

# Digital Mental Health Interventions at Colleges & Universities

Understanding the Need,  
Assessing the Evidence, &  
Identifying Steps Forward

*May 2024*

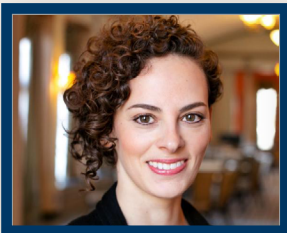
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# Executive Summary

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The number of college students reporting clinically significant mental health symptoms has doubled in the last decade (Lipson, Zhou, Abelson, Heinze, Jirsa, Morigney, Patterson, Singh, & Eisenberg, 2022). As students seek help in greater numbers, higher education leaders are considering the role of digital mental health interventions (DMHIs).

This guide is intended to help higher education leaders make informed decisions about selecting DMHIs. DMHIs refer to the use of digital technologies for mental health support, prevention, and treatment. DMHIs provide behavioral and psychological strategies through technological features, including websites, mobile applications (“apps”), wearables, virtual reality, and online platforms.

Some DMHIs allow students to self-manage symptoms, while others use some form of human support either to increase engagement or to provide additional intervention. Many DMHIs are preventive resources that can support those with less acute needs and potentially reduce need for treatment.

For this guide, we focus on DMHIs specifically designed for and commonly used with college populations. Within that scope, we examine programs that are not solely teletherapy (traditional counseling provided through technology); instead, we focus on those that use technologies to provide new types of interventions. Sometimes those interventions are paired with teletherapy to provide a comprehensive solution. We identified DMHIs based on two sources of information. First, we selected a random sample of 200 colleges and universities, reviewed their websites describing any DMHIs they offer to students, and compiled a list of the most commonly offered interventions in this sample. Second, we learned about other commonly offered DMHIs through interviews with counseling center directors and other experts. These interviews explored the decision-making process of selecting DMHIs for campus communities.

## Acronyms

**ACT = acceptance and commitment therapy**

**CBT = cognitive behavioral therapy**

**DBT = dialectical behavioral therapy**

**DMHI = digital mental health intervention**

**NIH = National Institutes of Health**

**RCT = randomized control trial**

**US = United States**

**UK = United Kingdom**

## Methodology

Identified DMHIs based on two sources of information: intervention offerings at a random sample of 200 colleges/universities (institutional websites), and interviews with college administrators and other experts from 20 institutions.

Reviewed nine specific DMHIs within three categories:

**Multi-component programs** (Mantra Health, TELUS Health, Timely Care, and the WellTrack Ecosystem)

**Self-guided programs** (Silvercloud by Amwell and TAO)

**“Connector” programs** (Togetherall, YOU at College, and Nod)

Examined effectiveness, evaluation design and limitations, user engagement, and current reach for each DMHI reviewed.



This guide was commissioned by the Ruderman Family Foundation. The research and writing of this guide occurred primarily during fall 2023 (October-December). To our knowledge, this is the first guide offering a critical review of specific DMHIs offered to college students.

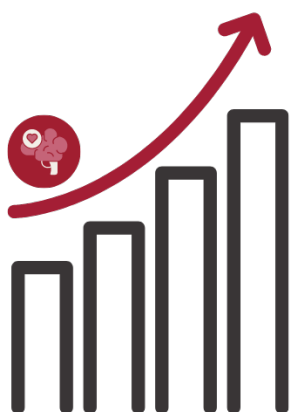
#### List of DMHIs Reviewed

Mantra Health  
TELUS Health Student Support  
TimelyCare  
WellTrack Ecosystem by ProtoCall Services  
SilverCloud by Amwell  
TAO  
Nod  
Togetherall  
YOU at College

We provide reviews of evidence for several specific DMHIs that are offered at many colleges and universities nationwide. We conclude that, although research has demonstrated that DMHIs can be effective at improving mental health, the majority of widely used DMHIs in college settings have limited direct evidence of effectiveness in student populations. There is a need for more rigorous studies, including experimental designs and research on effectiveness of DMHIs for diverse populations and institutional settings. Similarly, more research is needed on user uptake and engagement.

Although there is a clear need for additional research, there is also reason for optimism about the role of DMHIs in supporting student mental health. These tools are expanding the reach of mental health support in a variety of ways for students at institutions nationwide, and a high percentage of users are reporting they are satisfied and believe they are benefitting. In our interviews with counseling center directors and other administrators, we heard consistently that—despite challenges and uncertainty surrounding the selection of evidence-based DMHIs—these interventions are enhancing support as a supplement to traditional services and providing support to students who might otherwise not engage with traditional services.

The landscape of DMHIs is evolving rapidly. Many of the interventions reviewed here will change and new ones will emerge. DMHIs featured in this guide represent only a partial list of options to consider, and options will need to be revisited and reassessed on a regular basis. More comprehensive and continually updated information will be needed. We invite partners to collaborate in this effort.



The number of college students reporting **clinically significant mental health symptoms** has **doubled** in the last decade.

# Summary of Recommendations



Each institution will need to **consider how DMHIs fit with its specific population's needs and its existing system of resources.**

When assessing DMHIs, schools will want to look at factors such as effectiveness (that the intervention can reliably produce intended outcomes), data security and privacy, user experience, uptake, and engagement (the rate at which students continue to use the program after starting), and cost. Higher education leaders should insist on data, evidence, and information from companies to assess these factors.

- Intended outcomes vary considerably across DMHIs and sometimes even within DMHIs, depending on the services and implementation plan purchased and pursued. Colleges should consider what DMHI outcomes and user groups best supplement their mental health strategy, needs, and existing resources. For example, is your institution in need of a preventative, educational, or supportive intervention to improve positive mental health among all students or an intervention designed to reduce symptoms among students experiencing symptoms of depression and anxiety?



Higher education leaders and partners should **consider DMHIs as part of a holistic, public health approach to student mental health.** This requires acknowledgement of mental health along a continuum or spectrum, with resources that address promotion, prevention, treatment, and crisis management. This includes careful consideration of self-guided, support, and digital plus DMHIs.



Higher education leaders will need to consider **how to finance DMHIs** as part of their overall strategies to invest in student mental health. To inform these strategies, it will be important to quantify the value of the DMHIs (e.g., numbers of students who benefit and the amount by which they each benefit on average) as compared to the costs of the DMHIs.



We highlight **three areas of research and evaluation that could provide more useful information to guide decision-making regarding use of DMHIs** for college students.

1. **More rigorous evaluations of commonly used programs.** Evaluations would ideally use experimental or quasi-experimental evaluation designs with a control group that reasonably represents outcomes that would occur without the intervention (or with an alternative intervention).
2. **User engagement.** DMHIs are only effective if students use them, and available data indicate that engagement is a major challenge for many programs. There is a need for more research describing user engagement and clarifying which strategies are most effective for increasing engagement. Evaluations of DMHIs should document user engagement from initial account creation to longer-term sustainment.
3. **Real-world evidence and post-deployment evaluation.** In addition to researching intervention effectiveness in controlled trials, evaluations are needed to demonstrate that, once deployed, DMHIs continue to offer benefits when used in real world conditions by college and university students.



Across these areas for future research and evaluation, **the needs and inclusion of diverse student populations should be a top priority.** Many studies of DMHIs include a disproportionate number of White women (a group most likely to be served by traditional forms of counseling), and the results do not necessarily translate to how these programs might perform across diverse racial, gender, and other intersectional identities.

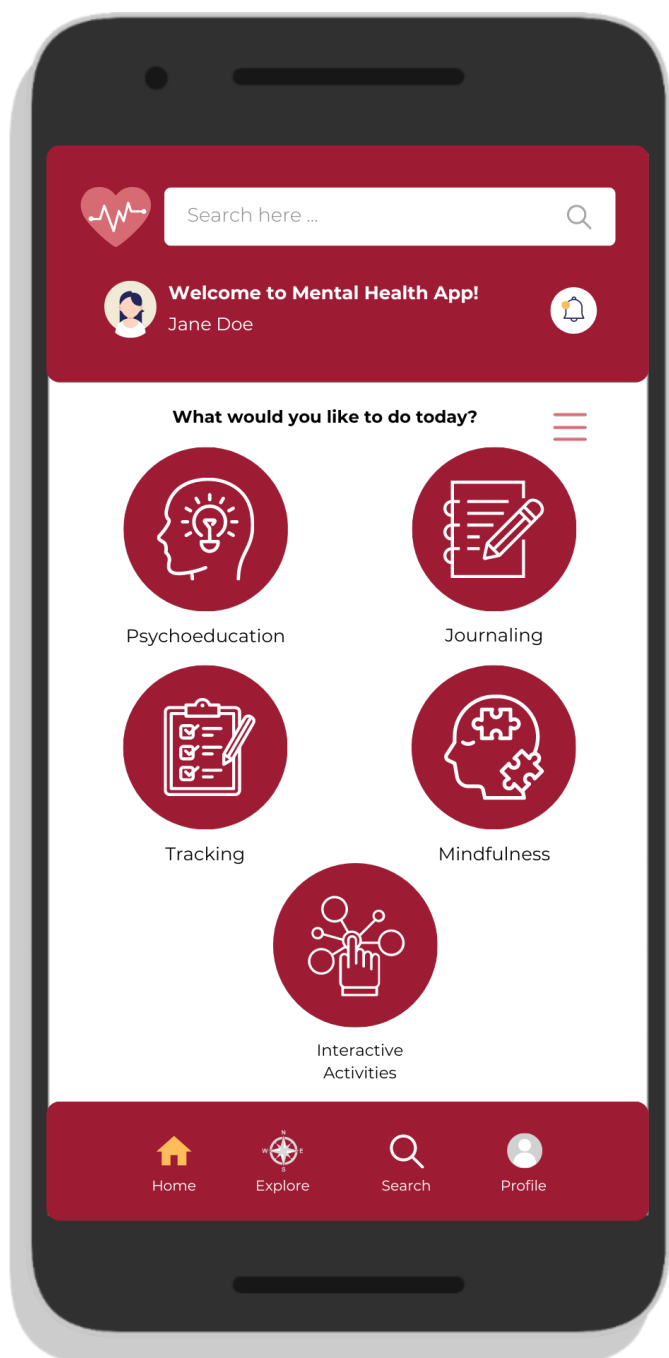
# Understanding the Need

## What are digital mental health interventions?

Digital mental health interventions refer to the use of digital health technologies for mental health support, prevention, and treatment. Various other terms have been used in this space including mental health apps and digital therapeutics. These technologies include websites, mobile health applications (“apps”), wearables, virtual reality systems, and online platforms. The focus in this report on digital health technologies excludes standard communication technologies that are only being used to provide traditional counseling through a technology platform like [Zoom](#), [Doxy.me](#), or [GoToMeeting](#). We use the term digital mental health interventions to focus on some specific aspects:

- DMHIs use technologies to provide behavioral and psychological strategies (e.g., coping skills) through technology features.
- DMHIs include apps, web platforms, and multi-component platforms that combine interactive technology components with virtual therapy.
- DMHIs tend to be consumer-facing. They are designed to meet the needs and interests of students.
- DMHIs are meant to support aspects of students’ mental health including general mental health and wellbeing as well as specific mental health targets (e.g., depression, anxiety, eating and body image concerns).

*A large and growing number of DMHIs exist, with estimates ranging from 10,000 to 20,000. This includes a multitude of different types of products with common features providing psychoeducation, journaling, tracking, mindfulness/meditation exercises, peer support, and interactive activities based on therapeutic practices.*





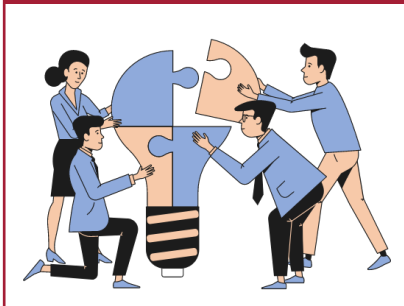
DMHIs can be used in different ways to support college student mental health. Some DMHIs are intended to allow students to self-manage their own conditions or symptoms, while others use some form of human support to increase engagement with the intervention or to provide additional intervention components.

### Self-Guided



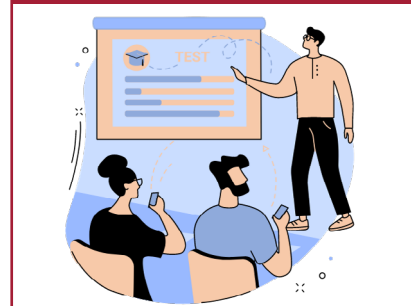
Self-help tools that students can use on their own

### Supported



Digital tools that include a light amount of human support to help students complete the program

### Digital Plus Solutions



Digital tools that include human support to provide peer support, coaching, or therapeutic support

## Why are DMHIs important for colleges and universities?

The number of college students struggling with mental health concerns has doubled in the last decade and students are seeking help in greater numbers, with a growing severity of concerns (Lipson et al., 2022; LeVines et al., 2020; Center for Collegiate Mental Health, 2023). A growing need for mental health support requires considering opportunities to expand capacity for meeting these needs. DMHIs provide one such opportunity, especially given that they can be effective, appealing, and scalable.

**Effectiveness.** Overall, scientific evidence suggests that DMHIs can be effective, especially when provided with some form of human support (i.e., digital plus solutions). Self-guided DMHIs can sometimes produce small to moderate benefits (Linardon et al., 2019). For example, one study found that 34-40% of people experienced at least a 50% reduction in depressive symptoms from self-guided digital CBT, compared to 45-53% of people in supported CBT (Karyotaki et al., 2021). Supported and digital plus solutions can in some cases generate benefits that are on par with traditional face-to-face psychotherapy (Carlbring et al., 2018), although this has not been investigated specifically in college student populations. There is also some evidence that they can be helpful for preventing the progression of symptoms among people with sub-clinical symptoms (Duarte-Díaz et al., 2023).

**34-40%**

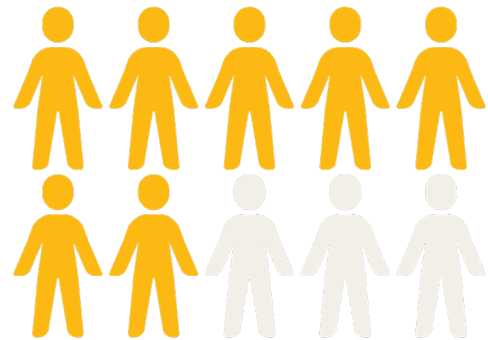
of people experienced at least a 50% reduction in depressive symptoms from **self-guided digital CBT**.

**45-53%**

of people experienced at least a 50% reduction in depressive symptoms from **supported CBT**.

In many countries, DMHIs are being used as frontline treatments for those with mental health conditions. For example, Australia has funded the [MindSpot Clinic](#), a digital mental health clinic that provides digital self-help and virtual care for tens of thousands of Australians. The UK has integrated DMHIs into its Increasing Access to Psychological Therapies Program to provide these interventions as first treatments for conditions such as depression, anxiety, and insomnia.

**Appeal.** Many people may want to use or even prefer a DMHI compared to traditional, in-person healthcare. One survey of 14- to 22-year-olds in the US found that nearly 7 out of 10 had used a mobile health app, with some of the most common being apps for sleep, stress, and meditation (Rideout, Fox, Peebles, & Robb, 2021). The rates were even higher (75%) among those with elevated rates of depression. People like DMHIs because they are convenient, can be used at one's own pace and comfort, and are accessible 24 hours a day. At the same time, the preference for in-person therapy remains strong, underscoring that DMHIs represent a supplement rather than a replacement for traditional mental health services. In a survey of over 60,000 students from 80 colleges and universities, 64% indicated they would be very likely or somewhat likely to use in-person counseling if they were struggling with their mental health (Hope Center, 2023). In contrast, only 32% of students said they would be very or somewhat likely to use a “digital mental health app or online program.” Research is needed to understand whether the appeal of DMHIs varies across student populations and settings. For example, are they attractive to students who are unable to find a local provider with similar lived experiences?



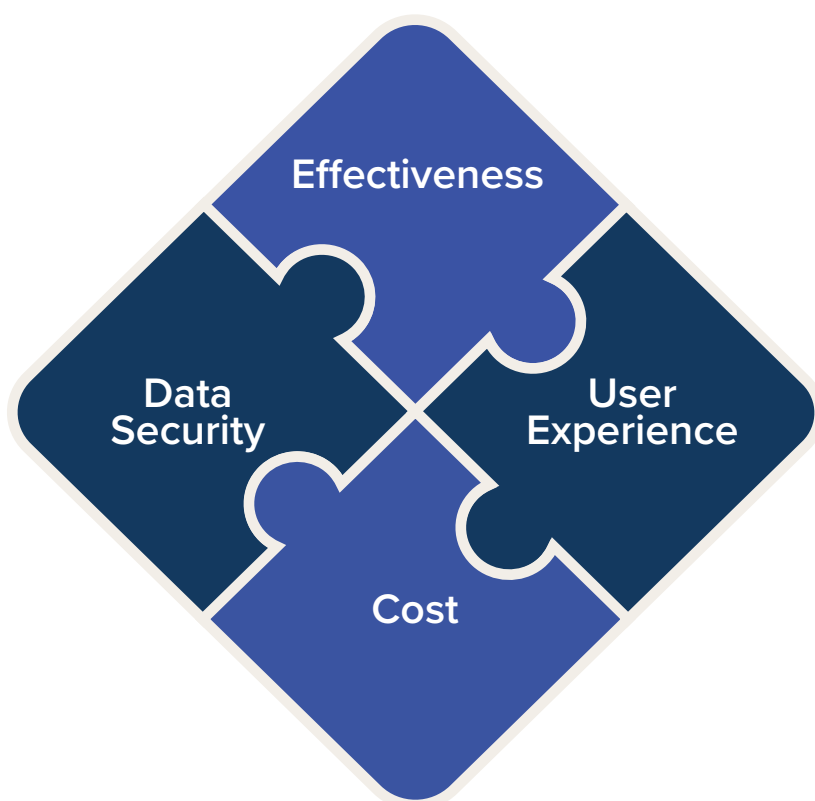
A survey of **14- to 22-year-olds** in the US found that nearly **7 out of 10** had used a **mobile health app**.

**Scalability.** Traditional mental health services can only help one person (or small group) at a time, and require hiring more professionals to meet rising demand. DMHIs can typically help many students without requiring a lot of time from professionals. As one interviewee noted, *“I’m always looking for something to help the students and especially the students that we are not able to reach right now, because they’re not coming into the Counseling Center and need that.”*

Further, state licensure laws prevent providing most traditional clinical mental health services across state lines. Non-clinical DMHIs, not bound by state licensure laws, and DMHI companies that have licensed clinicians across the US and/or abroad may help to provide continuity of care for students as they move between states or countries—for example for work, during breaks, internships, or study abroad experiences, or student athletes traveling for inter-state competition. As mental health needs have increased substantially over time, finding solutions that can provide support at scale is becoming increasingly attractive. In our interviews with campus administrators, many highlighted the ability to provide more students with mental health support as their primary motivation for implementing DMHIs.

## What evidence is relevant to higher education leaders who are selecting DMHIs?

Given that numerous DMHIs exist and that they vary in effectiveness, attractiveness, and scalability, higher education leaders need information to decide whether a specific program will be useful for their school and student population. Alongside the specific needs and characteristics of each school that should be taken into consideration, universal factors that are important for all settings and populations include: effectiveness, data security, user experience, uptake, and engagement, and cost.”



**Effectiveness.** Despite numerous non-college-based studies demonstrating that DMHIs are effective, the number of products far outpaces the science supporting these interventions. Importantly, few studies have been conducted specifically with college students and fewer with racially and ethnically diverse student populations. It is useful to have evidence that supports that a DMHI can reliably produce the outcomes it promises. The strongest evidence for effectiveness typically comes from randomized trials or quasi-experimental studies with reasonable comparison groups, although other types of evidence can also be informative. Our extensive review of the literature revealed that experimental evidence for DMHIs is largely lacking in student populations.

**Data Security.** A common priority of DMHI users is that information they provide to the intervention will be kept safe and secure. Rigorous data security and privacy standards can help address this concern and support user confidence. Another important aspect of safety is a risk management procedure that ensures users are monitored for acute risks and proper outreaches are made. Safety considerations should include a review of data handling procedures that follow standards set by IT departments as well as risk management procedures established by campus counseling/health and collaborating services (e.g., adjacent academic medical center). Such coordination can be a challenge for colleges. As one interviewee noted *“We’ve encountered several challenges with DMHIs at our college. We found that one had multiple contracts, with varying terms, with different entities across our large institution. In two recent experiences, the companies just didn’t deliver and overpromised. In one case they overpromised how ‘turnkey’ their product was, which in fact required substantial administrative support and maintenance from our college.”*



**User Experience, Uptake, and Engagement.** For students to benefit from DMHIs, they need to use them. DMHIs should be free from technical glitches, easy to learn, and easy to use; these are key features of what is often called the “user experience.” A positive user experience can facilitate higher user uptake (the rate at which people try out a program, when offered it) and user engagement (the rate at which they continue to use the program after starting). Of people who start a DMHI, the modal (most common) number of uses is just one (Baumel et al., 2019). Longer sustainment is also frequently low, with one study finding that rates of completion or sustained use after six weeks for DMHIs ranged from 0.5% to 28.6% (Fleming et al., 2018). It is worth noting that the most common number of appointments per student per year at college counseling centers is also one (Center for Collegiate Mental Health, 2023). Higher education leaders should consider product usability and ease of use as well as requesting information about typical use patterns and sustainment before selecting a DMHI.



Of people who start a DMHI, most use it **only once**.

Colleges and universities have an important role in determining whether a DMHI achieves user uptake and engagement. As one of our interviewees noted, *“Many colleges seem to expect DMHIs to result in magic [uptake] but we’ve seen before that you can offer the best service (i.e., in-person clinicians) and if students aren’t aware it exists, [uptake] can still be low.”* Another noted *“...some of our DMHIs require constant attention, marketing, and revisiting the value proposition to make the value obvious to students, faculty, and staff and keep it top of mind.”*

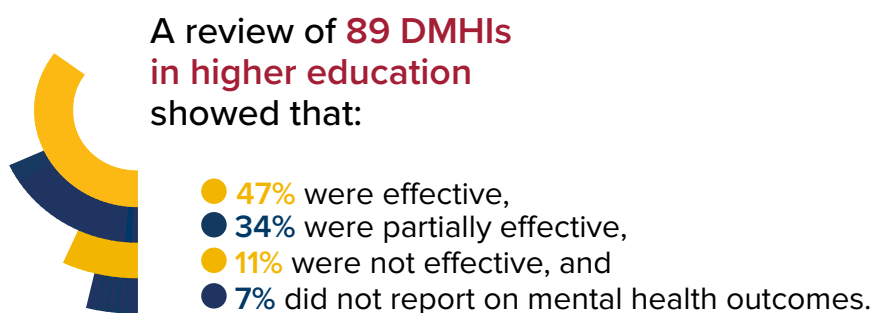
Campuses can increase access to DMHIs through active marketing and integration with other well-established resources. One study surveyed experts in DMHI, student mental health, and industry and noted that reducing friction, addressing privacy concerns, and embedding DMHIs within existing programs and infrastructures were all potential strategies to support awareness and uptake (Kodish, Schueller, & Lau, 2023). The level of implementation support provided by a DMHI company may be an important consideration for colleges and universities who are able to provide less of that support themselves.

**Cost.** Cost is an important factor impacting DMHI uptake and engagement. In higher education, DMHI access is often purchased by states or colleges and provided, without fees, to students. There is wide variation in costs and different pricing models across DMHIs. Many programs do not have standard costs, and pricing models are subject to frequent change. One major challenge in considering costs is that established pathways for reimbursement for many of these programs do not exist. Some efforts have tried to shoehorn DMHIs into existing billing categories (like remote patient monitoring, see Ekekezie, Hartstein, & Torous, 2023), whereas others have attempted to create new codes or new legislation to address these new intervention options such as the Access to Prescription Digital Therapeutics Act (S.3791). With the lack of clear data on user uptake and engagement, understanding cost per use or service delivered is challenging and prevents clear comparisons between products.

# Assessing the Evidence

## Overview of evidence on DMHIs

In general, there is support for the idea that DMHIs can improve a variety of mental health outcomes among college students. A review of 89 DMHIs in higher education showed that 47% were effective at improving all primary outcomes (e.g., clinical symptom scores), while 34% were partially effective, 11% were not effective, and 7% did not report on mental health outcomes (Lattie et al., 2019). This is supported by a systematic review and meta-analysis of 11 moderate quality randomized trials with active, waitlist, or treatment as usual controls assessing psychological well-being (Ferrari et al., 2022). The evidence base is particularly strong for digital interventions based on cognitive behavioral therapy (CBT) for college students (Oliveira et al., 2021; Oliveira et al., 2023), as well as mindfulness and acceptance and commitment therapy (ACT) (Becker & Torous, 2019).



There are two main caveats to this promising evidence. First, with few exceptions, the studies with positive outcomes have not been conducted with the DMHIs that are widely available for college populations. Second, these studies have typically been conducted with a highly selected group of students who have been recruited to participate in a study, which might not be representative of the average student who might use the DMHI in a larger student population.

Another important limitation in the evidence is the lack of understanding for how to improve user uptake and engagement with digital interventions, which are often quite low. Studies typically neglect to report on uptake or reach of interventions. For instance, only four studies reported on uptake and adoption of their programs in a review of 89 studies (Lattie et al., 2019). Similarly, a systematic review examining the reach and uptake of CBT-based DHMIs for college students found that of 90 studies, 81% did not provide sufficient data to calculate reach, 61% did not report rates of uptake, and 53% did not report either outcome (D'Adamo et al., 2023).

In addition, there is a lack of information about how intervention effects might vary across different types of students and institutions. For example, in one review, 91% of studies were conducted at universities, 2.2% at four-year colleges, 5.6% at professional schools and 1% at community colleges (Lattie et al. 2019). As such, the small number of existing studies may not be generalizable.

## Review of commonly used DMHIs designed for college populations

The general evidence about the benefits of DMHIs suggests that these tools are worth considering, but higher education leaders need information about specific interventions in order to make the best choices about which ones to offer at their campuses. This guide takes a first step in that direction by profiling several interventions with a focus on their evidence of effectiveness. These profiles represent a selected sample of the many available interventions; in future work we plan to build a more comprehensive repository. There are other databases not specific to college settings, such as [mindsapps.org](https://mindsapps.org), [Center for Technology and Behavioral Health](https://www.centerfortechandbehavioralhealth.org), and [One Mind PsyberGuide](https://onemindpsyberguide.org), that provide summary reviews of many common mental health apps.

Our focus here is on DMHIs that are designed specifically for student populations, are used by a large number of institutions, and offer something different from or in addition to traditional therapy. The effectiveness of traditional therapy is well documented and research has shown that teletherapy is generally as effective as in-person therapy for a wide range of mental health problems, including depression and anxiety (Abrams, 2020). We exclude platforms such as [AcademicLiveCare](https://academiclivecare.com), [BetterMynd](https://bettermynd.com), and [BetterHelp](https://betterhelp.com) that exclusively provide teletherapy/psychiatry and are discussed in other resources for higher education decision-makers (Roy, 2023). Interventions focused on substance use are also outside the scope of the present report.

We identified DMHIs based on two sources of information. First, we selected a random sample of 200 colleges and universities (from the [Integrated Postsecondary Education Data System \(IPEDS\)](https://nces.ed/ipeds/data/) database maintained by the [National Center for Education Statistics](https://nces.ed/ipeds/data/)), and we searched each institution's website to see which DMHIs they are currently offering or recommending. We compiled a list of the most commonly offered interventions based on this random sample. Second, we learned about other interventions offered through interviews with over 20 campus counseling center directors and other experts. We have included selected quotes from these interviews throughout the guide.

We found there is a rich and growing array of DMHIs for student mental health used by colleges and universities nationwide. As one interviewee reflected, *"there have been so many recently that have popped up, that I personally can't keep them all straight."* Some interventions have reached hundreds of campuses, but there appears to be a highly competitive and diverse landscape, with no single intervention dominating. There are many interventions in each of the categories noted previously—self-help, supported, and digital plus—and many products contain tools or options in more than one of these categories.

In general, the evidence of effectiveness for the commonly used interventions is limited. Although most interventions are grounded in evidence-based practices such as CBT and mindfulness, there is a lack of evidence specific to the interventions. Most of these interventions have not undergone or reported evaluation results or systematic post-deployment data. If an intervention is rooted in CBT, for example, it is reasonable to expect that it has the potential to be helpful in reducing symptoms of depression and anxiety, but the actual effectiveness will still depend on the details of how the intervention is designed and the context in which it is delivered. Similarly, there is limited information about user uptake and engagement for these interventions, just as there is in the more general literature regarding DMHIs. Although college students are good candidates in many respects for engaging with digital interventions, the actual uptake and usage rates for most interventions appears to be low compared to the high and rising mental health needs in this population. Finally, there is also limited information regarding impact on outcomes beyond mental health symptoms, such as help-seeking or "mental health literacy" at a population level.

Despite the limited evidence regarding the effectiveness of DMHIs in college populations, these tools clearly have a potentially important role to play in supplementing traditional services, for many of the reasons discussed in the beginning of this guide. At the very least, they could be increasing mental health knowledge and awareness in campus populations.



We hope that raising awareness about the limitations of current evidence will help spur efforts to gather more conclusive evidence moving forward. As one interviewee noted, *“I would say that I honestly don’t...look at things like efficacy and the effectiveness [of] a program. Now that you asked that question....we ought to be doing that.”* At the same time, interviewees recognized the importance of data for future decision-making: *“Gathering data is essential to making any decision to purchase products or not. You want to know how it is utilized. Are students getting any benefit from it? Were there improvements in retention? Was there any difference in traffic coming in and out of the Counseling Center?”* Higher education leaders should expect such evidence from companies, just as health care organizations and insurance plans do for many of the critical health services that are delivered to patient populations.

In the following pages, we provide brief overviews of the evidence for specific DMHIs used in college and university settings. To organize these reviews, we group the programs into a few categories. **First**, there are several programs that are more comprehensive, with many components spanning the range of self-guided, support, and digital plus (as described earlier). This first group includes [Mantra Health](#), [TELUS Health](#), [Timely Care](#), and the [WellTrack Ecosystem](#). Although pricing for most DMHIs in our review is not publicly available, this first group of programs is generally the most expensive, because it includes the most human support (depending on which components are selected by a campus). A **second** group of programs include those that are primarily self-guided, with a limited amount of human support, and use CBT and other evidence-based therapeutic principles to address common mental health issues such as depression and anxiety. These include [Silvercloud by Amwell](#) and [TAO](#). **Finally**, our review includes three programs that we loosely categorize as “connector” interventions. These programs connect students to other people and resources that can help support their mental health. These include a program that provides connections with peers ([Togetherall](#)); a portal that curates a wide variety of resources from both within and outside each campus community ([YOU at College](#)); and a self-guided program with a special focus on helping students with loneliness and social connection ([Nod](#)).

Although many of our interviewees highlighted cost as a central consideration when selecting DMHIs, we were not able to provide pricing information in this review. As noted, this information is not publicly available for most DMHIs. For the DMHIs reviewed in this guide, colleges typically pay for a certain level of services or access, which is then offered to all students or a set of students at no cost.

### We review three broad categories of DMHIs:



#### Multi-component

spanning self-guided, supported, and digital



#### Self-guided programs

addressing common mental health concerns



#### “Connector” programs



## **Multi-component programs (spanning self-guided, supported, and digital plus)**

### **Mantra Health**

#### **Description**

Mantra Health launched in 2019 and currently offers two options for their product: Capacity Expansion, which provides teletherapy and telepsychiatry services to supplement a campus's existing services; and Whole Campus Care, which provides a comprehensive package of services and support. The Whole Campus Care model is based on a stepped care approach and includes self-guided resources in the form of a dialectical behavioral therapy (DBT) modules to build relevant skills and resilience for mental wellness, peer-to-peer support through a partnership with Togetherall, emotional wellness coaching, teletherapy, telepsychiatry, virtual intensive outpatient programming, and 24/7 crisis support/on-demand emotional support. Both models include access to Mantra's proprietary Collaboration Portal for campus clinical leaders which provides: direct student referrals into Mantra's in house provider network, filterable by provider specialties, location, and demographics; aggregate reporting (including total students in care, ability to filter students by student risk status, time from referral to first appointment, referral completion rate, overall attendance rates, and satisfaction with provider); ability to directly message providers; and full student records including clinical notes, safety plans, risk levels, and ongoing patient symptom monitoring as measured by the PHQ-8 and GAD-7.

#### **Evidence of effectiveness**

We were not able to identify any published outcome studies for Mantra Health. The Whole Campus Care service was launched in fall 2023 and does not have data available yet. Their website provides some perceptions of users of their teletherapy and telepsychiatry services: 70% of users said the services they are receiving through Mantra Health have helped them stay enrolled in school; 68% said the services through Mantra Health have helped them perform better in school; and 98% gave a positive rating to the Mantra Self Care program. They also provided us with additional outcome data, which also indicate significant improvements for their users. For example, from 2020-2023, among students who attended three or more sessions (71% of users), more than two-thirds improved to a lower category of depressive or anxiety symptoms and 70% reported a higher likelihood of remaining in school.



**70%** of users said the services they are receiving through Mantra Health have helped them stay enrolled in school.



**68%** of users said the services through Mantra Health have helped them perform better in school.



**98%** of users gave a positive rating to the Mantra Self Care program.

## User engagement

We were not able to identify published data on user uptake and engagement. They did provide us with unpublished results, which include: 91% of students who were referred to clinical care attended at least their first appointment when referred directly by campus clinical staff from Mantra's Collaboration Portal technology; 71% of students who entered clinical care attended at least three sessions; and the average number of sessions for their users was 8.9.

## Current reach

In our scan of DMHIs in a random sample of 200 colleges and universities, we found that 1 institution (0.5%) was offering Mantra Health as of fall 2023. Mantra Health is currently offered at over 125 campuses serving more than 800,000 students, according to their website.

### TELUS Health Student Support

## Description

TELUS Health Student Support (myssp.app) provides real-time 24/7 access to professional counselors, scheduled short-term support, and additional mental health resources. Campuses can subscribe to one of three tiers:

1. "24/7 crisis phone support" (real time phone support for students, staff and faculty consultations, referrals to campus services and off-campus specialists);
2. "Essential" (the phone support features noted above, plus 24/7 real-time chat support, library of wellbeing resources, health assessments, and virtual fitness sessions);
3. "Total Care" (previous features plus phone/video support with a counselor, in-person support, and monitored referrals between campus counseling and the student support counselor).

The program, formerly known as My SSP, began with an emphasis on international students, by providing virtual access to counselors with a wide variety of language and cultural backgrounds. The current program retains this ability to serve diverse populations, but is also used to serve entire student populations.

## Evidence of effectiveness

We were able to identify one evaluation study, which took place in 2018-2019 (Morneau Shepell & JED, 2020). The study involved 23 campuses using My SSP (as it was named at the time), of which 6 provided the program exclusively to international students and 17 provided it to their full student populations. The evaluation primarily used data from a brief survey administered to students before and after they participated in a support session with a counselor. The response rate for the survey was 58%. Students were asked how concerned they were about their main presenting issue (e.g., depression, anxiety, stress). This concern level dropped on average by 0.5-0.6 standard deviations after the sessions. The majority of students accessing My SSP had not previously sought professional support, indicating the service was reaching students who might not otherwise receive support. The majority of students accessed the program outside of normal business hours, and nearly half of students said they would not have used the service if it had not been available in multiple languages. User satisfaction was high: 96% agreed they would recommend the service to a friend or fellow student.



## Limitations of the evidence

The evaluation described above assesses a previous version of the program that does not include many of the features now available in the program. It also does not measure clinical symptoms or other indicators of mental health, and does not include a control group. Furthermore, it is not clear whether the survey participants are representative of all users, and whether attrition from pre- to post-survey might have affected the sample composition.

## User engagement

We were not able to identify data on user uptake and engagement, except that the website reports over 7 million total student support interactions worldwide.

## Current reach

Our scan of 200 randomly selected institutions found that 8 (4%) were offering TELUS Health Student Support. According to their website, the program is offered in more than 150 languages and serves more than 160 countries with a worldwide network of 35,000 professionals.

**TELUS Health Student Support** serves more than



## TimelyCare

## Description

TimelyCare is a virtual health and well-being intervention offering 24/7 on-demand access to a network of providers and emotional support as well as a range of services including mental health counseling, medical care, psychiatric care, health coaching, basic needs assistance, faculty and staff guidance, peer support, and digital self-care content. TimelyCare was established in 2017 (then TimelyMD). It was adopted by the first university—Abilene Christian University—in 2018.

## Evidence of effectiveness

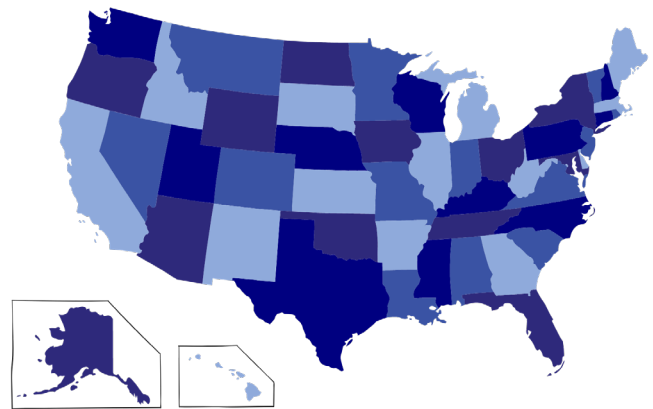
We were not able to identify any formal evaluations of TimelyCare's effectiveness. Their website provides a series of case studies that describe why and how various campuses have implemented the intervention in recent years. These case studies include quotes from campus administrators, professionals, and students, and they also mention high satisfaction ratings from students who have used TimelyCare.

## User engagement

We were not able to identify data or reports on user engagement.

## Current reach

Our scan of 200 randomly selected institutions found that 2 (1%) were offering TimelyCare. According to its website, TimelyCare is active in all 50 states; it serves more than 2 million students nationally and partners with more than 300 campuses.



**TimelyCare** is active in all **50 states**.

## WellTrack Ecosystem by ProtoCall Services

### Description

Protocall is a digital mental health company that has been offering crisis care for campuses since 1992, and has now expanded its services to offer a comprehensive package called the Welltrack Ecosystem. This package includes crisis care, care coordination, assistance with referrals, peer support (through a partnership with Togetherall), and a self-guided mental health app called Welltrack Boost. Here we focus on Welltrack Boost, because it is the component that fits within the scope of this report.

The WellTrack Boost app includes five components: wellness assessments; self-help CBT courses; self-help tools such as quizzes, a thought diary, and a Zen Room; a progress tracker; and connections to other resources (such as monitoring by a therapist and information about other sources of support in the community). WellTrack Boost provides aggregated user data to the institution to assess behavioral health needs. The data highlight the most prevalent issues on campus, identify students who may be at risk, estimate the number of students who have improved their mental health as well as provide insight into resource use.

### Evidence of effectiveness

We were not able to identify outcome evaluation reports or other evidence specific to WellTrack Boost. The program is grounded in evidence-based approaches including CBT, motivational interviewing, and mindfulness. In unpublished user feedback surveys regarding Welltrack Boost, provided by the company, 60% said it helped them stay enrolled in school, 72% said it helped their overall wellbeing, and 24% said they would not have sought mental health support elsewhere.

## User engagement

We were not able to identify data related to user uptake and engagement.



**60%** of users said the services they received through WellTrack helped them stay enrolled in school.



**72%** of users said WellTrack helped their overall wellbeing.



**98%** of users said they would not have sought mental health support elsewhere.

## Current reach

Our scan of 200 randomly selected institutions found that 15 (7.5%) were offering WellTrack. According to the company, the Welltrack Ecosystem serves over 420 campuses, covering over 6 million students. Welltrack Boost covers over 85 campuses and 1.1 million students.



***Self-guided programs addressing common mental health concerns***

SilverCloud by Amwell

## Description

SilverCloud is a self-guided DMHI based on principles of CBT. It has modules corresponding to common mental health issues such as depression, anxiety, stress, and sleep problems. It was established in the UK in 2012, and in 2021 was acquired by Amwell, which expanded services to include connecting users to a virtual network of behavioral health providers. The program has been implemented with not only higher education populations but also health care provider and health plan networks.

## Evidence of effectiveness

There have been [dozens of published studies reporting outcomes for the SilverCloud program](#). Here we focus on the small number of recent studies that involve college and university students specifically. First, a study of 102 students at a large university in the midwestern US found significant reductions in depression, anxiety, and stress among SilverCloud users, although the sample attrition was over 50% by the three-month follow-up (Palacios et al., 2018). The three groups all experienced comparable improvements in symptoms (lower depression, anxiety, general distress). In addition to these two studies, a multi-campus NIH-funded randomized trial was recently conducted to evaluate the impact of offering SilverCloud to students experiencing symptoms of depression, anxiety, or eating disorders (Fitzsimmons-Craft et al., 2021). This study is expected to report its main outcomes in 2024.

## Limitations of the evidence

The studies to date with students have had high attrition or compared self-selected groups, as noted. The new results from the NIH study mentioned above will help address these gaps. These limitations are also addressed to some extent in many of the studies of SilverCloud for non-student populations.

## User engagement

In the study at a large, public university in the midwest, SilverCloud users averaged a total of 14 logins and 296 minutes using the program. In the study at the large western university in the US, SilverCloud users logged in an average of 7 times in total, and viewed an average of 15% of the program's pages.

In a study at a large, public university in the midwest, **SilverCloud** users averaged a total of **14 logins** and **296 minutes** using the program.



## Current reach

We were not able to identify information on the current number of institutions or students using SilverCloud. However, our scan of 200 randomly selected institutions found that 5 (2.5%) were offering SilverCloud.

## TAO

## Description

TAO is a multi-tiered set of digital resources that is designed to meet the needs of users across a wide range of concerns and severity levels. It can be used as a standalone resource or as an adjunct to traditional therapy. The program is rooted in evidence-based practices such as CBT, ACT, DBT, and mindfulness. Its delivery modes include self-help videos, group training, individual treatment, and coursework on coping skills. TAO has modules that address specific concerns for higher education students, such as the transition to college, stress reduction, communication and relationships, focus and concentration, alcohol use, and sexual assault.

## Evidence of effectiveness

There have been two published studies, both reporting positive outcomes, for users of an early version of TAO, when it was primarily a CBT-based treatment for anxiety. The first study compared 72 students receiving TAO to 1,169 students receiving therapy at a university counseling center, and found significant small to medium effect sizes over seven weeks for improving global mental health, well-being, and reducing anxiety symptoms (Benton et al., 2016).

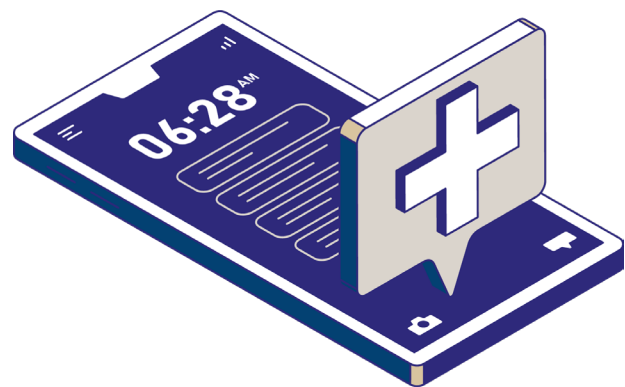
A second study compared clinical outcomes for 785 TAO clients at 24 college and university counseling centers from 2015-2016 (Cornish et al., 2017), versus benchmarked data from a separate study examining clinical outcomes from 13,664 clients across 46 college and university counseling centers (Owen et al., 2016). This study found that on average TAO clients had slightly better improvements than the comparison group on measures of global mental health, well-being, and life functioning. In addition to these published reports, TAO's website provides briefs summarizing data from participating sites, indicating positive experiences from therapists' perspectives and improvements in client-reported symptoms.

## Limitations of the evidence

There have not been published studies on the more recent, multi-tiered versions of TAO. The studies with an early version of TAO focused on a self-selected group of students who opted into using TAO. One of the studies had substantial missing data (Benton et al., 2016) and the other did not report the extent of missing data (Cornish et al., 2017). As with other DMHIs, there is also limited evidence on how the program effects might vary across diverse student populations.

## User engagement

TAO uses personalized text reminders and a regular stream of "homework assignments" to keep users engaged. In some of the formative research that led to the development of TAO, investigators asked students a series of questions about their willingness and interest in various modes of treatment delivery (Travers & Benton, 2014). We were not able to find recent statistics on user uptake and engagement for TAO, however.



TAO uses **personalized text messages** as one way to keep users engaged.

## Current reach

In our scan of DMHIs in a random sample of 200 colleges and universities, we found that 24 institutions (12%) were offering TAO as of fall 2023. This indicates that TAO ranks as one of the most commonly offered multi-tiered programs nationwide.





## “Connector” programs

### Nod

#### Description

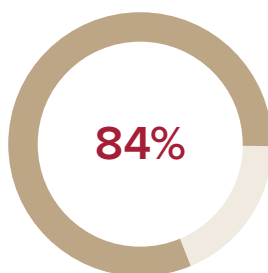
Nod is a digital application that addresses loneliness among college students by building skills to facilitate meaningful social connections. It is founded on evidence-based practices from positive psychology, cognitive and behavioral skill building, and self-compassion. This is translated into building social connection in three ways:

1. **social challenges**—prompts based on the science of social connection that help students take small, achievable steps to build social connections;
2. **reflections**—short in-app exercises that help students process social experiences, reduce self-criticism, and build resilience so they can keep progressing toward their social goals; and
3. **testimonials**—real student perspectives on social connection that reinforce the message that building connections takes time and effort.

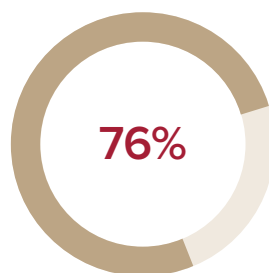
Nod was developed through user-centered design in a collaboration between Grit Digital Health and Hopelab.

#### Evidence of effectiveness

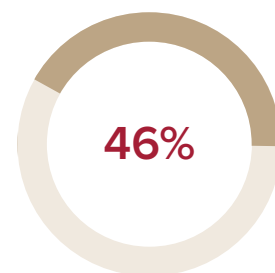
We identified one published report evaluating Nod: a randomized control trial among first-year students (N=221) at a university in the northwestern US (Bruehlman-Senecal et al., 2020). The sample included 47% non-White students and 35% first-generation college students. When comparing outcomes for the intervention and control groups, there were no significant differences in loneliness, mental health (depression, anxiety, social anxiety), sleep quality, or college adjustment (social support, belonging, social adjustment). In additional analyses, however, the study found that depression at baseline predicted poorer outcomes for students in the intervention as compared to the control group. The report interprets this finding as meaning that Nod benefited students with elevated risk at baseline, but there are no data presented directly on how outcomes compared for the intervention versus control group, among students with elevated risk at baseline. In terms of user experience, 84% of users reported the content was easy to understand, 76% said it gave sound advice, 46% reported that they’d like to continue using the app, and 41% reported having implemented skills.



of users reported the content was **easy to understand**



of users said it gave **sound advice**



of users reported that they'd like to **continue using the app**

## Limitations of the evidence

The trial of Nod noted above has many strengths, such as the randomized design, low study attrition, and measurement of a variety of outcomes. The interpretation of the positive findings is not entirely clear, however, as noted above. Also, as acknowledged in the study, engagement with the app might have been boosted by students' knowing they were in a study and their receipt of payment for participating in the study (although not for use of the app).

## User engagement

In the one trial of Nod to date, 96% of the treatment group created an account in the app, and users viewed an average of 37 pages of content during the four-week study. On average, users marked as completed 0.9 social challenges and clicked through 1.1 reflections.

## Current reach

We were not able to identify data on the current reach of the app in colleges and universities. However, our scan of 200 randomly selected institutions found that 5 (2.5%) were offering Nod.

## Togetherall

### Description

Togetherall is an online peer support platform where members can connect on shared interests. Users can also access structured courses to improve coping skills and promote health behaviors. Licensed professionals monitor the platform for changes in risk and support or refer someone they deem to be at imminent risk. Formerly known as Big White Wall (BWW), the program was founded in the UK in 2007 and became available in the US starting in 2014.

### Evidence of effectiveness

There has been one randomized trial of Togetherall, which reported promising outcomes for hospital outpatient mental health clients ages 16 and over in Ontario, Canada (Hensel et al., 2019a). In measuring outcomes after three months, they found small but statistically significant effects for improving mental health recovery and reducing depression and anxiety symptoms, among people referred to Togetherall, compared to a waitlist control group. A sub-study of this trial re-randomized intervention participants who were interested in continuing after three months, but there were no apparent improvements among those who were offered extended access to the intervention compared to the control group (Hensel et al., 2019b).

Other studies related to Togetherall report on the overall logic and evidence supporting the approach (Togetherall, 2023; Harding & Chung, 2016), the theory of change underlying the intervention (Thomsom et al., 2023), the experiences and perspectives of moderators (Deng et al., 2023), and user engagement (see below) (Marinova et al., 2022).

## Limitations of the evidence

There have been no published studies evaluating outcomes of Togetherall for college students specifically. In other populations, some of the most positive findings are for subsamples of participants who engage most with the intervention, which could partially reflect unmeasured differences in motivation or other confounding factors. In the main randomized trial to date (Hensel et al., 2019a), the main outcome measures at three months were available for 48% of the intervention group, versus 69% of the control group.

## User engagement

In the study with outpatient clients in Ontario (Hensel et al., 2019a), 86% of the intervention group activated their user accounts. Among these users, the mean number of logins was 8.7, but the median was just 2. In the retrospective analysis of adolescent users of Togetherall in the UK (Marinova et al., 2022), the mean number of logins was 5.1 and the median was 2. The mean total usage time was 64 minutes and the median was 28 minutes. Slightly less than half of users (48%) accessed one or more guided courses within the intervention.

According to **Togetherall**, they have reached **4.6M students** worldwide.



## Current reach

Togetherall states that they have reached 4.6 million students worldwide and have a presence with more than 450 colleges and universities. Our scan of 200 randomly selected institutions found that 22 (11%) were offering Togetherall.

## YOU at College

### Description

YOU at College is a digital platform that provides curated resources to students in higher education. The resources are organized into three categories:

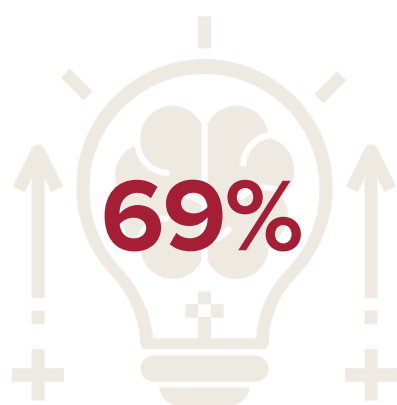
1. “**succeed**,” which focuses on academic success;
2. “**thrive**,” which focuses on well-being; and
3. “**matter**” which focuses on belonging. Students learn how to take action through self-check assessments, goal setting, and skill-building exercises.

The look and content of the platform is customized for each institution; it integrates campus resources with articles, videos, and exercises. Aggregate data on usage and self-assessments are provided to institutions to inform programming and planning. There is also a version of YOU for faculty and staff members. YOU at College was developed by Grit Digital Health in 2015 in collaboration with Colorado State University.

## Evidence of effectiveness

We found two reports with evaluation data for YOU at College, which are on the program's website. The first report summarizes outcomes from the launch at Colorado State in 2016 (Grit Digital Health, 2016). In a survey of 350 student users, 87% reported increasing awareness of resources, and 76% said YOU helped them manage stress. The second report, published in 2020, summarizes experiences with YOU at California State universities (Demers et al., 2020). At one institution, 51 students (83% from underrepresented groups) provided feedback: 100% agreed the platform is valuable; 93% said the resources are relevant to their identities; and 69% learned new skills (of whom 82% practiced those skills). At the other institution, students in a focus group found the design student-friendly and the platform increasingly useful over time.

*At one institution, 51 students provided the following feedback:*



said they learned new skills.



**100%** agreed that YOU is valuable.



**93%** said the resources are relevant to their identities.

## Limitations of the evidence

Although the user feedback is positive, we could not identify any studies of YOU with mental health and well-being outcomes, nor any studies with control or comparison groups.

## User engagement

User engagement can be high at institutions promoting the platform. Within months of launch at Colorado State, the portal had received more than 7,000 visits, and each visit averaged five minutes (Grit Digital Health, 2016). Within three months of launch at CSU-Fullerton in 2020, 25% of all students, faculty, and staff created accounts. User visits averaged over 4 minutes. The university marketed YOU through links in existing platforms and promotional videos and social media by higher education leaders. At CSU-Long Beach, within six weeks of launch in 2020, 46% of students and 60% of faculty/staff created accounts, and 3,000 self-checks were completed.

## Current reach

The program website indicates that the program is “embraced by over 200 campuses.” Our scan of 200 randomly selected institutions found that 10 (5%) were offering YOU.

## Other DMHIs to Consider

While the previous section profiled many of the DMHIs that are designed for and used widely in college populations, there are many other interventions that warrant consideration. One such category of interventions is those that are not designed specifically for college populations but are nonetheless frequently used by students (and often recommended by their institutions). A number of mindfulness and meditation apps fall into this category. For example, Calm and Headspace are both recommended to students by many colleges and universities, as we found in our review of 200 randomly selected institutions. In some cases, institutions purchase group licenses, so that all students (and sometimes faculty and staff) can have free access to the app, and in other cases, the institutions simply list the app on their student mental health website as a recommended resource.

### Headspace



[Headspace](#) has considerable evidence supporting its effectiveness. One Mind Psyberguide rates Headspace a 5.00 out of 5.00 for credibility (grounded in science and evidence) and 4.97 out of 5.00 in user experience. Randomized trials of Headspace have found significant improvements in mindfulness (Bennike et al., 2017), positive affect and reduced depression (Howells et al., 2016), and health-related quality of life (Rosen et al., 2018).

### Calm



[Calm](#) has less evidence regarding its effectiveness, but is still highly rated by One Mind PsyberGuide for credibility (4.67 out of 5.00) and user experience (4.40 out of 5.00). Calm yielded positive outcomes in a randomized control trial involving 88 college students, with significant effects on stress, mindfulness, and self-compassion (Huberty et al., 2019).

### UCLA Mindful



The [UCLA Mindful app](#) is another meditation and mindfulness app that is recommended by many institutions for their students, as we found when reviewing the random sample of 200 institutions. Although we were not able to identify any studies of this app with college students, there have been studies with other populations, such as pediatric residents, that found positive effects on mental health (Purdie et al., 2023).

Several digital CBT products also fall into this category. As mentioned earlier the evidence base is particularly strong for digital CBT for college students (Oliveira et al., 2021; Oliveira et al., 2023). Some examples of CBT products include [Sanvello](#), [Mindshift](#), [myStrength](#), and [moodgym](#). Several other programs may integrate CBT exercises or concepts into a broader program such as [Happify](#). The US Department of Veterans Affairs and Department of Defense have also developed several apps for veterans to support their mental and behavioral health needs. These include apps for specific symptoms or conditions such as sleep problems ([Insomnia Coach](#)) or trauma symptoms ([PTSD Coach](#)) and different therapeutic strategies (i.e., [Mindfulness Coach and Safety Plan](#)). Despite these apps being developed for Veterans, they could be useful for a broader audience and are free.



Another important category of interventions to monitor is those that have a promising research basis with college populations but are not yet widely available. One notable example is the [Young Black Men, Masculinities, and Mental Health \(YBMen\) project](#). It is an online psychoeducation program that uses popular culture to promote mental health, progressive definitions of manhood, and social support among Black college men. The program has been implemented at five colleges and universities to date, involving over 300 students.

Participants have experienced decreases in depressive symptoms and increases in social support (Watkins et al., 2023). The developers of the program note that it has potential to be especially beneficial for Black men who are first-generation college students.

Another program with an emerging research base is the [Screening and Treatment for Anxiety and Depression \(STAND\) program](#). This is a stratified stepped care model that incorporates online screening, continuous symptom monitoring, and triaging to the appropriate level of care (three tiers for students with mild, moderate, and severe symptoms respectively). The program includes a digital CBT program that can be supplemented with trained coaches who provide support and encouragement. An initial evaluation found significant declines in depressive and anxiety symptoms for students in all three severity tiers (Wolitzky-Taylor et al., 2023). An NIH-funded center is currently conducting trials in collaboration with a community college. This initiative will report new findings in the coming years, and one of the goals is to support the implementation of STAND at other colleges and universities, particularly community colleges.

The landscape of DMHIs is evolving rapidly. Many of the current programs will change substantially, and new ones will emerge. As one interviewee noted, *“It’s hard to keep up with this stuff because interventions change, and then scientific papers change. There’s so much information that keeps coming.”* It is important to keep in mind that the profiles of interventions above represent only a partial list of options to consider, and everyone in the field will need to reassess these options on a regular basis. This is part of our team’s broader goal for synthesizing and sharing evidence moving forward, as described on the [Healthy Minds website](#).

# Identifying Steps Forward

## Urgent need for more research and evaluation

Although research has demonstrated that DMHIs have potential to be effective at improving mental health, the majority of widely used DMHIs in college settings have limited direct evidence of effectiveness in student populations. The majority of DMHIs evaluated rigorously in research studies are never commercialized and are not available for students at scale. Similarly, most widely available DMHIs have not undergone rigorous evaluation. It is important to recognize that the proliferation of DMHIs in higher education is somewhat recent, meaning that it may not be realistic to expect randomized control trials or large-scale evaluations to exist for all interventions at this time, but we hope this guide underscores the value of filling gaps in the evidence base moving forward. Research is starting to emerge that describes efforts to integrate DMHIs into various service settings including health systems like Kaiser Permanente (Mordecai et al., 2021), Reliant Health Partners (Youn et al., 2023), and the National Health System in the UK (Bennion et al., 2017). However similar integrated implementations have not been conducted and evaluated in college populations.

We highlight here three areas of research and evaluation that could provide more useful information to guide decision-making regarding use of DMHIs for college and university students:



- ✓ More rigorous evaluations of commonly used programs
- ✓ User engagement
- ✓ Real-world evidence



### *More rigorous evaluations of commonly used programs*

Evaluations would ideally use experimental or quasi-experimental evaluation designs with a control group that reasonably represents outcomes that would occur without the intervention (or with an alternative intervention). A common concern with randomized trials is that they are seen as conflicting with the goal of offering a resource to everyone in a community. It is not necessary to restrict access to a DMHI, however, in order to conduct this type of study, particularly in the context of DMHIs that have low uptake. For example, an “encouragement design” trial can compare one group who are heavily encouraged or incentivized to use the intervention versus another group of students who have free access but no such encouragement or incentive. Trials can compare a particular DMHI to digital help seeking as usual, providing lists or suggestions of potential programs (as many colleges and universities do) and monitoring which resources students in that condition actually use.

Increasing the rigor of research for commonly used DMHIs will require collaborations between researchers, campuses, and the companies that own and distribute the interventions. Many of these companies have researchers and data scientists on their teams, suggesting the capacity and interest to partner in more rigorous studies of their products. As one interviewee noted, *“I think it would be great if there was some organization or research team that could provide counseling centers with data to make a better decision, because right now we’re in the dark.”*



## *User engagement*

DMHIs are only effective if students use them, and available data indicate that user engagement is a major challenge for many programs. Most evaluations of DMHIs do not report outcomes related to user engagement, and those that do generally report relatively low levels (D'Adamo et al., 2023). Thus, there is a need for more research describing user engagement and clarifying which strategies are most effective for increasing engagement in college populations.

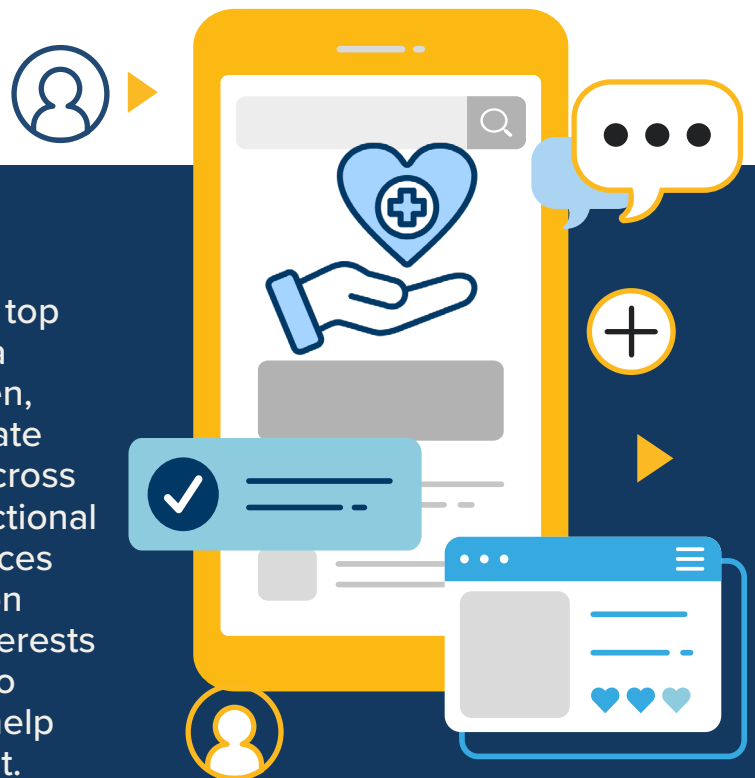
Evaluations of DMHIs should document user engagement from initial account creation to longer-term sustainment over weeks or months, depending on the type of intervention. Studies should also compare alternative strategies for increasing engagement, such as strategies that use varying levels of human support. User engagement can also depend on cultural factors, which need to be better understood. In a study that surveyed industry experts regarding the engagement of students of color with DMHIs, researchers identified key barriers including mistrust of mental health services and lack of culturally responsive care, as well as potential facilitators such as reducing user burden and friction, addressing privacy issues, and embedding DMHIs into existing infrastructure and workflows (Kodish et al., 2023).



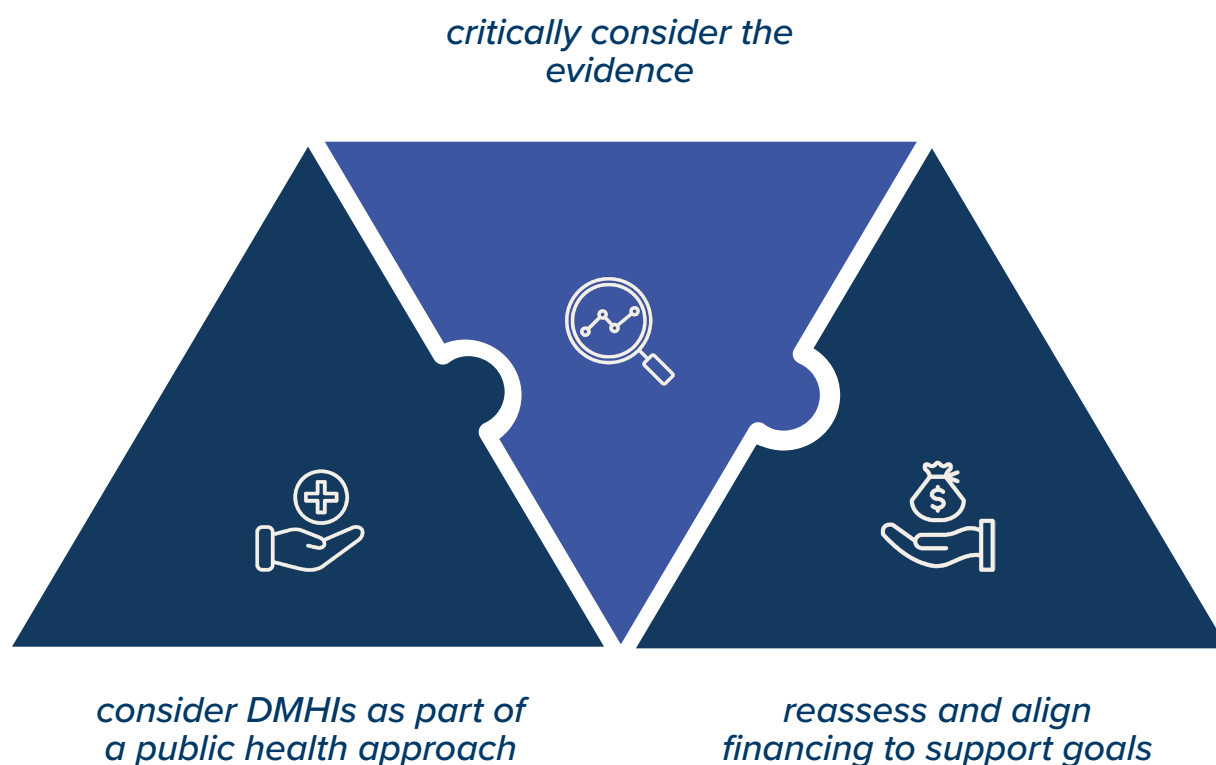
## *Real-world evidence*

Research data will only tell one piece of the story. Additional evaluations need to demonstrate that, once deployed, DMHIs continue to offer benefits consistent with previous research while used in real world conditions by college and university students. Continued evaluation can speak to the safety, effectiveness, and viability of DMHIs for specific campuses and populations (Mohr et al., 2023). DMHIs that cannot deliver outcomes on par with previous studies should be scrutinized with regards to effectiveness and engagement. It will also be very helpful to document how colleges and universities are integrating DMHIs with their wider set of mental health resources; many of our interviewees expressed a strong desire to understand this issue better. Learning collaboratives or other networks could facilitate the sharing of this knowledge.

Across all areas for future research and evaluation, the needs and inclusion of diverse student populations should be a top priority. Many studies of DMHIs include a disproportionate number of White women, and the results do not necessarily translate to how these programs might perform across diverse racial, gender, and other intersectional identities. In addition, integrating the voices of diverse students early in the evaluation process—to consider what needs and interests they have that could be incorporated into research questions and designs—could help ensure that the research is more relevant.



## Recommendations for higher education leaders and partners



The goal of this guide is to help higher education leaders and partners make informed decisions around the use of DMHIs. Our first recommendation to higher education leaders and partners is to consider DMHIs as part of a holistic, public health approach to student mental health. Based on our interviews, many are already taking this approach. As one interviewee noted, *“I look at digital mental health tools as an adjunct and a supplement to the work that we do, because I have come to realize along with my colleagues is that we can never hire our way out of the mental health issues that students bring to the table here in higher education. So I look at it as an expanded set of tools and resources to complement the existing services that we already provide to contribute to students’ wellbeing and wellness and to support their wellness on campus.”*

A holistic perspective considers mental health as a continuum or spectrum. This requires resources that address everything from promotion to prevention to treatment and crisis management. DMHIs are not just supplemental to traditional mental health care, but also preventive resources that support students with less acute needs and potentially reduce the need for future mental health care. A self-guided DMHI that students can use on their own might be impactful at a population-level even with a small benefit for each individual student. However, the population impact will require sufficient reach and adoption across the campus. Virtual care platforms that provide professional, human-supported services might be more expensive and have a larger impact on each individual student, but may only be indicated and necessary for a subset of the student population. In this way, DMHIs should be viewed as components of broader strategies to improve population-level student mental health. Each campus needs to consider its own existing needs and resources, and determine which DMHIs will best enhance its overall system of support.

Our next recommendation to higher education leaders and partners is to critically consider the evidence for DMHIs that will potentially be offered to students. From our interviews, we know that leaders value this evidence but also find it difficult to compare across products, which can dampen the role that evidence plays in selecting DMHIs. The varying quality and reporting of research studies on DMHIs have required decision makers to compare apples to oranges.

Higher education leaders should communicate to companies the key metrics they need to make decisions and the type of evaluation and research that would address these metrics.

For example, several interviewees noted that they would at least like to have clearer data about the levels of user uptake and engagement that various DMHIs are able to achieve in campus populations. Campus leaders and administrators would like a clearer sense of approximately how many students are likely to use a DMHI, and how much an average student typically uses it, so they can compare those numbers to the licensing price they are paying. Higher education leaders and partners can also contribute to evaluation by collecting their own data and sharing results, and partnering with DMHI companies to conduct evaluations. Similar to our call for real-world evidence and post-deployment research, important information can be gleaned from campuses feeding back into efforts to understand the impact of DMHIs.

Lastly, we recommend that higher education leaders and partners reassess the financing of DMHIs that support students. In our interviews, we found that many campuses are constrained to use small discretionary budgets from their health or counseling centers to adopt DMHIs. We have also heard examples when decisions were made at levels above health or counseling centers to purchase certain products without considering how it fits the needs and opportunities for that specific campus. Campuses will need to consider more carefully how much they want to invest in DMHIs, and how those investments fit into their larger budget for student support. This will require a careful assessment of the value which DMHIs deliver to student populations and how that value compares to the cost of DMHIs. It is also worth noting that DMHIs might lead more students to access care, and so some additional costs might be justified if quality care is delivered to more students. Relatedly, campuses will need to grapple with the unease they sometimes have over contracting with for-profit companies. As one interviewee noted: *“My biggest concern about the future of this industry: College counseling centers are typically funded by student fees, state funds, or the institution itself....Profit isn’t part of that conversation. It’s about providing services directly to students who need them....whenever profit is a driver for healthcare, it gets tricky and complicated.”*



# Conclusion

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This is the first known guide offering a critical review of DMHIs for college students. While research has demonstrated that DMHIs can be effective at improving mental health, the majority of widely used DMHIs in higher education settings have limited direct evidence of effectiveness in student populations. From a public health perspective, there is an urgent need for prioritizing the collection and dissemination of new data to increase understanding of which DMHIs are being used by students (reach) and which are working (effectiveness), with an eye towards addressing known mental health inequalities that persist in college student populations. At the same time, innovation is occurring at a rapid pace and campuses nationwide are increasingly implementing DMHIs to fill in gaps and enhance their overall systems of support. This guide provides a summary of the current evidence and recommendations for moving the field forward, recognizing that DMHIs are likely a long-term component of campus mental health systems and efforts to address growing student mental health needs at colleges and universities across the country. Our research and findings reveal that insufficient information and evidence is available to colleges and universities to make fully informed, strategic decisions regarding which DMHIs are most beneficial and useful for their student population. We highlight opportunities for collaboration between colleges, universities, and digital mental health companies to improve the evidence available.

# References

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- Baumel A, Muench F, Edan S, & Kane JM. Objective user engagement with mental health apps: systematic search and panel-based usage analysis. *Journal of medical Internet research*. 2019; 21(9), e14567.
- Becker TD, Torous JB. Recent developments in digital mental health interventions for college and university students. *Curr Treat Opt Psychiatry*. 2019;6:210–220.
- Bennike IH, Wieghorst A, Kirk U. Online-based mindfulness training reduces behavioral markers of mind wandering. *J Cogn Enhanc*. 2017;1, 172–181.
- Bennion MR, Hardy G, Moore RK, et al. E-therapies in England for stress, anxiety or depression: what is being used in the NHS? A survey of mental health services. *BMJ Open* 2017;7:e014844.
- Benton SA, Heesacker M, Snowden SJ, Lee G. Therapist-assisted, online (TAO) intervention for anxiety in college students: TAO outperformed treatment as usual. *Professional Psychology: Research and Practice*. 2016; 47(5), 363–371.
- Bruehlman-Senecal E, Hook CJ, Pfeifer JH, FitzGerald C, Davis B, Delucchi KL, Haritatos J, Ramo DE. Smartphone app to address loneliness among college students: Pilot randomized controlled trial. *JMIR Ment Health*. 2020 Oct 20;7(10):e21496.
- Carlbring P, Andersson G, Cuijpers P, Riper H., & Hedman-Lagerlöf E. Internet-based vs. face-to-face cognitive behavior therapy for psychiatric and somatic disorders: an updated systematic review and meta-analysis. *Cognitive behaviour therapy*. 2018; 47(1), 1-18.
- Center for Collegiate Mental Health. 2023 Annual Report (Publication No. STA 24-147). 2024, January: 1-36. Available at <https://files.eric.ed.gov/fulltext/ED640229.pdf>.
- Cornish PA, Berry G, Benton S, Barros-Gomes P, Johnson D, Ginsburg R, Whelan B, Fawcett E, Romano V. Meeting the mental health needs of today's college student: Reinventing services through Stepped Care 2.0. *Psychol Serv*. 2017 Nov;14(4):428-442.
- D'Adamo L, Paraboschi L, Claire Grammer A, Fennig M, Graham AK, Yaeger LH, Newman, MG, Wilfley DE, Barr Taylor C, Eisenberg D, & Fitzsimmons-Craft EE. Reach and uptake of digital mental health interventions based on cognitive-behavioral therapy for college students: A systematic review. *Journal of Behavioral and Cognitive Therapy*. 2023; 33(2), 97-117.
- Demers N, Beaufort, P, Jarnagin LM, Chick C, Thomas K, Vigil V, Hoang L. YOU at College: Launching with impact and efficacy in the Cal State System. White Paper, October 2020. Available at <https://youatcollege.com/wp-content/uploads/2022/01/YOU-Launching-with-Impact-and-Efficacy-Cal-State-System.pdf>.
- Deng D, Rogers T, Naslund JA. The role of moderators in facilitating and encouraging peer-to-peer support in an online mental health community: A qualitative exploratory study. *J Technol Behav Sci*. 2023;8(2):128-139.
- Duarte-Díaz A, Perestelo-Pérez L, Gelabert E, Robles N, Pérez-Navarro A, Vidal-Alaball J, Solà-Morales O, Sales Masnou A, Carrion C. Efficacy, safety, and evaluation criteria of mHealth interventions for depression: Systematic review. *JMIR Ment Health*. 2023 Sep 27;10:e46877.

Eisenberg D, Golberstein E, & Hunt, JB. Mental health and academic success in college. *B.E. Journal of Economic Analysis and Policy*. 2009; 9(1), Article 40.

Ekekezie O, Hartstein GL, & Torous, J. (2023). Expanding mental health care access—remote therapeutic monitoring for cognitive behavioral therapy. In *JAMA Health Forum* (Vol. 4, No. 9, pp. e232954-e232954). American Medical Association.

Ferrari M, Allan S, Arnold C, Eleftheriadis D, Alvarez-Jimenez M, Gumley A, Gleeson JF. Digital interventions for psychological well-being in university students: Systematic review and meta-analysis. *J Med Internet Res*. 2022 Sep 28;24(9):e39686.

Fleming T, Bavin L, Lucassen M, Stasiak K, Hopkins S, & Merry S. Beyond the trial: Systematic review of real-world uptake and engagement with digital self-help interventions for depression, low mood, or anxiety. *J Med Internet Res*. 2018; 20(6), e199.

Fitzsimmons-Craft EE, Taylor CB, Newman MG, Zainal NH, Rojas-Ashe EE, Lipson SK, Firebaugh ML, Ceglarek P, Topooco N, Jacobson NC, Graham AK, Kim HM, Eisenberg D, Wilfley DE. Harnessing mobile technology to reduce mental health disorders in college populations: A randomized controlled trial study protocol. *Contemp Clin Trials*. 2021 Apr;103:106320.

Grit Digital Health. College student well-being hub promotes student success, resilience, and mental health. White paper, 2016; available at <https://youatcollege.com/wp-content/uploads/2022/01/YOU-Origins-White-Paper.pdf>

Harding C, Chung H. Behavioral health support and online peer communities: international experiences. *Mhealth*. 2016 Nov 23;2:43.

Hensel JM, Shaw J, Ivers NM, et al. A web-based mental health platform for individuals seeking specialized mental health care services: multicenter pragmatic randomized controlled trial. *J. Med. Internet Res*. 2019a; 21 (6), 1–12.

Hensel JM, Shaw J, Ivers NM, et al. Extending access to a web-based mental health intervention: Who wants more, what happens to use over time, and is it helpful? Results of a concealed, randomized controlled extension study. *BMC Psychiatry*. 2019b; 1–10.

The Hope Center. Student basic needs survey, 2023. The Hope Center at Temple University: <https://hope.temple.edu/research/hope-center-basic-needs-survey>.

Howells A, Ivtzan I, Eiroa-Orosa F. Putting the ‘app’ in happiness: a randomised controlled trial of a smartphone-based mindfulness intervention to enhance wellbeing. *J Happiness Stud*. 2014 Oct 29;17(1):163–185. doi: 10.1007/s10902-014-9589-1.

Huberty J, Green J, Glissmann C, Larkey L, Puzia M, Lee C. Efficacy of the mindfulness meditation mobile app “Calm” to reduce stress among college students: Randomized controlled trial. *JMIR Mhealth Uhealth*. 2019 Jun 25;7(6):e14273.

Kodish T, Schueller SM, Lau AS. Barriers and strategies to improve digital mental health intervention uptake among college students of color: A modified Delphi study, *Journal of Behavioral and Cognitive Therapy*, Volume 33, Issue 1, 2023, Pages 10-23.

Lattie EG, Adkins EC, Winquist N, Stiles-Shields C, Wafford QE, Graham AK. Digital mental health interventions for depression, anxiety, and enhancement of psychological well-being among college students: Systematic review. *J Med Internet Res*. 2019 Jul 22;21(7):e12869.

Linardon, J, Cuijpers, P, Carlbring, P, Messer, M, & Fuller-Tyszkiewicz, M. The efficacy of app-supported smartphone interventions for mental health problems: A meta-analysis of randomized controlled trials. *World Psychiatry*. 2019; 18(3), 325-336.

Lipson S, Zhou S, Abelson S, Heinze J, Jirsa M, Morigney J, Patterson A, Singh M, & Eisenberg D. Trends in college student mental health and help-seeking by race/ethnicity: findings from the national Healthy Minds Study, 2013-2021. *Journal of Affective Disorders*. 2022; 306: 138-147.

Marinova N, Rogers T, MacBeth A. Predictors of adolescent engagement and outcomes - A cross-sectional study using the togetherall (formerly Big White Wall) digital mental health platform. *J Affect Disord*. 2022 Aug 15;311:284-293.

Mohr DC, Meyerhoff J, Schueller SM. Postmarket surveillance for effective regulation of digital mental health treatments. *Psychiatr Serv*. 2023 Nov 1;74(11):1114-1115.

Mordecai D, Histon T, Neuwirth E, Heisler W, Kraft A, Bang Y, Franchino K, Taillac C, & Nixon J. How Kaiser Permanente created a mental health and wellness digital ecosystem. *NEJM Catalyst*. 2020; 2:10.

Morneau S, The Jed Foundation (JED). Using technology to access mental health support services for international students attending American colleges and universities: Evaluation study results for My SSP. March 2020. Available at <https://myssp.app/demo/jed-study>

Oliveira C, Pacheco M, Borges J, Meira L, Santos A. Internet-delivered cognitive behavioral therapy for anxiety among university students: A systematic review and meta-analysis. *Internet Interv*. 2023 Feb 22;31:100609.

Oliveira C, Pereira A, Vagos P, Nóbrega C, Gonçalves J, Afonso B. Effectiveness of mobile app-based psychological interventions for college students: A systematic review of the literature. *Front Psychol*. 2021 May 11;12:647606.

Owen, JJ, Adelson, J, Budge, S, Kopta, SM, & Reese, RJ. Good-enough level and dose-effect models: Variation among outcomes and therapists. *Psychotherapy Research*. 2016; 26, 22-30.

Palacios J, Richards D, Palmer R, Coudray C, Hofmann S, Palmieri P, Frazier P. Supported internet-delivered cognitive behavioral therapy programs for depression, anxiety, and stress in university students: Open, non-randomised trial of acceptability, effectiveness, and satisfaction. *JMIR Ment Health* 2018;5(4):e11467.

Pescatello M, Pedersen T, Baldwin S. Treatment engagement and effectiveness of an internet-delivered cognitive behavioral therapy program at a university counseling center. *Psychotherapy research : journal of the Society for Psychotherapy Research*. 2020; 31. 1-12:2.

Purdie DR, Federman M, Chin A, Winston D, Bursch B, Olmstead R, Bulut Y, Irwin MR. Hybrid delivery of mindfulness meditation and perceived stress in pediatric resident physicians: A randomized clinical trial of in-person and digital mindfulness meditation. *J Clin Psychol Med Settings*. 2023 Jun;30(2):425-434.

Rideout V, Fox S, Peebles A, Robb MB. Coping with COVID-19: How young people use digital media to manage their mental health. San Francisco, CA. 2021. Common Sense and Hopelab.

Rosen K, Paniagua S, Kazanis W, Jones S, Potter J. Quality of life among women diagnosed with breast cancer: a randomized waitlist controlled trial of commercially available mobile app-delivered mindfulness training. *Psycho-Oncology*. 2018 Jun 01;27(8):2023–2030.

Thomson M, Henderson G, Vines J, Rogers T & MacBeth A. Towards a better understanding of peer support platforms for digital mental health: Learning from stakeholder engagement and mapping a Theory of Change. 2023. University of Edinburgh.

Togetherall. An evidence-based model for digital peer support. Togetherall White Paper, January 2023, Available at <https://togetherall.com/en-us/insights/>.

Travers, MF, & Benton, S. The acceptability of therapist-assisted, internet-delivered treatment for college students. *Journal of College Student Psychotherapy*. 2014; 28(1), 35–46.

Watkins DC, Brown BR, Abelson JM, Ellis J. First-generation Black college men in the United States and the value of cohort-based programs: Addressing inequities through the YBMen Project. In: Smith, JA, Watkins, DC, Griffith, DM. (eds) *Health Promotion with Adolescent Boys and Young Men of Colour*. 2023. Springer, Cham.

Wolitzky-Taylor K, LeBeau R, Arnaudova I, Barnes-Horowitz N, Gong-Guy E, Fears S, Congdon E, Freimer N, Craske M. A novel and integrated digitally supported system of care for depression and anxiety: Findings from an open trial. *JMIR Ment Health*. 2023 Jul 24;10:e46200.

Youn SJ, Jaso B, Eyllon M, Sah P, Hoyler G, Barnes JB, ... & Nordberg SS. Leveraging Implementation Science to Integrate Digital Mental Health Interventions as part of Routine Care in a Practice Research Network. *Administration and Policy in Mental Health and Mental Health Services Research*. 2023; 1-10.



# About This Report

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## Contributing organizations

### *The Healthy Minds Network*

The Healthy Minds Network is dedicated to improving the mental and emotional well-being of young people through innovative, multidisciplinary scholarship. HMN spans coast to coast with our principal investigators at Boston University, University of California-Los Angeles, the University of Michigan, and Wayne State University. HMN proudly serves as a resource for post-secondary education administrators, students, researchers, clinicians, policy-makers, and the greater public. For over 15 years, the network has administered the Healthy Minds Study, a population-level survey of post-secondary student mental health. In recent years HMN has also initiated a mental health survey of faculty and staff in higher education.

### *The Hope Center*

The Hope Center at Temple University is an action research center transforming higher education into a more effective, equitable, and impactful sector using a powerful combination of applied scientific research, technical assistance and educational training services to colleges and universities, policy advising with state and federal governments and agencies, and strategic communications. We believe that students are humans first and that their basic needs (e.g. food, housing, childcare, digital access, transportation, mental health) are central conditions for learning.

### *Ruderman Family Foundation*

The foundation's mental health program seeks to end the stigma associated with mental health challenges among young adults by partnering with leading higher education institutions, innovative organizations and field experts advocating for youth mental health in Massachusetts. Through supporting research and strategic initiatives, the Foundation believes that raising awareness and providing access to mental health resources can change public discourse and our society's culture around mental health.

