

Accessibility and Availability of Mental Health Resources to Treat Mental Health Disorders Among University of Virginia (UVA) Engineering Students

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A national sampling of students in the United States determined that 39% of college students struggle with anxiety, depression, eating disorders, self-injury, or suicidality (Bischof et al., 2018). Within the same age group, anxiety increased from 5.12% in 2008 to 6.68% in 2018, which was a more rapid increase than among 26-34- and 35–49-year-old (Goodwin et al., 2020). For students between the ages 18-25, the struggles have been a part of low levels of emotional health that have swept across campuses with the increase in information technology like social media, the increasingly global economy, and pressures to complete higher education (Iarovici, 2014). These low levels of emotional health like high stress are due to the pressure to succeed or perfectionism, bullying, loneliness, and relationships on campus, alcohol on campus, sleep problems, sudden independence, financial concerns, and parental pressure (America, 2020, Alemu, 2013, Iarovici, 2014, Vasu Balaguru, 2013). Since most of those students live in proximity to their college campuses, the responsibility of restoring positive mental health rests upon the shoulders of the colleges they attend. The goal of this project was to identify how colleges can promote positive mental health among their students.

The accessibility and availability of mental health resources were analyzed by using the School of Engineering and Applied Science at the University of Virginia (UVA) as a case study and comparing them to the resources provided by the top five best colleges for engineering in Virginia according to the 2021 Niche Ranking, and the top three best engineering schools in the United States (US) according to the 2022 US News ranking. The analysis done was to answer three main questions using the Science Technology and Society (STS) theories: Sociology Method, to examine how society impacts the mental health of the students, and the access to

resources at the colleges, and Social Construction of Technology (SCOT) to better understand the influences that led to the advancement in mental health resources. The questions of the analysis were: to identify what issues had the most impact on the mental health of students, determine what resources provided by the engineering school had the most positive significant impact, and the delivery method that was the most efficient. This paper first identifies the mental health issues students are facing, identifies what aspect of a student's experience colleges should focus on to address their mental health needs, then introduces UVA Counseling and Psychological Services (CAPS), the resources at the other schools, analyzing the resources at the schools, and recommendation for increasing accessibility and availability of mental health resources.

Identify the issues students are facing.

There are five major mental health diagnoses sweeping college campuses. The increasing diagnoses, which are depression, eating disorders, anxiety, addiction, and suicide, have continued to increase from 2007-2016 (Staff Writers, 2014). An epidemiological study discovered that mental health diagnoses among college student respondents from 2007-2017 have risen from 22% to 36% (Lattie et al., 2019). The increase in mental health diagnoses is due to the pressure to succeed or perfectionism (Iarovici, 2014), bullying (Vasu Balaguru, 2013), loneliness, and relationships on campus (Iarovici, 2014), alcohol on campus, sleep problems (Alemu, 2013), sudden independence (America, 2020), financial concerns (America, 2020), and parental pressure (America, 2020). These trends have continued among all college students including traditional college students (Pedrelli et al., 2014), those who start college after completing high school, and non-traditional college students (Pedrelli et al., 2014), who are often employed full-time, older, and may have dependents other than their spouses. Among traditional

students, the increase in mental health diagnoses in college mostly has to do with stress from academic workload (Pedrelli et al., 2014) and the new task of taking on more adult-like responsibilities without having already acquired the skills and mental capacity of a mature adult (Pedrelli et al., 2014). For traditional students, stress comes from working for the first time, being in a significant relationship, and even navigating various cultures and belief systems different from their own or what they are used to (Pedrelli et al., 2014). Non-traditional students who are often minority students from low-income families often must cope with meeting long work and family demands in addition to academic requirements (Amour, 2019). The need to attend to the demands of their numerous roles leads to an exacerbation of their symptoms or a replacement in their mental health (Amour, 2019).

In a 2018 survey by the American College Health Association (ACHA), 40% of American college students experienced at least one major depressive episode that year (America, 2020). Of these students, most of them experience mood swings, sleep disturbances, appetite changes, and headaches and body pains that have no apparent physical cause. For some of the students, over half of their depression had the first onset during childhood, adolescence, or young adulthood (Pedrelli et al., 2014). These often untreated coupled with the pressures of college lead to increased anxiety with about 61% of college students identifying with the mental health challenges (Staff Writers, 2014). In the worst-case students experiencing depression, eating disorders, and anxiety turn to alcohol to cope with their issues. In 2019 statistics from the National Institute on Alcohol Abuse and Alcoholism (NIAAA) it was found that 37% of students admitted to recent binge drinking and 25% abuse stimulants to enhance studying (N.I.A.A.A, 2020). Students using these drugs to feel good and get better with school assignments resulted in unforeseen and serious consequences with 1519 student deaths each year and 696,000 assaults by

students who had been drinking (Hingson et al., 2009). Suicide is the second top leading cause of death accounting for 18% of deaths among people of college-age according to a 2020 report (Stibich, 2020).

What colleges should look at?

So, what should colleges be doing to help their students going through these problems? One of the most important things to do is the early identification of college students with mental health problems and thorough assessments are critical to provide adequate services and to ensure better outcomes, such as graduation. This ensures that students suffering from these mental health challenges before they enrolled in the college are receiving the best care which will put them on a better path towards graduation and achieving their goals. It also leads to preventing an increase in the severity of the mental health challenges which are likely to require more specialized services to help the students. The question then becomes, what if colleges cannot do that for all students? Then information regarding these disorders should be put around. Students and friends should be educated on the early signs so they are prepared and can identify them. This includes identifying each of the actors that contribute to the increasing mental health disorders like pressure to succeed and providing resources for students to work around using pressure to succeed as a motivation. In the long run, students, and their allies, like staff, friends, family members, and faculty are to be educated or provided with resources on symptoms of the five major mental health diagnoses. These allies are also to be provided with the contact information of the school's mental health professional, so the students know that there is there to speak to if need be. One major downside of this is the fact that the responsibility of helping a student moves from the college as an institution over to other students, creating more stress for

them as they must not just take care of themselves, but those around them. To break this cycle, colleges are to focus on improving their mental health resources for students.

Mental health resources with UVA as a case study

For colleges like the University of Virginia, mental health services are provided by the Counseling and Psychological Services (CAPS). The initial establishment of what is now known as CAPS at the University of Virginia was supported by the Vice President and Chief Student Affairs Officer (VPSA), William Harmon in the mid-1990s. In the early 70s, there was the development of a small mental health unit within UVA's Student Health with around one psychiatrist and two to three therapists (Carter, 2021). At the same time in the UVA School of Education and Human Development, there was the formation of the Counseling Center, which was a small mental health unit with approximately seven or eight who were doing clinical and teaching, with components of outreach and training (Carter, 2021).

In the mid-90s, VPSA Harmon met and had a conversation on the lawn with the student who was well known around the community, but tragically, the student died by suicide about a day or two later. This was a big shock to the VPSA and other members of the UVA community. So, in response, a decision was supported by VPSA Harmon to merge the Counseling Center at the School of Education and the Mental Health Unit all under the umbrella of Student Health to form CAPS at UVA (Carter, 2021). The new structure of CAPS was made to serve the needs of all UVA students struggling with mental health issues by providing mental health support, including emergency services. Under this new structure of CAPS, programs like suicide prevention in this new center were supported in 1996 with a grant from the Clay Foundation (CAPS, 2017).

Currently, CAPS at UVA has four essential roles in serving the UVA community: providing clinical services to eligible students, offering community outreach and prevention programming, consulting with staff and faculty regarding students with mental health concerns, and engaging in supervision and training of graduate students in psychology and psychiatry (CAPS, 2017). This includes services including individual therapy, group therapy, care management, psychiatric services, drop-in consults, and emergency and crisis services. These services provided address the needs of students who self-identify as a deterioration in their mental health. For preventive measures, CAPS work with student organizations, resident advisors, and individual groups at the university to teach courses techniques such as meditation that led to better control of stress. Outside working with organizations to teach students how to prevent severe mental health disorders, CAPS has identified schools with students in need of more mental health resources and created a program called embedded caps services. The program includes the Darden School of Business, McIntire School of Commerce, The School of Architecture, The School of Engineering and Applied Science (SEAS), and The School of Law. The embedded program serves to break the cycle of students being responsible for the mental health of others while establishing a trusted entity at the schools that understand the everyday working of the school and can personalize services and help to those needs (E. Ramirez-Weaver, personal communication, March 4, 2021). Due to the wide variations between the colleges at UVA, the availability of resources for this project, the SEAS, or UVA Engineering was used as the case study to identify the primary resources that schools should seek to provide to their students.

The services provided in general by UVA CAPS is an example of what colleges are doing to promote positive mental health, but the question becomes, how many students are

knowledgeable about the resources being provided, is it customized to both traditional and non-traditional students and how many students can the CAPS as a system handle? For most of these questions, the answers were unable to be obtained as part of this research. According to SEA's embedded CAPS therapist and Licensed Clinical Social Worker (LCSW), Elizabeth Ramirez-Weaver, most of the services in the past 10 years were used by college juniors who by their 3rd year in college were used to ignoring stigma surrounding the use of mental health resources or more aware of their need of the resources. But within the past 3 years, there has been an increase in services utilized by freshmen or 1st-year college students especially those who are introduced to the program during their introductory classes at the University (E. Ramirez-Weaver, personal communication, March 4, 2021). But even when students know about the resources, they face the issues of supply and demand where there is limited service for students due to ever-increasing diagnosis of mental health disorder across college campuses. This means that at UVA the students with a more immediate need are moved up to the front of the line and then given a referral to a long-term therapist instead of being assigned a specific school therapist. This of course means students who do not have the financial needs or insurance face an issue and even more burden. This also means that customization of services is limited to programs such as the embedded caps programs at various schools. For example, caps may not be able to meet the needs of a non-traditional college student who works during business times. This leaves space for improvement of the CAPS program.

What colleges like UVA and others are doing?

To identify what improvements are to be done to UVA's CAPS, research was done to identify and compare the mental health providers for the top five engineering schools in Virginia and the top three engineering universities in the United States. Table 1 was made as part of the

research to identify the mental health providers at the eight schools and the services offered to the students. To compile the table, each of the eight school’s mental health websites was visited from the point of view of a first-time user. The services that were provided to students were then obtained as part of this project and listed out in the table below. The primary goal was to identify the services provided by the schools to their students through the website of the mental health providers.

Table 1

Mental health services provided by the top three and four engineering colleges in the United States and Virginia respectively

School	US Ranking	Name of Mental Health Program	Services
University of Virginia (UVA)	29 th	Counseling & Psychological Services (CAPS)	<ul style="list-style-type: none"> • Individual Therapy • Group Therapy • Care Management • Psychiatric Service • Let’s Talk: Drop-In Consults • Emergency + Crisis Services
Massachusetts Institute of Technology (MIT)	1 st	Student Mental Health & Counseling	<ul style="list-style-type: none"> • Evaluations and consultations • Brief treatment (counseling/psychotherapy and medication) • Referrals to non-MIT Medical clinicians • Urgent care • Group Counseling • Advice when a student is worried about a friend, colleague, or student. • Help for departments, labs, and centers that are dealing with traumatic events, sudden losses, or other troubling situations.

Stanford University	2 nd	Counseling and Psychological Services (CAPS)	<ul style="list-style-type: none"> • 24/7 Support • Call or walk in between 9AM - 4PM • Initial Consult • Follow-up Consult • Psychiatry Consult (Fee applies after initial consultation) • Groups and Workshops • Medication consulting • Medication management (Fee applies)
University of California—Berkeley (UC Berkeley)	3 rd	Counseling and Psychological Services (CAPS)	<ul style="list-style-type: none"> • Individual and Couples Counseling • Group Counseling • Psychiatry • Let’s Talk (Drop-In Consultation) • Career Counseling • Off-Campus Referrals • Getting Help for Students of Concern • Prevention, Education & Outreach
Virginia Polytechnic Institute and State University (Virginia Tech)	37 th	Cook Counseling Center (CCC)	<ul style="list-style-type: none"> • Individual counseling • Couple’s counseling (both members of the couple must be enrolled VT students) • Consultation with students and parents • Groups and workshops • Psychiatry/Medication management • Referral to appropriate campus offices • Referral to off-campus providers
Washington & Lee University	70 th	University Counseling	<ul style="list-style-type: none"> • Support Groups • Peer Counseling Program • Washingtonian Society • On-Line / Phone Mental Health Support and Therapy

			<ul style="list-style-type: none"> • New Client Information • New Client Registration Form • Health Records and Patient Privacy • Recognizing and Responding to Students in Distress: A Faculty Handbook
Virginia Military Institute (VMI)	155 th	Cadet Counseling	<ul style="list-style-type: none"> • Individual Counseling • Consultations and Referrals • Employee Assistance Program • Psychological Testing • Substance Abuse Assessment • Psychiatric Services • Performance Enhancement • Enhance Resilience
Virginia Commonwealth University (VCU)	170 th	Center for Psychological Services and Development (CPSD)	<ul style="list-style-type: none"> • Individual therapy • Couple's therapy • Group therapy • Support groups • Psychiatric services • Inpatient treatment programs • Detoxification programs • Reproductive health services • Crisis Services • Professional Training • Consultation and Outreach

Table 1: Shows the mental health services provided by the top three engineering colleges in the United and the top five engineering colleges in Virginia, all ordered by their national ranking.

From the websites of the schools cited below, all the information presented in the table was obtained. Looking at the mental health resources from the perspective of a first-time user was done to determine the accessibility of the information. This includes the freshmen, their parents, or anyone who is seeking information for the various resources that the school provides. From the initial look at the table, the findings below were made:

- All eight of the schools provided a variety of individual counseling for students.

- All eight schools provided a variety of initial consultation and drop-in consultation.
- All eight schools had a variation of a referral to off-campus programs.
- Seven out of the eight schools (except Virginia Military Institute) provided some form of group counseling or group and workshops.
- Three of the eight schools provided couple's counseling to students.

What are the colleges lacking?

Looking at the colleges listed in the table, they all provide similar services like individual and group therapy, care management, psychiatric services, drop-in hours, and a system for emergency and crisis services. The fact that all the various schools outlined provide similar services shows the similar needs for college students across the board, but what is lacking most are services for non-traditional students. Most of the students are not often available during the scheduled hours of the mental health service provider (Chamberlin, 2012). They are most likely to either be employed or supporting members which gives them less time to get to regular mental health hours. According to an ACCA survey, 60% of community college counselors reported that they had seen severe problems among students they counseled (Chamberlin, 2012). This means that the students who often need the services the most are not receiving them due to inability. It is good to know that most schools do provide some form of 24 support but those supports do not give the chance for these students to meet, for example, a therapist of their choice during some of their most needed hours. For example, Stanford provides a call or walk-in from 9 AM-4 PM which is a useful service to allow students access to mental health professionals whenever they need it during business hours. They do however provide 24-hour service which can potentially be argued that it helps non-traditional students, but the question that arises is, are those services identical to those provided during the 9 AM-4 PM time frame.

This problem arises due to the lack of therapists, or the therapists not having enough time to student care because they must serve on campus committees, academic advising, and career counseling (Chamberlin, 2012). It can be argued that most schools have gotten away from making their mental health professionals wear multiple hats, but it is also known that these professionals have no choice but to be there for students who are true of career counseling, and academic advising. Some schools do have such resources that students are directed to, which reduces work on the mental health professional. But for schools that do not have such resources, the mental health professional ends up providing all the services.

Along with that, it was noted that all eight schools referred students to other mental health resources outside the school with schools like VCU and VMI providing psychiatric services. Schools like UVA and Virginia Tech provided some services to students but referred them to outside service. At UVA, this is due to a lack of resources and the need to provide students with a long-term solution to the various mental health issues they struggle with (E. Ramirez-Weaver, personal communication, March 4, 2021). Due to lack of resources, some of the colleges like Stanford had fees for psychiatric consultation after the initial one. None of the information presented on Stanford and the other school's website identified if students had to pay for the services, but all schools had a variation of a health fee embedded into their tuition. It is important to note that most of the schools had changed the delivery of their services due to the global COVID-19 pandemic, which is a fast-mutating SARS-CoV-2 that caused schools and other public areas to close. Due to the pandemic, all the schools moved to an online or a hybrid format for the mental health resources they provided to their students. Schools like Stanford introduced virtual services for students outside California. These services included 24/7 crisis support, care management and consultation online, and workshops and outreach events. For

some of the schools like the University of California-Berkeley it was found that due to their current licensing laws, they had to limit certain services provided for students. For example, they had to limit the types of services provided to students who were outside California. Those students were unable to receive new diagnostic assessments and ongoing treatment.

Recommendations for what UVA Engineering and other schools should implement.

So, what can UVA Engineering and possibly other colleges like those listed in Table 1, do to increase the accessibility and availability of their resources? First, mental health professionals should be given the chance to fully focus their time on helping students. They can potentially have some assistants who can handle campus committees, academic advising, and anything that takes their time away from one-on-one time with students. This will give them more time to provide services for students who need them.

Another option is for colleges to provide mental health information at easy-to-find places. Schools like UVA require non-discrimination information on every syllabus for students. UVA Engineering can require UVA CAPS information and a link to services to be included on each professor's syllabus. This will present easier access to information and direct access to all the online resources provided. For schools that can, they can provide a tab on class websites or pages that provides mental health resource information the college provides. For example, a physics class will have a tab on their page that states "CAPS Services & Contact". This will make the services available for students when they need them.

The other way to make mental health at UVA Engineering and other colleges more accessible is by including mental health components like meditation and talking to embedded therapists in orientations. Since most students coming into the colleges must have orientation, it is the best time for them to be introduced to the resources the colleges have. This will help the

students identify familiar faces they can contact if they have any issues as well as learn some techniques to manage the upcoming stress of college. This can follow other preventative approaches like that of George Mason University, which is focusing on promoting mental wellness through initiatives like the development of De-Stress Fest, with events that serve as the perfect opportunity for students to relax before finals season (George Mason University, n.d.).

The biggest preventive measure that can be taken is for colleges to partner with their local areas to teach high schoolers and middle schoolers the ways to cope with stress and other mental health issues they may experience in life. This can either be done through community partnership or schools can work with organizations to provide those services to students. These preventive measures will have students come to college prepared to deal with any stress or low levels of emotional health that they may experience especially if they are traditional college students.

Solving other issues related to access to mental health resources.

A positive outcome of increased advertising and outreach is the increased demand for the services. Meaning more students will easily have access to the services. Increased demand will often create a bottleneck as seen around colleges like Boston University, where they saw a 40% increase in the number of students in crisis coming in for help on their campus from 2014-2015 (Brown, 2016). Such a steep increase in demand can only be satisfied by increasing funding for mental health services at colleges. The increased budget could go towards hiring more counseling staffers, decreasing the student-to-counselor ratio. Some funds can also go towards student organizations or various organizations that can make videos for maintaining things like stress, anxiety, and other issues most students face. Videos can also surround identifying when

one is not in a positive mental state so students, their friends, and family can identify if their students need help.

Funding can also go towards preventive approaches especially ones before stressful seasons like before job fairs, around midterms and finals will promote a more positive way for students to deal with the stress of those activities. These services can include online smartphone or virtual counseling assistance services, videos of stress management, identifying healthier lifestyles, and coping methods for stress. Specific technologies like the fidget cube, which is a desk toy with six sides to get one breathing and reduce anxiety, can be given to students as part of a campus-wide pre-final initiative.

Lastly, the best way to improve the accessibility and availability of mental health resources is by providing funding to schools. As the demand for services increases, the pressure on the college board of trustees and political leaders should increase so they allocate more resources to those services. The pressures in the case of UVA can include letters to congress representatives for the state, the board of trustees, and other leaders who have the power to increase funds for mental health programs.

Conclusion

This paper examines the accessibility and availability of mental health resources on college campuses with UVA Engineering as a case study. It examines the causes of low levels of emotional health on the campuses among traditional and non-traditional college students while identifying the effect of the source. The cause includes pressure to succeed, which creates high levels of stress and anxiety. To deal with these mental health issues on campuses, the UVA CAPS services were compared to the top five engineering colleges in Virginia and the top three colleges in the United States. Services were analyzed, and recommendations including adding

information to mental health services be provided in the syllabus were made to improve the services provided.

It is important to note that these recommendations are presented based on the highest lacking identified through the students of the services presented by the eight schools listed in this paper. Therefore a more in-depth look is recommended to identify the specific needs of individual schools like UVA Engineering. Questions for further research include, are there any issues that resulted in the establishment of services like couples counseling? Have there been significant improvements in the situations since the issues were addressed? Can these programs and services provided at the other schools be scaled and integrated into other schools? What are the best proactive ways to prevent low levels of emotional health among high schoolers before they come to college? Looking at the questions, one can state that schools like VCU did provide couples counseling to address demands they have seen on campus, and the continuation of the services suggests success in achieving their goal. But it is unclear from looking at the resources provided on the website to see if the services can be scaled. Answering these questions in more detailed research will provide UVA Engineering with the steps to decreasing the low levels of emotional health among their students.

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