

*Promoting Behavioral Health and Reducing Risk among College Students:*

*A Comprehensive Approach*

**Edited by**

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**Chapter Title**

College Student Mental Health: The National Landscape

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## **I. Introduction to the Healthy Minds Study**

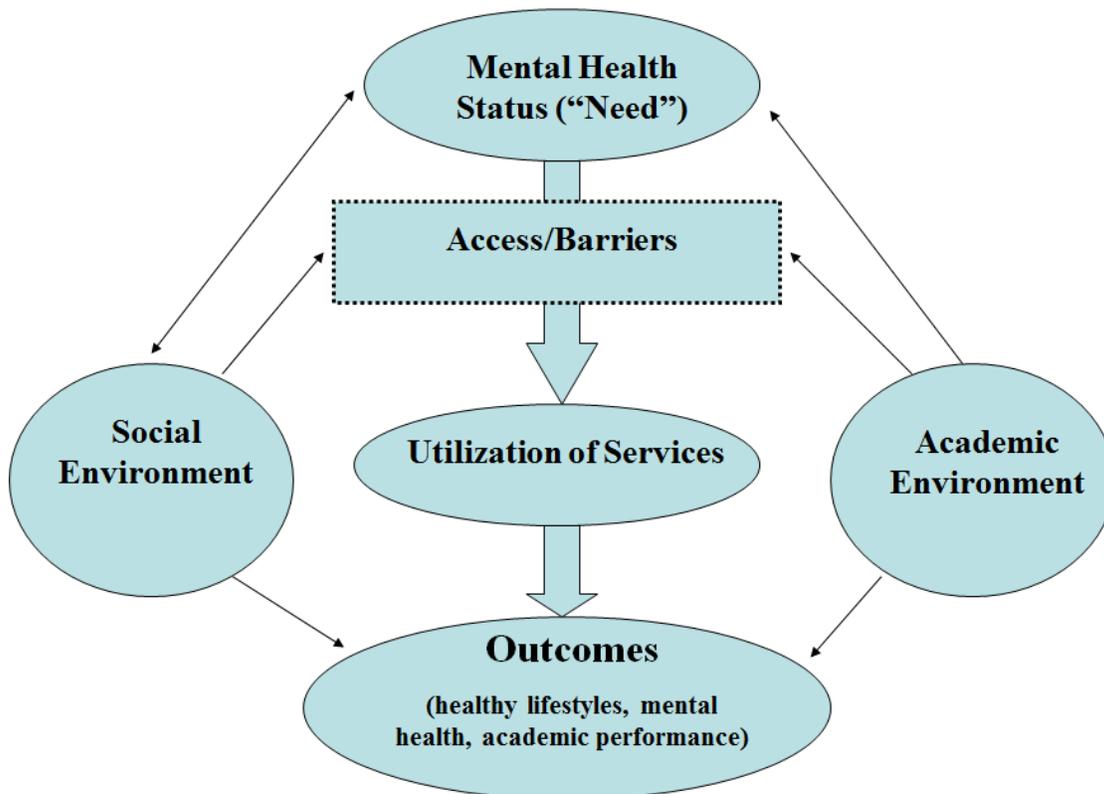
The purpose of this chapter is to describe the national landscape of student mental health using the most recent data from the Healthy Minds Study (HMS). These descriptive data can help campus professionals and administrators, as well as other researchers, identify areas of need and opportunity, and thereby establish priorities for their programs, funding, and research projects.

HMS is a national web-based survey that our research team at University of Michigan has been conducting since 2005. Cumulatively, the study has included over 150 colleges and universities in the U.S. (and a handful outside the U.S.) with over 200,000 student participants. In the 2016-2017 academic year, there were 54 colleges and universities and over 50,000 student participants.

Consistent with the themes of this edited volume, HMS evolved from a conceptual framework reflecting a holistic, public health approach to student health and risks. Our interdisciplinary research team includes expertise in economics, public health, higher education, and counseling psychology.

This framework is depicted below, unchanged from the original framework that we first proposed when applying for funding to begin the project in 2005. The framework highlights the many possibilities for improving student mental health through various channels within the college experience. The long-term, overarching goal of our study is to increase understanding of how to make the best investments in student mental health.

## Conceptual Framework



Much of the study's focus to date has been in the middle part of this diagram, examining utilization of mental health services and factors that might facilitate or impede access to services (such as knowledge, attitudes, and financial barriers). In recent years we have also expanded the scope of the study to address more thoroughly the social and academic environments that influence student mental health and help-seeking behavior. This expansion has been possible through the shift to a modular survey design, in which participating schools can now choose from a menu of elective modules (sections of the survey) to add to the three core modules that are used for all schools. The three core modules address demographic/background characteristics, mental health symptoms and status, and service utilization, while the elective

modules cover topics including substance use, sleep health, eating and body image, sexual assault, overall health, knowledge and attitudes, upstander/bystander behaviors, campus climate and culture, resilience and coping, persistence and retention, and financial stress. The core modules also cover briefly some of the topics in the elective modules.

The study design involves recruiting a random sample of 4,000 students at participating institutions (with the exception of smaller schools, which recruit all students, and a small number of larger schools that elect to recruit a random sample of more than 4,000). The study is entirely online, with email invitations and a web survey administered using Qualtrics. The participation rate varies considerably across institutions, and was 31% overall in 2016-2017. Information about the full student populations--including the distribution of gender, race/ethnicity, academic level, and grade point average--is used to construct survey sample weights, which adjust all estimates to be representative on these dimensions.

Healthy Minds is one of several studies that collectively provide a rich picture of student mental health and related risks. The unique contribution of Healthy Minds is to provide the only annual, ongoing study that focuses mainly on mental health in student populations. The National College Health Assessment (NCHA) by the American College Health Association (ACHA) is a large, annual study that addresses the full range of student health issues, including mental health. The Center for Collegiate Mental Health (CCMH) is collecting standardized data on mental health and related factors from counseling center clients at hundreds of schools nationwide. The Research Consortium based at the University of Texas conducts major studies once every several years, each time with a new theme (most recently, the relationship between mental health and academic outcomes). The College Life Study, based at the University of Maryland, represents one of the most comprehensive longitudinal studies of behavioral health among college students,

following students from their first year to well beyond their college years. While the present chapter reports data exclusively from the Healthy Minds Study, these other sources are important to keep in mind for issues or questions that are outside the scope of Healthy Minds.

## II. Mental Health and Service Utilization

We begin our overview of the latest data by examining the prevalence of mental health conditions. The HMS questionnaire includes brief, validated screens for depression (the PHQ-9), generalized anxiety (the GAD-7), eating disorders (the SCOFF), and positive mental health (the Flourishing Scale), as well as questions about past-year non-suicidal self-injury and suicidality. The overall prevalence in our 2016-2017 sample are shown in Table 1. The numbers illustrate both the lows and highs of college life: many students are struggling with at least one of these mental health problems (39%), while many students are flourishing (42%). Comparing these numbers to our previous years of data, our study provides some evidence of an increase in the prevalence of mental health struggles in college populations. For example, 11% of students are now reporting past-year suicidal ideation, as compared to 6-8% in the earlier years of our survey (2005-2013). Similarly, 21% are now reporting non-suicidal self-injury, as compared to 14-17% during that earlier period.

**Table 1: Mental Health Symptoms/Status**

N=43,048

Depression	Anxiety	Eating disorders	NSSI	Suicidal ideation	Any MH problem	Flourishing
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15+ on PHQ-9	15+ on GAD-7	3+ on SCOFF	Any, past yr	Any, past yr		48+ on Diener
0.136	0.104	0.087	0.208	0.112	0.387	0.419

Consistent with the high and growing rate of symptoms, we also see a high prevalence of students reporting they have been diagnosed with a mental health condition. A total of 36% report at least one lifetime diagnosis, with the most common being depression and other mood disorders (23%) and anxiety disorders (25%). These numbers are also higher than what we observed in earlier years of data collection.

**Table 2: Mental Health Diagnoses**

N=44,478

Depression and other mood	Anxiety disorders	Attention or learning	Eating disorder	Psychosis	Personality	Substance abuse	Any disorder
0.227	0.245	0.109	0.027	0.004	0.016	0.016	0.361

In parallel with the increases in symptoms and diagnoses, the use of mental health services, including therapy/counseling and medication, are reaching new heights. More than one third (34%) of students have received some form of mental health treatment in the previous year. By comparison, this number was in the range of 19-26% during earlier years of our study.

Nevertheless, still only 52% of students with an apparent mental health condition have received treatment in the previous year. The most common source for therapy/counseling is a campus provider (12% of students), but many students also receive services from non-campus providers

(11%). The most common types of psychotropic medication are antidepressants (13%), anti-anxiety medications (8%), and psychostimulants (7%).

**Table 3: Overall Service Use**

N=47,081

Therapy/counseling		Medication		Any treatment (tx)		Any tx among students w/ MH problems (N=14,800)	
Past year	Current	Past year	Current	Past year	Current	Past year	Current
0.239	0.107	0.224	0.17	0.341	0.221	0.515	0.348

The increasing use of services is undoubtedly related to the low levels of reported stigma regarding mental health treatment. Only a small proportion of students report agreeing with the statement, “I would think less of someone who has received mental health treatment.” The level of perceived stigma among others (perceived public stigma) is considerably higher, indicating the possible value of a social norms campaign to “correct” their overly pessimistic beliefs about the prevailing attitudes in their communities. Our survey also asks students why they have not received services, or might have received fewer services than they would have otherwise. The most commonly endorsed responses in our 2014-2015 study (which we report here because we reduced the answer categories in more recent years) were: “I prefer to deal with issues on my own” (41%), “stress is normal in college/graduate school” (38%), “I don’t have enough time” (33%), “I get a lot of support from other sources, such as friends and family” (30%), “the problem will get better on its own” (22%), and “financial reasons” (22%).

**Table 4: Stigma**

N=46,077

Personal stigma (I think less of someone who has received mental health treatment.)						Perceived public stigma (Most people think less...)					
SA	A	SwA	SwD	D	SD	SA	A	SwA	SwD	D	SD
0.009	0.016	0.038	0.073	0.274	0.59	0.05	0.144	0.281	0.206	0.231	0.089

SA=strongly agree, A=agree, SwA=somewhat agree, SwD=somewhat disagree, D=disagree, SD=strongly disagree

In recent years we have also examined variations in mental health and service use across different groups within the broader student population. We have found considerable differences across institutions, with some schools experiencing prevalence rates several times higher than others; we have also found that these variations cannot be easily explained by basic institutional characteristics (such as size and competitiveness) (Eisenberg et al, 2011 JNMD; Eisenberg et al, 2013 JNMD; Lipson et al., 2015 JACH). Other notable variations include a higher prevalence of mental health problems among undergraduate students compared to graduate students, a higher prevalence of depression among students of color compared to white students, a higher prevalence of anxiety among women compared to men, and a higher prevalence of all mental health problems among students from lower socioeconomic backgrounds and among students

with minority sexual orientation or gender identities (Eisenberg et al., 2013 JNMD). Across fields of study, we have found higher rates of mental health problems among students in the arts and humanities, and lower use of services among students in business and engineering (Lipson et al., 2016 JCSP).

### **III. Risk and Protective Factors**

In this section we examine health and social factors that might contribute or predict mental health (i.e., risk and protective factors), and in some cases might also result from poor or good mental health. Our cross-sectional data cannot isolate the direction and magnitude of causal relationships, but the correlations can help indicate which factors might be most important to address in a holistic effort to improve student mental health and its downstream consequences. We begin by examining factors that operate primarily on an individual level, and then conclude the section by examining interpersonal and community-level factors.

Substance use, particularly binge drinking and marijuana use, is a common risk factor in college populations, as shown in Table 5. The table also illustrates that students who use substances are at somewhat higher risk for experiencing a mental health problem (recall from a previous table that 39% of students experience a mental health problem in the overall population).

**Table 5: Substance Use**

N=47,652

	Any binge drinking	Frequent binge drinking	Cigarette smoking	Marijuana use
	One or more, past 2 wks	3+ times, past 2 wks	Any, past 30 days	Any, past 30 days
% of population	0.373	0.126	0.124	0.219
% w/ MH problems	0.422	0.462	0.523	0.506

Sleep problems, as measured in HMS by the Insomnia Severity Index (ISI), are also highly prevalent in college populations, with over half of students experiencing at least subthreshold sleep difficulties, including 17% in the clinical range. These problems are very highly correlated with mental health problems, as shown in the table.

**Table 6: Sleep Problems (Insomnia Severity Index)**

N=3,814

	None/minimal	Subthreshold	Clinical (moderate)	Clinical (severe)
	ISI=0-7	ISI=8-14	ISI=15-21	ISI=22-28
% of population	0.453	0.379	0.142	0.026
% w/ MH problems**	0.167	0.451	0.722	0.883

\*\*elevated depression or generalized anxiety on CCAPS-34

Physical activity is also correlated with mental health problems, although not to the same degree as sleep problems. The data below are from the 2014-2015 HMS, the most recent year in which physical activity was asked about in the core survey (it is now in an elective module). Table 7 suggests that physical activity could be a fruitful target for intervention in efforts to improve mental health, because a large proportion of students are engaging in relatively little physical activity per week.

**Table 7: Physical Activity (Hours Per Week of Moderate or Higher Intensity, Past 30 Days)**

N=14,861 (2014-2015 data)

	Less than 1 hour	2-3 hours	3-4 hours	5 or more hours
% of population	0.224	0.249	0.251	0.277
% w/ MH problems	0.416	0.338	0.312	0.295

Experiencing assault or abuse in the previous year is another clear risk factor for mental health struggles. A total of 16% of students report experiencing some form of abuse or assault; the prevalence of mental health problems is very high among all groups of students experiencing different types of abuse or assault.

**Table 8: Experiences of Assault and Abuse (Past Year)**

N=41,310

	Emotionally abused	Physically abused	In sexually abusive relationship	Forced to have unwanted sexual intercourse	Any abuse or assault
% of population	0.147	0.034	0.024	0.02	0.164
% w/ MH problems	0.671	0.727	0.785	0.789	0.665

Perhaps the most common risk factor for mental health problems among college students is financial stress. The large majority of students report that their financial situation is at least

“sometimes stressful”, with 25% reporting that it is “often stressful” and 14% reporting that it is “always stressful.” These latter two groups experience a high prevalence of mental health problems, particular those whose financial situation is “always stressful.”

**Table 9: Financial Stress (Current)**

N=50,865

	Never stressful	Rarely stressful	Sometimes stressful	Often stressful	Always stressful
% of population	0.056	0.182	0.369	0.254	0.139
% w/ MH problems	0.290	0.295	0.320	0.447	0.597

Resilience and coping skills are well-established protective factors. We measure these through two different scales. First, the Acceptance and Action Questionnaire-II (AAQ-II) (Bond, Hayes, et al., 2011) measures psychological flexibility and experiential avoidance, which are essentially the positive and negative terms, respectively, for a general construct underlying Acceptance and Commitment Therapy. Second, the Brief Resilience Scale (Smith et al., 2008) is a widely used instrument to measure the general ability to recover from and cope with life challenges. As shown in Table 19, both of these measures are very highly correlated with mental health problems, underscoring the potential value of interventions and services that can increase these skills.

**Table 10: Resilience and Coping Skills**

N=28,881

	Psychological flexibility / Experiential avoidance (AAQ-II)			Brief Resilience Scale (BRS)		
	Low avoidance (0-14)	Medium (15-28)	High (29-42)	Low (1-2.3)	Medium (2.3-3.7)	High (3.7-5)
% of population	0.554	0.36	0.086	0.125	0.534	0.341
% w/ MH problems	0.174	0.581	0.912	0.747	0.427	0.196

At the interpersonal and community level, we examine campus climate, in terms of sense of belonging and feeling that mental health is a priority at one’s school. Although the majority of students report a positive sense of belonging and a feeling that mental health is a priority, there are many students who disagree, and those students are at substantially higher risk for mental health problems.

**Table 11: Campus Climate: Sense of Belonging; Feeling that Mental Health is a Priority**

N=8,249

Belonging (Feels part of campus community)

Mental Health is a Priority at my School

	SA	A	SwA	SwD	D	SD	SA	A	SwA	SwD	D	SD
% of population	0.13 7	0.29 9	0.27 4	0.10 7	0.11 4	0.06 8	0.108	0.303	0.346	0.139	0.071	0.033
% w/ MH problems	0.27	0.29 6	0.34 8	0.34 9	0.44 8	0.51 1	0.29	0.302	0.319	0.371	0.52	0.694

Finally, as another indicator of campus climate, we examine the degree to which students view themselves and their peers as responsible and supportive for each other (“upstanders” rather than mere “bystanders”). Although the majority of students either agree or somewhat agree with this perception, only a small proportion strongly agrees and many disagree. Those who disagree are at considerably higher risk of mental health problems.

**Table 12: Campus Climate: Upstander/Bystander Attitudes**

N=27,873

	We are a campus where we look out for each other						I am responsible to help if a classmate is struggling					
	SA	A	Sw A	Sw D	D	SD	SA	A	Sw A	Sw D	D	SD
% of population	0.09 5	0.28 9	0.36 3	0.12 5	0.08 7	0.04 1	0.12 8	0.30 1	0.36 3	0.13 6	0.05 4	0.01 7
% w/ MH problems	0.28 5	0.31 7	0.39 5	0.46 4	0.52 3	0.65 7	0.37 7	0.36 5	0.38 2	0.44 3	0.47 1	0.52 7

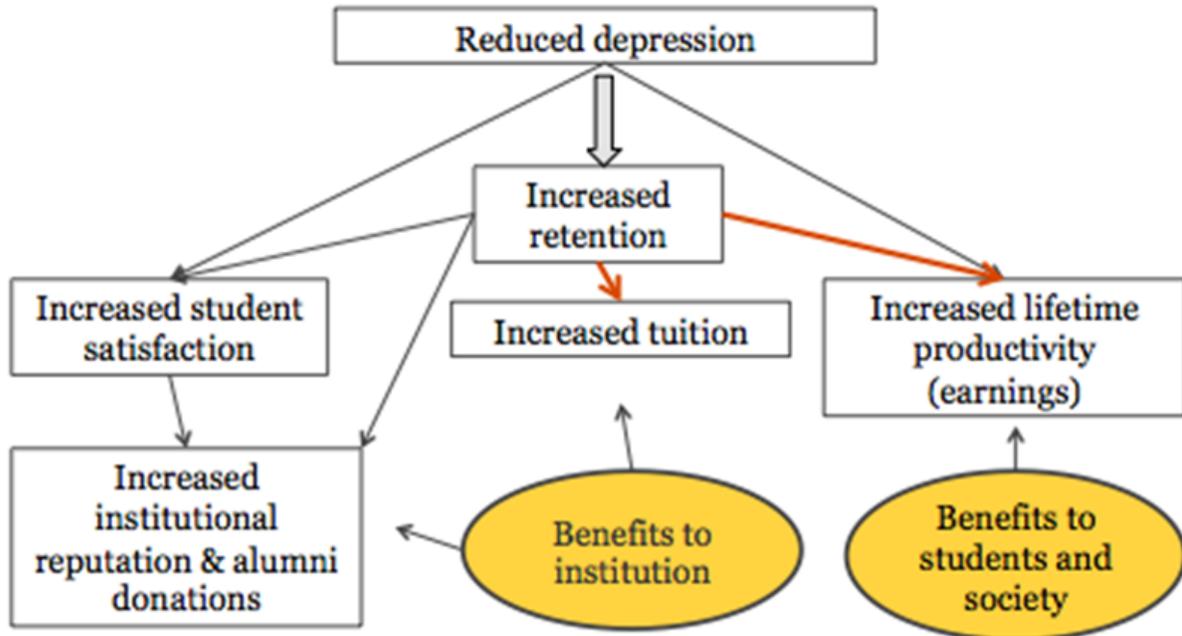
#### **IV. Economic Case for Student Mental Health Services**

Mental health is tightly linked with nearly every aspect of student health and wellbeing, as illustrated by the data in the previous section. To underscore this point for campus administrators and leaders, our research has quantified an economic case for programs and services that improve student mental health (Eisenberg et al., 2009). The primary users of our research, such as directors of counseling centers and health centers, often tell us this economic case is the most valuable piece of data from HMS. They report using this logic, adapted to their own campus contexts, in successful efforts to advocate for more resources to address student mental health.

The figure below illustrates the economic case for a hypothetical program, or services, to reduce depression symptoms in a student population. This case applies to both preventive and treatment services and programs, as long as they are effective in reducing depressive symptoms. Our research has estimated how depressive symptoms predict student retention, using data from the University of Michigan and a small number of other schools. For each of these schools, we have found that the risk of student attrition (the inverse of retention) is approximately double for students with clinically significant levels of depressive symptoms, as compared to students with mild or minimal symptoms, even after adjusting for prior academic achievement (e.g., grade point average and standardized test scores). This implies that programs and services that reduce depression can potentially increase student retention. Student retention, in turn, can yield substantial economic returns to the institution (tuition revenue) and to the students themselves and society at large (higher lifetime earnings and productivity, as a result of higher educational attainment). There may be additional economic benefits through increased institutional reputation and alumni donations, although we have only a small amount of data to quantify those channels (e.g., we have found that depressed students are substantially less likely to report in

HMS that they expect to donate to their institution in the future).

### Economic Case for Student Mental Health Services and Programs



A specific example can help illustrate the logic of this economic case. Consider a potential expansion of services by a counseling or health center, which would allow the center to provide evidence-based care to an additional 1,000 students per year. While this expansion would cost no more than \$1 million (assuming a brief treatment model, as in most counseling and health centers), our analysis for an average institution suggests that the expanded services would retain more than 40 students who would have otherwise left, yielding well over \$1 million in additional tuition revenue and over \$5 million in additional lifetime earnings for the retained students.

We are often asked why our analysis does not take a more direct approach to estimating the relationship between mental health care and student retention. Our approach is indirect; we

estimate how a reduction in depressive symptoms predicts retention, and then draw on other studies, such as meta-analyses of randomized trials, to make assumptions about how much a standard treatment (e.g., antidepressants or cognitive behavioral therapy) can reduce symptoms on average. Why not use our data to estimate directly how treatment use predicts retention? The problem is that any comparison of students who receive treatment, versus those who do not, is substantially confounded by unmeasured factors such as symptom severity--our brief scales such as the PHQ-9 have strong psychometric properties but cannot possibly characterize the full picture of each person's mental health.

Another question about the economic case is whether it is compelling for institutions where student tuition is replaceable. Some institutions have the luxury of maintaining steady or increasing enrollment numbers, regardless of attrition rates. For these institutions, the direct financial case for investing more in student mental health services is questionable. Even for these institutions, however, there are broader economic reasons to make these investments. First, boosting the retention (and graduation) rates even modestly could enhance the institution's ranking and reputation, which can allow them to attract better prepared students or charge higher tuition. Second, even if an institution can quickly replace students who leave, there are transition costs for both outgoing and incoming students, as these students use extra services associated with their departures or arrivals. Third, students with mental health concerns are not only at risk of attrition but also at risk of crises that can be expensive in terms of personnel time and resources. Finally, to the extent that the institution is dedicated to a larger societal contribution, it should take into account the high economic returns for the students themselves and society at large, in terms of future earnings and productivity.

## V. Conclusion

Our data can be summarized in four overarching findings, each of which implies a set of potential priorities for campus practitioners.

First, there are still large numbers of students with untreated mental health problems, despite the steadily increasing use of services. This raises the question about the adequacy of current approaches to the ever-increasing demand for services, which sometimes focus almost exclusively on increasing service capacity and increasing screening and referrals to services. Campuses may need to consider creative, proactive solutions that are closer to the primary prevention spectrum of public health approaches. Such approaches might involve a combination of online resources and in-person programs (e.g., curriculum-based coping skills courses or seminars). Many schools are experimenting in these areas.

Second, stigma is not necessarily the main barrier for many of the students who fail to access services when they are struggling with mental health problems. Thus, efforts to facilitate access to services need to go beyond addressing attitudes and knowledge about mental illnesses and treatment options. We would advocate for approaches that engrain mental health more firmly in the daily culture and routine of student life, such as integrating consideration of mental health with academic advising or academic curricula in creative new ways. This integration would also leverage the fact that mental health can help support students' goals and values with respect to academic success and career development.

Building on the second point, a third finding is that mental health is interconnected with nearly every aspect of student life and wellbeing. Therefore, campus services and programs should be integrated accordingly. For example, financial stress is a clear risk factor for mental health problems, so services that assist students with their finances should connect with services

and programs that support mental health.

Fourth, our analysis of the economic case underscores the high value of mental health services and programs for college students. Of course, a key assumption in this analysis is that services and programs are effective in reducing symptoms, and this assumption should not be taken for granted--campuses must take care to adopt evidence-based practices where possible and evaluate their efforts on an ongoing basis. With this caveat in mind, the implication of the economic case is that institutions and society in general can benefit economically from continued investments in student mental health. Those economic benefits are on top of the basic, primary benefits of mental health services and programs, which are to reduce suffering and increase quality of life.

Our data, in tandem with other research efforts, provide a rich picture of student mental health, but there is much more to learn in the coming years. We have several priorities in mind for future research. We still need to strengthen the data on how mental health relates to academic outcomes and the economic case, by assessing more rigorously the causal relationships (e.g., by examining academic outcomes as part of randomized trials for interventions that improve student mental health). We also need to conduct more longitudinal studies, including post-college outcomes, to get a fuller picture of how investments in student mental health can yield longer-run returns. In addition, we need to gain a better understanding of the variations across campuses in terms of mental health, help-seeking behavior, and related factors. For example, we need to measure various dimensions of campus climate and understand better how these measures relate to student wellbeing and experiences across a range of student backgrounds and characteristics. These are just a few examples of important questions still to be answered in our quest to understand how to invest most effectively in student mental health and success.

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