceptual model in which the extent to which people are doing well (*outcomes*) is a function of the extent to which they have access to the skills, resources, and conditions they need to be well (*pathways*). This model helps us organize the many ideas about well-being into a coherent model. The basic structure of pathways and outcomes is demonstrated below in Figure 2.

Figure 2. The basic structure of pathways and outcomes.

We can demonstrate the idea of pathways and outcomes with an oversimplified swimming example: Being able to swim (the *outcome*) is the result of skills, resources, and conditions (*pathways*) like knowing how to float, having access to swimming lessons, confidence in your ability to learn how to swim, knowing how to hold your breath underwater, and having people who encourage you and help you learn to swim.

Why are some dimensions scored but not others?

Scored dimensions include well-being outcomes, which measure the extent to which students are doing well. For these scored dimensions, the outcomes are traits or qualities a person has that are not immediately observable. These scored dimensions include the mood dimensions (Happiness, Anxiety, Depression, Loneliness, Social Anxiety), Life Satisfaction, Self-Esteem, Optimism, Positive Coping, Activity Engagement, Academic Engagement, Belonging, Meaning, and Purpose. You can learn more about the scoring in our Technical Reports (linked here).

Not all dimensions with outcomes can be scored. The Work and Academic Plans dimension is a set of outcomes because it measures things we think are potentially the result of being well, like

having good grades or feeling confident about job prospects. However, it is not scored because whether students plan to go to graduate school or feel confident about their job prospects reflects their beliefs and attitudes about various things and does not represent a unified quality or trait of the students.

The Demographics, Financial Resources, and Basic Security Needs dimensions are not scored because they include facts and perceptions about students' circumstances, which are not qualities or traits of students.

Why do some dimensions have both pathways and outcomes?

In the section immediately above, we listed dimensions that are scored because they include outcomes and also measure traits or qualities about students. For six of these dimensions, we researched the skills, resources, and conditions (*pathways*) students need to be well in those areas. Those dimensions include Positive Coping, Activity Engagement, Academic Engagement, Belonging, Meaning, and Purpose.

These *dimension-specific pathways* provide starting points for developing programs, policies, and practices to support students' well-being. Chapter 2 of this document describes these pathways, and the Additional Technical History appendix overviews our research.

In Figure 1, the scored dimensions with both pathways and outcomes are the yellow and green columns in the middle:

Dimension-specific pathways	Dimension outcomes
Self-compassion, social support, problem-solving, emotion regulation, *and more!*	Positive Coping
Availability of interesting activities, knowing where to find activities, *and more!*	Activity Engagement
Campus climate, faculty & staff support, activity engagement, *and more!*	Academic Engagement
Campus climate, faculty & staff support, activity engagement, *and more!*	Belonging
People who can help students explore their sense of meaning, campus and classroom experiences, *and more!*	Meaning
Having goals, course content, supportive parents, career services, *and more!*	Purpose

These dimensions' outcomes and pathways are also supported by the General Pathways (the red columns to the left in Figure 1). In turn, these dimensions support general outcomes like subjective well-being and work and academic plans (the blue and purple columns at the right in Figure 1).

The remaining eight scored dimensions do not have pathways because we treat them as general pathways (Optimism) or general outcomes (Happiness, Anxiety, Depression, Loneliness, Social Anxiety, Life Satisfaction, Self-Esteem). The absence of pathways in the Assessment does not mean that these dimensions do not have pathways that can support them. There are many interventions for and research articles about supporting these dimensions, but we have not included dimension-specific pathways for them in the Assessment.

What are general pathways?

General Pathways support multiple other dimensions, well-being dimensions, or outcomes. The red column at the left of Figure 1 shows some examples.

Figure 3. General pathways

They include things that support our foundational needs, like food, shelter, safety, and access to care.

We also include the scored dimension of Optimism in the General Pathways because research has shown it broadly supports multiple aspects of well-being (e.g., Seligman, 2006).

We have not included pathways that focus on students' home neighborhoods or high schools because higher education programs are not typically designed to influence them significantly. However, these pathways are just as important as those in this document. We have included pathways about students' relationships with their families and guardians because higher education institutions often interact with families and guardians and help students navigate some aspects of their relationships with them.

What are general outcomes?

General outcomes are anything that results from students being well.

In the blue and purple columns to the left of Figure 1, we have included two types of general outcomes: Subjective Well-being and Work & Academic Plans:
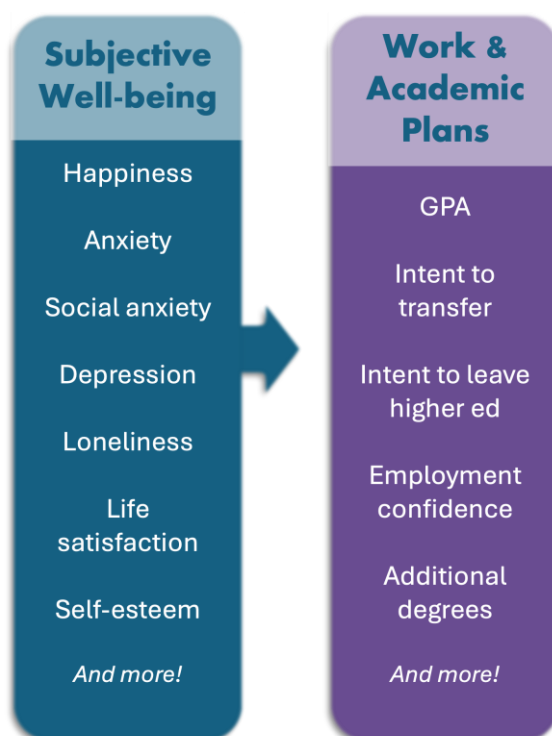
Figure 4. General outcomes

Subjective well-being is the extent to which people feel good, experience a reasonable minimum of negative emotions, and are satisfied with their lives (Diener, 2000). In the Assessment, subjective well-being is a collection of dimensions, not a dimension in and of itself. In the Assessment, subjective well-being includes the scored dimensions of Happiness, Anxiety, Social anxiety, Depression, Loneliness, Life Satisfaction, and Self-Esteem.

In Work and Academic Plans, the Assessment includes individual, unscored items that measure students' self-reported GPA, their intent to transfer, their intent to leave higher education without

completing a degree, their confidence in employment after graduation, and whether students have plans for additional degrees.

Neither the Subjective Well-being nor Work and Academic Plans general outcomes are exhaustive lists. Other indicators of both could be added.

Other arrangements of the ACHA Well-being Assessment dimensions

As we have mentioned, there are many theories and opinions about well-being. To our knowledge, there is no generally agreed-upon model of well-being because well-being is an active area of research.

We developed our model of well-being based on extensive input from substantive experts, published research, statistical modeling, and national Well-being Assessment data sets. However, another arrangement of the dimensions may be a better fit for your needs.

One common alternative is to place subjective well-being with the other yellow and green dimensions and treat it as a dimension with pathways and outcomes. People who support this model (e.g., Seligman, 2018) argue that subjective well-being isn't the result of being well in other dimensions, nor is it a culmination of those other dimensions. Instead, subjective well-being is a type of well-being that can be developed just like the other dimensions. Such a model would look like Figure 5.

Another alternative is to treat Positive Coping as a General Pathway, as depicted in Figure 6.

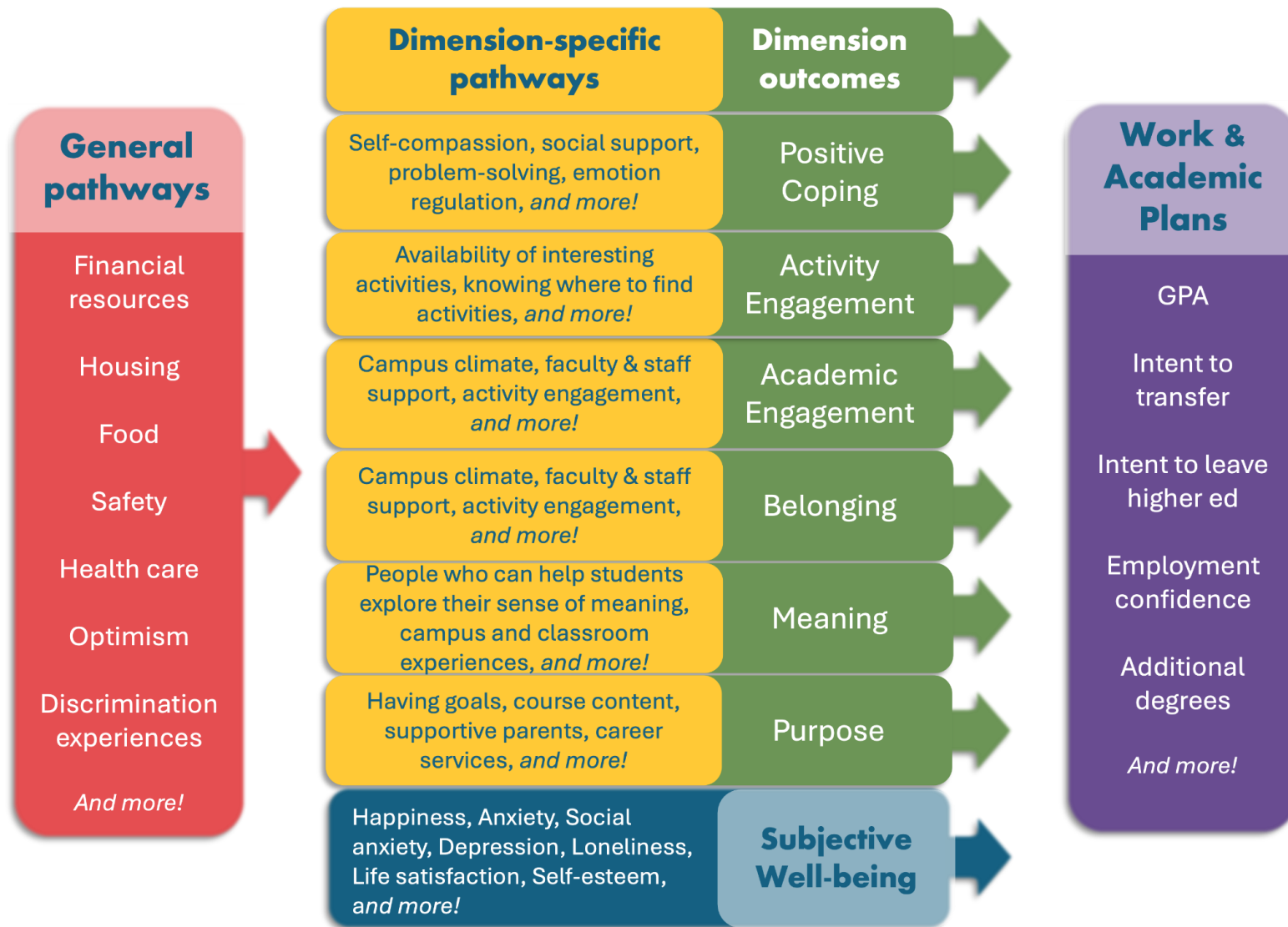**Up next in Chapter 2,** we provide details about the dimension-specific pathways.

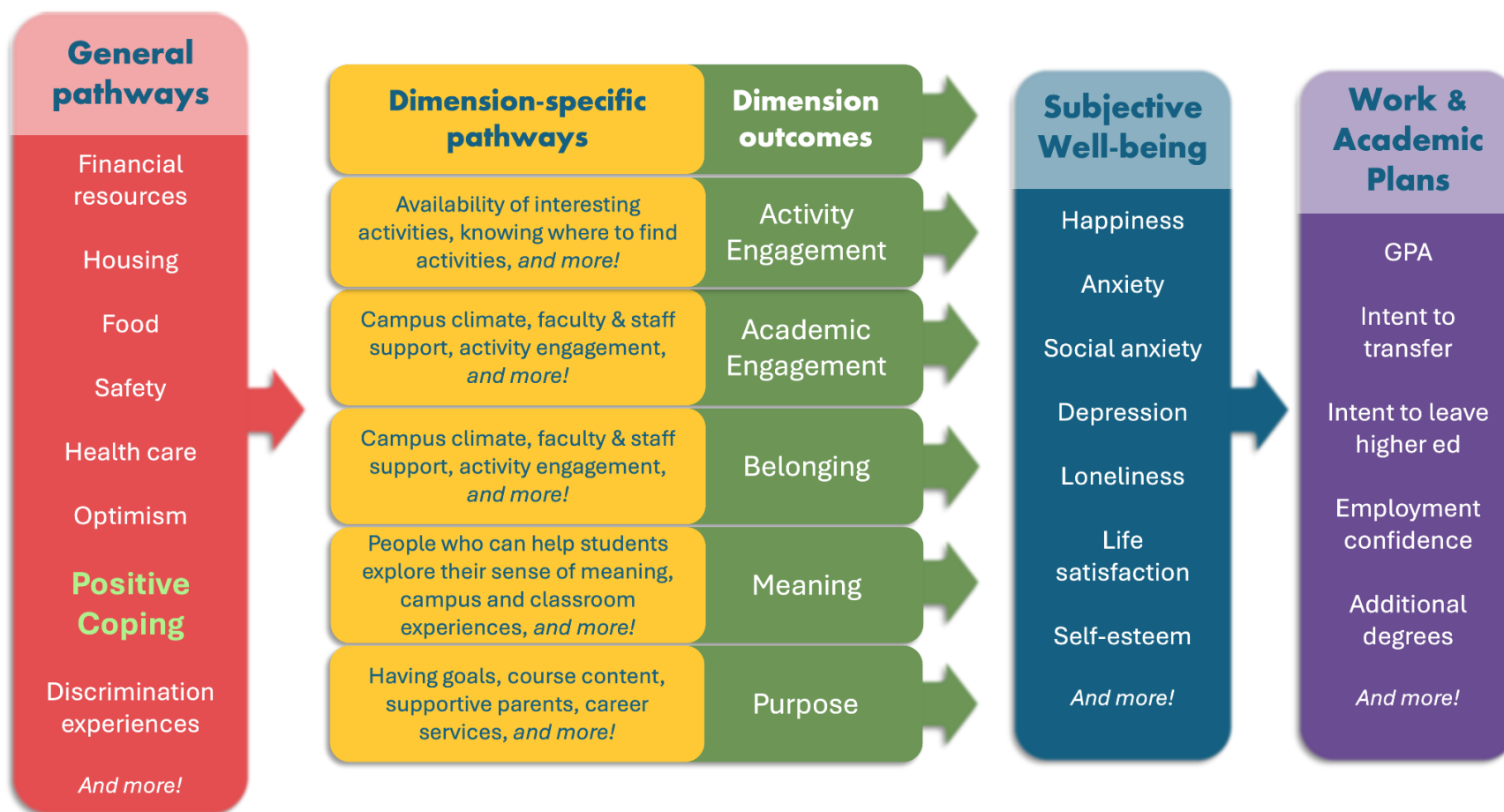Figure 5. Subjective well-being as a dimension with dimension-specific pathways and outcomes

Figure 6. Positive Coping as a general pathway

Chapter 1 References

Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, *55*(1), 34–43. https://doi.org/10.1037//0003-066X.55.1.34

Jayawickreme, E., Forgeard, M. J. C., & Seligman, M. E. P. (2012). The engine of well-being. *Review of General Psychology*, *16*(4), 327–342. https://doi.org/10.1037/a0027990

NIRSA: Leaders in Collegiate Recreation, NASPA - Student Affairs Administrators in Higher Education, & ACHA - American College Health Association. (2020, November). *Inter-association definition of well-being*. https://nirsa.net/nirsa/portfolio-items/health-wellbeing-in-higher-education/

Seligman, M. E. P. (2006). *Learned Optimism: How to Change Your Mind and Your Life*. Vintage Books.

Seligman, M. E. P. (2018). PERMA and the building blocks of well-being. *The Journal of Positive Psychology*, *13*(4), 333–335. https://doi.org/10.1080/17439760.2018.1437466

Chapter 2: Dimension-Specific Pathways

Belonging

Our measure of belonging focuses on the extent to which students experience a felt sense of belonging in their higher education institutions. The Belonging items ask students whether they feel a sense of belonging at their school, feel accepted, and feel included. Like our approaches to the other dimensions, our final set of items did not include the many other factors commonly included in definitions of belonging, such as feeling supported and respected inside and outside the classroom.

Pathways

Our statistical modeling found that many of these other factors are potent pathways to belonging, and most are factors in students' environments rather than factors internal to students, like their skills, beliefs, and behaviors.

Relationships of all forms are important to belonging. One of the most consistent and robust pathways to belonging was whether students felt like faculty and staff supported their belonging, including through their academic experiences. It is also important for students to have a group of friends or feel close to other students at school.

The general campus climate matters to belonging. Students need to feel like people are friendly toward them, like they are welcomed as they are, and that they are safe. Feelings of safety include freedom from discrimination, items which are included in the Assessment.

Activity engagement also contributes to belonging, although it is possible for students to be highly engaged in activities but still feel low levels of belonging. Regularly participating in activities, programs, and events may help support belonging, but those activities, programs, and events must be inclusive of students' identities.

Our research found one factor within students: their desire to attend a school where they feel like they belong.

Source material for our definition and measurement of Belonging

Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development*, *40*(5), 518–529.

Goodenow, C., & Grady, K. E. (1993). The relationship of school belonging and friends' values to academic motivation among urban adolescent students. *The Journal of Experimental Education*, *62*(1), 60–71. https://doi.org/10.1080/00220973.1993.9943831

Hurtado, S., Alvarez, C. L., Guillermo-Wann, C., Cuellar, M., & Arellano, L. (2012). A Model for diverse learning environments: The scholarship on creating and assessing conditions for student success. In J. C. Smart & M. B. Paulsen (Eds.), *Higher Education: Handbook of Theory and Research* (Vol. 27, pp. 41–122). Springer Netherlands. https://doi.org/10.1007/978-94-007-2950-6_2

Strayhorn, T. L. (2012). *College students' sense of belonging: A key to educational success for all students*. Routledge.

Further reading about supporting students' sense of belonging

Allen, K.-A., Kern, M. L., Rozek, C. S., McInereney, D., & Slavich, G. M. (2021). Belonging: A review of conceptual issues, an integrative framework, and directions for future research. *Australian Journal of Psychology*, *73*(1), 87–102. https://doi.org/10.1080/00049530.2021.1883409

Gravett, K., & Ajjawi, R. (2022). Belonging as situated practice. *Studies in Higher Education*, *47*(7), 1386–1396. https://doi.org/10.1080/03075079.2021.1894118

Vaccaro, A., & Newman, B. M. (2016). Development of a sense of belonging for privileged and minoritized students: An emergent model. *Journal of College Student Development*, *57*(8), 925–942. https://doi.org/10.1353/csd.2016.0091

Walton, G. M., & Brady, S. T. (2017). The many questions of belonging. In A. J. Elliot, C. S. Dweck, & D. S. Yeager (Eds.), *Handbook of competence and motivation: Theory and application., 2nd ed.* (2017-17591-015; pp. 272–293). The Guilford Press.

Academic Engagement

At the core of the Academic Engagement and Activity Engagement dimensions are positive psychology's ideas about flow, which refer to the feeling of being completely absorbed in activities that help us learn and grow. We then incorporated theories from educational research to focus on areas of flow that are within higher education institutions' typical intervention purview. Because educational research has often treated academic and activity engagement as interchangeable, we also drew from industrial-organizational psychology's theories about work engagement to help us better distinguish academic engagement from academic engagement.

The result is a set of outcome items that measure the extent to which students find their coursework interesting, engaging, and exciting.

Pathways

Our research identified academic engagement pathways that included factors in students' environments and factors within students.

The quality of students' social interactions is an important environmental contributor to students' academic engagement. Students benefitted from feeling respected by professors and having their experiences taken seriously in class. Whether from faculty or staff, students' academic engagement benefitted from mentorship and feeling like someone cared about them.

Students' active efforts to engage in their academics also matter. Reaching out to faculty, discussing academic plans with an advisor, studying with other students, and actively participating in class are all associated with higher levels of academic engagement. Inclusive and supportive environments help support students to engage in these activities.

Source material for positive psychology's theories of flow and engagement

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience.* Harper & Row. https://doi.org/10.1177/0013164405282471

Seligman, M. E. P. (2011). *Flourish.* The Free Press.

Source material for academic and activity engagement

Hurtado, S., Alvarez, C. L., Guillermo-Wann, C., Cuellar, M., & Arellano, L. (2012). A Model for diverse learning environments: The scholarship on creating and assessing conditions for student success. In J. C. Smart & M. B. Paulsen (Eds.), *Higher Education: Handbook of Theory and Research* (Vol. 27, pp. 41–122). Springer Netherlands. https://doi.org/10.1007/978-94-007-2950-6_2

Wolf-Wendel, L., Ward, K., & Kinzie, J. (2009). A tangled web of terms: The overlap and unique contribution of involvement, engagement, and integration to understanding college student success. *Journal of College Student Development*, *50*(4), 407–428. https://muse.jhu.edu/pub/1/article/270626

Source material for academic engagement only

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, *66*(4), 701–716. https://doi.org/10.1177/0013164405282471

Further reading about supporting students' academic engagement

Beasy, K., Morrison, R., Coleman, B., & Mainsbridge, C. (2022). Reflections of a student engagement program designed and delivered by academics. *Journal of Applied Learning and Teaching*, *5*(1), Article 1. https://doi.org/10.37074/jalt.2022.5.1.7

Li, J., & Xue, E. (2023). Dynamic interaction between student learning behaviour and learning environment: Meta-analysis of student engagement and its influencing factors. *Behavioral Sciences*, *13*(1), Article 1. https://doi.org/10.3390/bs13010059

Museus, S. D. (2014). The Culturally Engaging Campus Environments (CECE) model: A new theory of success among racially diverse college student populations. In M. B. Paulsen (Ed.), *Higher Education: Handbook of Theory and Research: Volume 29* (pp. 189–227). Springer Netherlands. https://doi.org/10.1007/978-94-017-8005-6_5

Activity Engagement

As described in the *Academic Engagement* section above, the Activity Engagement and Academic Engagement items have common conceptual roots.

In contrast to the Academic Engagement items, the Activity Engagement items draw more heavily from positive psychology theories of flow and engagement referenced in the *Academic Engagement* section above. The outcome items evaluate the extent to which students are involved in activities they enjoy, that have expanded their skills, and that they find meaningful.

Pathways

We focused our pathways research on factors that higher education institutions typically support, namely institution-sponsored activities.

Within students' environments, students benefit from feeling like the institution offers interesting activities, knowing where to find activities, and hearing faculty or staff talk about the benefits of being involved in activities.

Students' attitudes and behaviors also play an important role in their engagement levels. Engaged students report trying new activities and making time to participate in activities.

Further reading about supporting students' activity engagement

Chapman, G., Emambocus, W., & Obembe, D. (2023). Higher education student motivations for extracurricular activities: Evidence from UK universities. *Journal of Education and Work*, *36*(2), 138–152. https://doi.org/10.1080/13639080.2023.2167955

Dickinson, J., Griffiths, T.-L., & Bredice, A. (2021). 'It's just another thing to think about': Encouraging students' engagement in extracurricular activities. *Journal of Further and Higher Education*, *45*(6), 744–757. https://doi.org/10.1080/0309877X.2020.1813263

Knifsend, C. A., Green, L., & Clifford, K. L. (2020). Extracurricular participation, collective self-esteem, and academic outcomes among college students. *Psi Chi Journal of Psychological Research*, *25*, 318–326. https://doi.org/10.24839/2325-7342.jn25.4.318

Raja, A., Lambert, K., Patlamazoglou, L., & Pringle, R. (2023). Diversity and inclusion strategies for LGBTQ + students from diverse ethnic backgrounds in higher education: A scoping review. *International Journal of Inclusive Education*, 1–21. https://doi.org/10.1080/13603116.2023.2217814

Meaning

Although people often treat Meaning and Purpose as synonymous, they are distinct constructs. People need purpose to feel like their lives have meaning, and without a sense of purpose, they often struggle with their sense of meaning in life.

Like most dimensions in the Assessment, we measured the outcomes of Meaning as the "felt sense" of meaning: the extent to which students feel like their lives are meaningful, do something meaningful every day and live their lives in meaningful ways. Most definitions of meaning include multiple components beyond that felt sense, such as coherence (feeling like life makes sense) and mattering (feeling like you matter in the world). These definitions also tend to require that students find meaning in activities that contribute to the greater good rather than self-serving activities.

The benefit of measuring meaning as a felt sense is that we can leave more room for students to base their sense of meaning on conditions that matter to them. Definitions and measures of meaning (and purpose) in life are often built on models designed for adults. We found in our qualitative research that students often said they felt a strong sense of meaning in life and based that sense of meaning on conditions that would not usually meet the research definitions of meaning, for instance, because they had regular access to video games or time for playing the guitar.

Pathways

The pathways we identified for the Meaning dimension include factors in students' environments and factors within students.

Students' sense of meaning benefits from environments where participants feel like they have people who can help them identify and support their sense of meaning in life. An institutional culture that supports students' sense of meaning in life is also helpful. Examples include classroom experiences and other opportunities to explore meaning in life openly.

Within students, factors that support a sense of meaning in life include cognitive skills and beliefs that help students make sense of the world, feel like they matter (a belief that is also important to belonging), understand their place in the world, discover what they value and find meaningful in life, and see the world as full of possibilities.

The Further Reading section below provides more ideas for supporting students' sense of meaning in life.

Source material for our definition and measurement of Meaning

Krause, N. (2004). Stressors arising in highly valued roles, meaning in life, and the physical health status of older adults. *The Journals of Gerontology. Series B, Psychological*

Sciences and Social Sciences, *59*(5), S287-297.
https://doi.org/10.1093/geronb/59.5.s287

Prager, E. (1996). Exploring personal meaning in an age-differentiated Australian sample: Another look at the Sources Of Meaning Profile (SOMP). *Journal of Aging Studies*, *10*(2), 117–136. https://doi.org/10.1016/S0890-4065(96)90009-2

Roepke, A. M., Jayawickreme, E., & Riffle, O. M. (2014). Meaning and Health: A Systematic Review. *Applied Research in Quality of Life*, *9*(4), 1055–1079. https://doi.org/10.1007/s11482-013-9288-9

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, *53*(1), 80–93. https://doi.org/10.1037/0022-0167.53.1.80

Further reading about promoting students' sense of meaning in life

Kiang, L., & Fuligni, A. (2010). Meaning in life as a mediator of ethnic identity and adjustment among adolescents from Latin, Asian, and European American backgrounds. *Journal of Youth and Adolescence*, *39*(11), 1253–1264. https://doi.org/10.1007/S10964-009-9475-Z

Manco, N., & Hamby, S. (2021). A meta-analytic review of interventions that promote meaning in life. *American Journal of Health Promotion*, *35*(6), 866–873. https://doi.org/10.1177/0890117121995736

Steger, M. F., O'Donnell, M. B., & Morse, J. L. (2021). Helping students find their way to meaning: Meaning and purpose in education. In M. L. Kern & M. L. Wehmeyer (Eds.), *The Palgrave Handbook of Positive Education* (pp. 551–579). Springer International Publishing. https://doi.org/10.1007/978-3-030-64537-3_22

More about the distinction between meaning and purpose

Bronk, K. C., Reichard, R. J., & Qi Li, J. (2023). A co-citation analysis of purpose: Trends and (potential) troubles in the foundation of purpose scholarship. *The Journal of Positive Psychology*, *18*(6), 1012–1026. https://doi.org/10.1080/17439760.2023.2168563

Ratner, K., Burrow, A. L., Burd, K. A., & Hill, P. L. (2021). On the conflation of purpose and meaning in life: A qualitative study of high school and college student conceptions. *Applied Developmental Science*, *25*(4), 364–384. https://doi.org/10.1080/10888691.2019.1659140

Positive Coping

The Positive Coping dimension's outcome items measure how well students feel they can cope with difficult events, which is one aspect of resilience. Like the other dimensions in the Assessment, the exact definition of resilience is a subject of ongoing debate, but at its core lies the extent to which students can overcome adversity and return to their baseline levels of health and well-being. In order to bounce back from hard times, students rely on coping skills along with the many other components of the Assessment, such as good physical and mental health, social support networks, and the things that bring them meaning in life.

Pathways

In this dimension, the pathways are different types of coping skills that help students feel more confident in coping with difficult events. There are many varieties of coping skills from many religious, philosophical, cultural, and psychological traditions. In our statistical modeling, some pathways associated with students' coping confidence levels included self-compassion, social support, and whether students use coping strategies focused on problem-solving or managing their feelings.

Source material for positive coping outcome items

Benight, C. C., & Bandura, A. (2004). Social cognitive theory of posttraumatic recovery: The role of perceived self-efficacy. *Behaviour Research and Therapy*, *42*(10), 1129–1148. https://doi.org/10.1016/j.brat.2003.08.008

Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, *18*(2), 76–82. https://doi.org/10.1002/da.10113

Sinclair, V. G., & Wallston, K. A. (2004). The development and psychometric evaluation of the Brief Resilient Coping Scale. *Assessment*, *11*(1), 94–101. https://doi.org/10.1177/1073191103258144

Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine*, *15*(3), 194–200. https://doi.org/10.1080/10705500802222972

Windle, G., Bennett, K. M., & Noyes, J. (2011). A methodological review of resilience measurement scales. *Health and Quality of Life Outcomes*, *9*(1), 8. https://doi.org/10.1186/1477-7525-9-8

Source material for pathways

Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, *2*(3), 223–250. https://doi.org/10.1080/15298860309027

Riley, K., & Park, C. L. (2014). Problem-focused vs meaning-focused coping as mediators of the appraisal-adjustment relationship in chronic stressors. *Journal of Social and Clinical Psychology*, *33*(7), 587–611. https://doi.org/10.1521/jscp.2014.33.7.587

Whitney, C. (2010). Social supports among college students and measures of alcohol use, perceived stress, satisfaction with life, emotional intelligence, and coping. *The Journal of Student Wellbeing*, *4*(1), Article 1. https://doi.org/10.21913/JSW.v4i1.588

Further reading about promoting students' positive coping

Albright, J. N., & Hurd, N. M. (2018). Constellations of social support among underrepresented college students: Associations with mental health. *Applied Developmental Science*, *22*(4), 258–269. https://doi.org/10.1080/10888691.2017.1287568

Egan, H., O'Hara, M., Cook, A., & Mantzios, M. (2022). Mindfulness, self-compassion, resiliency and wellbeing in higher education: A recipe to increase academic performance. *Journal of Further and Higher Education*, *46*(3), 301–311. https://doi.org/10.1080/0309877X.2021.1912306

Leipold, B., Munz, M., & Michéle-Malkowsky, A. (2019). Coping and resilience in the transition to adulthood. *Emerging Adulthood*, *7*(1), 12–20. https://doi.org/10.1177/2167696817752950

Pittman, D. M., Quayson, A. A., Rush, C. R., & Minges, M. L. (2022). Revisiting resilience: Examining the relationships between stress, social support, and drinking behavior among black college students with parental substance use disorder histories. *Journal of Ethnicity in Substance Abuse*, *21*(1), 90–111. https://doi.org/10.1080/15332640.2019.1707142

Tendhar, T., Marcotte, M. A., Saikia, M. J., & de Mesquita, P. B. (2024). Relationship of compassion for self and others to sense of well-being of college students. *Journal of American College Health*, *72*(4), 1246–1254. https://doi.org/10.1080/07448481.2022.2074276

Purpose

Although people often treat Meaning and Purpose as synonymous, they are distinct but related constructs. People need purpose to feel like their lives have meaning, and without a sense of purpose, they often struggle with their sense of meaning in life.

Our purpose measure focuses on the extent to which students feel they have a set of life goals they value and which are aligned with their true interests. Like our approach to measuring meaning, this limited approach focuses on students' felt sense of purpose. It does not include the many other contributing factors commonly a part of research definitions, such as lifelong aims or contributing to the greater good.

The benefit of focusing on students' felt sense of purpose is that we respect students' experience of purpose, even if they find purpose in ways inconsistent with research definitions. Our qualitative research found that many students were developing goals to complete higher education or determine what to do after higher education rather than developing lifelong aims. They were also understandably focused on the practical requirements of caring for themselves more than contributing to the greater good. Although most students we interviewed had aspirations of contributing to the world around them, many were not yet ready to identify associated lifelong aims.

Pathways

In our development research for the Assessment, the pathways that emerged as statistically significant contributions to purpose were similar to those identified for meaning.

Pathways in students' environments include having people they can talk to about their goals, particularly faculty and staff. Family is also important, but pressure from family to pursue specific goals can negatively impact students' sense of purpose. Students also benefit from having opportunities in their courses to think about their goals and from having access to general resources to help them with their goals when needed, such as career services and academic advising.

Pathways within students include knowing their skills and talents, skill with defining goals, and skill with setting plans for achieving their goals.

The Further Reading section below provides more ideas for supporting students' sense of meaning in life.

Source material for our definition and measurement of Purpose

Bronk, K. C., Hill, P. L., Lapsley, D. K., Talib, T. L., & Finch, H. (2009). Purpose, hope, and life satisfaction in three age groups. *The Journal of Positive Psychology*, *4*(6), 500–510. https://doi.org/10.1080/17439760903271439

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. Journal of Personality and Social Psychology, 57, 1069-1081.

Ryff, C. D., Almeida, D. M., Ayanian, J. S., Carr, D. S., Cleary, P. D., Coe, C., … Williams, D. (2007). National Survey of Midlife Development in the United States (MIDUS II), 2004-2006: Documentation of the Psychosocial Constructs and Composite Variables in MIDUS II Project 1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research.

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, *53*(1), 80–93. https://doi.org/10.1037/0022-0167.53.1.80

Sumner, R., Burrow, A. L., & Hill, P. L. (2015). Identity and purpose as predictors of subjective well-being in emerging adulthood. *Emerging Adulthood*, *3*(1), 46–54. https://doi.org/10.1177/2167696814532796

Further reading about promoting students' sense of purpose

Bronk, K. C., Baumsteiger, R., Mangan, S., Riches, B., Dubon, V., Benavides, C., & Bono, G. (2019). Fostering purpose among young adults: Effective online interventions. *Journal of Character Education*, *15*(2), 21–39. https://go.gale.com/ps/i.do?p=AONE&sw=w&issn=15431223&v=2.1&it=r&id=GALE%7CA614685967&sid=googleScholar&linkaccess=abs

Hielscher, E., Blake, J., Chang, I., Crandon, T., McGrath, M., & Scott, J. (2022). *Sense of purpose interventions for depression and anxiety in adolescents and young adults: A scoping review and cross-cultural youth consultation.* OSF. https://doi.org/10.31234/osf.io/sequ4

Sharma, G., & De Alba, E. (2018). Sense of purpose among female students belonging to minority ethnic and Buddhist backgrounds. *Journal of College and Character*, *19*(2), 137–151. https://doi.org/10.1080/2194587X.2018.1445644

Appendix: Additional Technical History

The ACHA Well-being Assessment was originally developed at Wake Forest University using the Engine Model of Well-being (Jayawickreme et al., 2012). The Assessment was known as the *WFU Wellbeing Assessment* at that time. Read more about the technical history of the Assessment [here](#).

According to the Engine Model, well-being outcomes are the extent to which people are well. The items in the WFU Wellbeing Assessment measure well-being outcomes and indicate whether students are well across multiple dimensions of well-being.

In the Engine Model, outcomes depend on the extent to which individuals have access to well-being pathways, which are the skills, resources, and conditions people need to be well. Those pathways cover a wide range of content and include resources and conditions outside the individual (e.g., money, social support) and resources and conditions within the individual (e.g., values, beliefs, knowledge bases, emotional reactions, social and behavioral skills, and motivations).

We chose pathways using four primary sources: (a) feedback from programming and faculty experts, (b) research literature about the dimensions of well-being, (c) the Transtheoretical Model of Change (Prochaska & DiClemente, 1984), (d) a socio-ecological model, and (e) several years of statistical modeling to select pathway items that were most strongly associated with the outcomes.

Our **programming experts** included members from Wake Forest University's Office of Wellbeing and five other administrative offices. Our faculty experts were a multidisciplinary team of five researchers from Wake Forest's academic departments of Psychology, Philosophy, Politics, and International Affairs.

In the individual dimensions' sections, we discuss more of the **research literature** on well-being. This literature includes a mixture of theoretical and applied literature, primarily from the fields of education and psychology.

The **Transtheoretical Model of Change** (TTM; (Prochaska & DiClemente, 1984) was originally a behavior change theory specific to substance abuse. It has since been applied across dozens of fields in thousands of published articles. TTM is commonly applied in conjunction with Motivational Interviewing (Miller, 1983; Miller & Rollnick, 2023), a clinical approach to supporting people through change. The combination of these two approaches encourages us to think about the following pathways: campus culture, the presence of supportive programming, the presence of supportive faculty and staff, the presence of supportive friends, and respondents' skills, self-efficacy, motivations, and emotional reactions.

Socio-ecological models were first introduced by Urie Bronfenbrenner (1979). Since then, these models have been adapted for a variety of contexts and settings. The American College

Health Association's website includes a model specific to higher education [here](#). These models encourage us to consider the influence of contexts and settings, such as people's relationships with others; communities; higher education's infrastructures, such as policies, practices, and cultures; and influences on the broader community and nation.

During the research to develop the WFU Wellbeing Assessment, we included items in the Assessment that measured many different pathways. Over five survey administrations between 2015 and 2019, we used multiple rounds of structural equation and MIMIC statistical modeling to identify the pathway items that were most strongly associated with the well-being outcomes. We retained and edited items by integrating those models with feedback from our substantive experts and findings in the research literature. Findings from four rounds of cognitive interviews between Fall 2015 and Spring 2018 helped ensure we identified pathways that students found meaningful and relevant.

Technical History References

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.

Jayawickreme, E., Forgeard, M. J. C., & Seligman, M. E. P. (2012). The engine of well-being. *Review of General Psychology*, *16*(4), 327–342. https://doi.org/10.1037/a0027990

Miller, W. R. (1983). Motivational interviewing with problem drinkers. *Behavioural Psychotherapy*, *11*(2), 147–172. https://doi.org/10.1017/S0141347300006583

Miller, W. R., & Rollnick, S. (2023). *Motivational interviewing: Fourth edition: Helping people change and grow* (4th ed.). Guilford Press.

Prochaska, J. O., & DiClemente, C. (1984). *The transtheoretical approach: Crossing traditional boundaries of therapy*. Dow Jones-Irwin.

Seligman, M. E. P. (2006). *Learned Optimism: How to Change Your Mind and Your Life*. Vintage Books.