Published in final edited form as:

J Am Coll Health. ; : 1–8. doi:10.1080/07448481.2018.1539397.

Help-seeking Behaviors and Attitudes of Emerging Adults: How College Students Reporting Recent Suicidal Ideation Utilize the Internet Compared to Traditional Resources

Susan M. De Luca [Assistant Professor],

School of Social Work, Research Faculty Associate, Population Research Center, University of Texas at Austin

Megan C. Lytle [Assistant Professor],

Department of Psychiatry, University of Rochester Medical Center

Yueqi Yan [Senior Research Associate],

Children and Family Futures

Chris Brownson [Associate Vice President for Student Affairs, Clinical Associate Professor]

University of Texas at Austin

Abstract

Suicide is the 2nd leading cause of death among emerging adults, yet little is known regarding their online help-seeking. The National Research Consortium of Counseling Centers in Higher Education's dataset ($N=26,292$) observed the effectiveness of online and traditional help-seeking stratified by recent suicidal ideation related to their most distressful period in the past year. Females and younger students endorsed both types of help-seeking, yet those with recent ideation were less likely to disclose any help-seeking. Among those reporting recent ideation, only females reported that traditional supports were more than moderately helpful. Regardless of whether students endorsed ideation, students who were younger, engaged in risky behaviors, and identified as female reported that online resources were more than moderately helpful. Online resources could potentially bridge barriers to traditional help-seeking for those reluctant to seek-out care, yet traditional resources were reported to be the most effective among this sample.

Keywords

College students; suicidal ideation; online help-seeking; help-seeking attitudes

Suicide is the second leading cause of death among emerging adults, and in 2015 the suicide rate was 14.43 per 100,000 among individuals 18–24 years in age.^{1,2} By 14 years of age, approximately 50% of mental health disorders have started and the onset of 75% of mental

sdeluca@austin.utexas.edu.

“The data that support the findings of this study are available from the University of Texas Research Consortium. Restrictions apply to the availability of these data, which were used under license for this study. Data are available at https://cmhc.utexas.edu/rc_project6.html with the permission of Chris Brownson, Ph.D, who leads the Consortium.”

health disorders begin by the age of 24.³ Despite these risks, college students who deny suicidal ideation are more likely to believe treatment is helpful than students who have had suicidal ideation.⁴ Indeed, according to Downs and Eisenberg,⁴ three quarters of students with suicidal ideation believe they can deal with their own problems and less than one-third of students with suicidal behaviors report being in treatment. Similarly, Garlow and colleagues⁵ found that nearly 84% of college students with suicidal ideation were not in treatment. Evidence also suggests that unless clinicians directly inquire about suicidal ideations and behaviors, students who identified as racial and ethnic minorities were less likely to disclose that they were having thoughts of suicide compared to their non-Hispanic white peers.⁶ In addition, scholars found that female students as well as Black, Multiracial, and individuals who identified their race as Other, reported that not having enough time was a barrier to help-seeking.⁷ As a result, researchers have started to explore how to remove barriers to care as well as develop strategies to promote help-seeking.

In 2013, almost 93% of emerging adults in the United States had a computer in their home and 99% of individuals between 18 and 29 years of age use the internet; however, there were lower rates of computer ownership among households with lower socio-economic status, lower levels of education, older adults, and Black and Latino families.^{8,9} Yet, in 2010, almost 100% of undergraduate and graduate students reported that they use the internet and at that time over 80% of students were connected to social networking sites.¹⁰ With the growing use of the internet and social media among college students, the web is often used as a repository for emotional support during stressful periods. Not only is the Internet described as an anonymous realm, but it may foster help-seeking since online support may seem less stigmatizing and more accessible.¹¹

Indeed, researchers and suicide prevention organizations have started to examine how technology can be used for suicide prevention outreach through emails, web-based applications, and virtual worlds.¹¹ For instance, the National Suicide Prevention Lifeline¹² offers chat services via a suicide prevention application and they have partnered with Facebook to provide outreach to suicidal users. Lifeline has blogs for young adults, they provide video stories of hope, and individuals can send supportive e-cards to loved ones they are concerned about. In addition, The Trevor Project,¹³ a suicide and crisis prevention organization dedicated to lesbian, gay, bisexual, transgender, and questioning youth, hosts a social network site, Trevor Space, in addition to their lifeline, chat, and text prevention services. Although these web-based services have the potential to make support more accessible, many young adults continue to struggle with seeking help due to stigma and privacy concerns.¹⁴

Among the few studies to examine using the internet to foster help-seeking, Haas and colleagues¹⁵ explored whether a web-based outreach program could promote treatment utilization. Specifically, after completing an online mental health questionnaire, students received personalized assessments along with a counselor's contact information and an invitation to begin an online dialogue. Haas and colleagues¹⁵ found that the students who engaged in the online dialogue were more likely to attend an in-person evaluation compared to students who did not participate in the dialogue. Moreover, the opportunities to engage in an online dialogue also led to more students engaging in treatment. Likewise, students who

participated in a randomized controlled clinical trial to test a web-based intervention could contact a peer coach by phone or email for support.¹⁶ Day and colleagues found that students who received immediate access to a web-based self-help program reported greater reductions in anxiety, depression, and stress compared to students who had delayed access to the program. When comparing attitudes toward online and in-person counseling, Lewis and colleagues¹⁷ found that while women tend to view in-person counseling more favorably than men, there were no gender-based differences in the level of discomfort with in-person or online counseling. Interestingly, it appears both men and women may place greater value on in-person counseling than online counseling. In terms of comparing in-person counseling with telehealth, there were no differences in treatment outcomes or the quality of treatment conditions (e.g., working alliance and satisfaction).

Despite the suicide prevention and self-help resources available online, Luxon and colleagues¹⁸ examined several pro-suicide resources as well, and although Google and Yahoo promote the National Suicide Prevention Lifeline when individuals search the web to learn about suicide, other search engines do not actively disseminate suicide prevention resources. For instance, social media sites like Reddit¹⁹ have forums dedicated to encouraging individuals to anonymously post their suicide notes. Among 480 websites derived from suicide-related search terms, almost 20% were pro-suicide, another 20% were not relevant, approximately 13% were dedicated to suicide prevention or support, and roughly 12% were against suicide.²⁰ Surprisingly, information about suicide methods were available on almost 50% of the websites, including some suicide prevention sites.²⁰ Thus, to better promote web-based resources that facilitate help-seeking and suicide prevention, additional information about how college students utilize the internet and traditional supports during times of distress is needed, especially among culturally diverse emerging adults.

Hence, this study will examine help-seeking behaviors and the role of web-based as well as traditional resource utilization based on age, gender, race/ethnicity, and sexual orientation. Although scholars have started to explore the potential benefits of online resources and help-seeking,¹¹ there is scant literature about within group and between group differences in help-seeking. Thus, we will explore whether students with recent suicidal ideation and students who denied recent suicidal ideation differ based on their help-seeking preferences and cultural factors such as age, gender, racial/ethnic identity, and sexual orientation. Additionally, we will investigate the relationship between suicidal ideation and the type of support (internet-based or traditional help-seeking) emerging adults received during times of distress.

Methods

Procedure

This study utilized the National Research Consortium of Counseling Centers in Higher Education's 2011 Undergraduate and Graduate Student Coping with Stressful Experiences dataset ($N=26,292$). Students across the United States were recruited from 73 four-year institutions to participate during the 2010–2011 school year. Schools were representative of national higher education institutions relative to enrollment size, private or public

qualification, and geographic location. Participants received an email invitation that described the study and access to the 79-item survey. The overall response rate was 26.3%, which is similar to other large-scale surveys focusing on college populations.²¹ For example, the Spring and Fall 2011 response rates for the American College Health Association^{22,23} were 28.5% and 19%, respectively. This study was approved by the institution's IRB (institution left anonymous for reviewer).

Measures

Dependent Variables

Traditional and Online Help-Seeking: Participants were first asked to think about the most stressful period they had experienced in the past 12 months. Then students were asked several questions related to that stressful period including, "How important was the following in helping you to reach out for support during this stressful time?" Respondents were given the following options and could choose multiple forms of help-seeking. Traditional and online social coping resources are identified accordingly: *Bloggging, Email, In person contact, Gaming connections, Phone, Social networking* (e.g., Facebook, Twitter), *Text message*, and *Videochat*. More conventional means of connecting to others (*in person* and *phone*) were recoded into traditional help-seeking. All other measures were recoded as online help-seeking.

Independent Variables

Age, LGB, Gender, and Race/Ethnicity: Participants were asked a variety of demographic questions. They provided their age in years. Students described their sexual orientation as follows: *Bisexual, Gay/Lesbian, Heterosexual*. Lesbian, Gay, and Bisexual students were combined and students who questioned their identity or chose other were excluded from this study; thus, sexual orientation was coded as 0=heterosexual and 1= lesbian, gay and bisexual (LGB). Participants identified their gender as *male, female*, or *transgender*. Due to the small number of transgender students in the sample, and the stratification of the sample by suicidal ideation, we were unable to include this group into our analysis. Moreover, gender identity and sexual orientation are discrete characteristics, and consistent with previous research we did not combine these unique variables into the LGBT umbrella. Participants were also asked, "With the understanding that these categories might be limiting, how do you typically describe yourself".²⁴ The options included *Asian, Alaska Native/American Indian, Black/African American, Hispanic/Latino, Middle Eastern, Pacific Islander, White*, or *Other* and individuals who endorse more than one choice were recoded as *Multiracial*. The students' racial and ethnic identity were recoded 0= non-Hispanic white and the remaining race/ethnicities were coded as 1. Most college samples are over-represented with non-Hispanic white students.⁷ Our sample was no different with 72% identifying as non-Hispanic white. As a result, we chose to dichotomize racial and ethnic minorities into one combined measure, as we have done in previous studies. By examining each race and ethnic minority separately, our results would be difficult to interpret otherwise. We acknowledge that race and ethnicity are distinctively different yet, people of color often share similar help seeking behaviors and attitudes compared to non-Hispanic white individuals.^{25,26}

Risky Behaviors: Participants were given a variety of options to respond to the question “During the stressful period, did you engage in any of the following behaviors?” and were instructed to select all that apply. The options included: *Getting into fights, Increased gambling, Increased internet use or gaming, Increased use of drugs or alcohol, Risk-taking behavior* (e.g., drunk driving, speeding), *Risky sexual behavior* (e.g., unprotected sex with an untested partner, sexual contact with strangers or while intoxicated), *Severely restricted or excessive eating, Self-injury* (e.g., intentional cutting, burning), *Significant drop in academic performance, Violating the law or violating school policies,* and *None of the above*. Risky behaviors were recoded 1=any risky behavior and 0= no risky behaviors reported.

Suicidal Ideation: Participants were asked if they had “seriously thought about killing themselves in the past 12 months”. The measure was coded 1= yes and 0= no.

Covariates

Relationship Status and Living Arrangements: Items related to connecting with others were also included. Relationship status was determined by the question “What is your current relationship?” with options: *I am single and not currently dating, I am casually dating, I am in a steady dating relationship, I am partnered or married, I am separated or divorced,* and *I am widowed*. This measure was recoded: 1-in a relationship and 0- single. They were asked about their living situations and given the following options: *By myself, with parent(s) and/or family of origin, with roommate(s), With romantic partner or spouse, with children or dependents, Sorority or fraternity house, or College or University Housing,* with the option to check as many that applied. This variable was recoded 1 = living with someone or 0= living alone.

Data Analysis

Two separate logistic models were created: 1) comparing those with recent ideation and no reported ideation in the past 12 months and 2) observing differences in help-seeking for online and traditional resources (Model 1 & Model 2). Both Model 1 and 2 included the same measures, except that Model 1 included recent suicidal ideation in the past 12 months as a covariate and Model 2 was stratified by recent suicidal ideation. The development of prediction models utilized a forward selection procedure and each variable was entered individually. First, age, gender and race/ethnicity were regressed on the outcome to detect any possible connections between demographic measures and help-seeking. Afterwards the measures representing connectedness, risk behaviors, and sexual orientation were included. Upon inclusion, changes in coefficients were also observed to detect any possible confounders. Logistic models were tested for goodness-of-fit using the Hosmer-Lemeshow statistic. Odds ratios were reported to interpret the effect size of the significant results.

Results

Sample Description

Descriptive analyses of variables included in this study are presented in Table 1. The mean age was roughly 25 years (range of 18–35 years of age) for this sample and predominately female. Greater proportions of students reporting SI in the past 12 months were female, identified as LGB, reported riskier behaviors, and not partnered than those who did not report ideation. In terms of help-seeking behaviors, greater proportions of students with recent ideation reported that traditional and online contacts were at least moderately important to them in reaching out for support during their most stressful period in the past 12 months than those without a history of ideation.

Help-seeking behaviors

Model 1-In person and online help-seeking.—To help understand the overall use of traditional and online help-seeking, we examined risk profiles controlling for suicidal ideation in the past 12 months. Model 1 included the separate measures for online and traditional help-seeking. Female students OR=2.38, CI [2.15, 2.63], students in a relationship OR=1.63, CI [1.47, 1.81], and those who identify as racial/ethnic minorities OR=1.14, CI [1.02, 1.28] had greater odds of reporting that traditional help-seeking was at least moderately important in helping them deal with their most stressful period in the past 12 months. Conversely, those who reported that they had recent suicidal ideations OR=0.48, CI [0.39, 0.59] and were older OR=0.98, CI [0.97, 0.99] were less likely to report that traditional help-seeking was more than moderately important.

Participants were also asked how important online sources of support were in terms of help-seeking during their most stressful period in the past 12 months. Female students OR=1.48, CI [1.40, 1.56] and those experiencing risky behaviors OR=1.30, CI [1.23, 1.36] disclosed that online sources were at least moderately important in helping them deal their most stressful period in the past 12 months. However, students that were in relationships OR=.93, CI [0.87, 0.98], older students OR=.95, CI [0.94, 0.95], and those who reported recent suicidal ideation OR=.69; CI [0.60, 0.79] had lower odds of asserting that online sources were at least moderately important in helping them deal with their most stressful period in the past 12 months.

Model 2- Help-seeking and recent suicidal ideation.—Differences were observed among those who reported recent suicidal ideation versus those who did not report ideation in relation to traditional help-seeking (. Among those who denied recent suicidal ideation, students who were female OR= 2.46, CI [2.22, 2.73], partnered OR= 1.65 CI [1.49, 1.84], and those who identified as racial/ethnic minorities OR= 1.17, CI [1.04, 1.31] had greater odds of reporting that traditional help-seeking was more than moderately helpful during their most stressful event in the past 12 months whereas older students OR=.98, CI [0.97, 0.98] had lower odds of reporting that traditional connections were at least moderately important in helping them deal with their most stressful period in the past 12 months. In contrast, those who reported recent suicidal ideation shared notable differences from those without recent suicidal ideation. Only female students OR=1.50, CI [1.01, 2.20] were more

likely to report that traditional connections helped them deal with the worst part of their most stressful period in the past 12 months.

We then examined potential differences in on-line help-seeking related to recent suicidal ideation. Among those who did not report recent suicidal ideation in the past 12 months, females OR=1.47, CI [1.39, 1.56] and those engaging in risky behaviors OR=1.29, CI [1.22, 1.36] had greater odds of stating that online help-seeking were at least moderately important in helping them deal with the worst part of their most stressful period in the past 12 months. And those who were older OR=.95, CI [0.94, 0.95] were less likely to report that online connections were at least moderately important in helping them deal with their most stressful period in the past 12 months. Among those who reported recent ideation in the past 12 months, females OR=1.75, CI [1.39, 1.56] and those engaging in risky behaviors OR=1.60, CI [1.07, 2.48] were more likely to report that online help-seeking was at least moderately important in helping them deal with their most stressful period in the past 12 months. Further, those who were older OR=.95, CI [0.93, 0.97] had lower odds of reporting that online help-seeking was at least moderately important in helping them deal with their most stressful period in the past 12 months.

Discussion

The current study examined the online and traditional help-seeking behaviors among a large sample of college students in the United States and may provide new insights for campus prevention efforts. Overall, female students endorsed both types of help-seeking during their most difficult time in the past 12 months, yet older students were less likely to subscribe to either traditional or online sources of support. Regardless of ideation history, older students disclosed lower importance of online and traditional help-seeking than younger students.

When examining differences related to suicidal ideation history, most of those who reported recent ideations did not believe that traditional or online help-seeking were important during their time of distress. Only females reported that traditional help-seeking was important and those engaging in at least one risky behavior reported that online help-seeking was important. While the literature posits that those who engage in suicidal thoughts and behaviors are less likely to seek help,^{27,28} it was encouraging to observe that females with and without suicidal ideation were certifying both traditional and online. Although, it is concerning that so many males are not finding that their sources of support were important during their most stressful period during the past year. What is encouraging is that online help-seeking might be an emerging area for suicide prevention on college campuses to focus on regarding their higher risk groups, (i.e. those who have recent ideation in addition to those engaging in risky behaviors) and reducing stigma related to help-seeking as the internet may provide some level of anonymity.¹¹ Additionally, those engaging in risky behaviors might not have an in-person support system that practices pro-social coping skills and the internet may be the only outlet to seeking help. Online help-seeking could be a source of upstream suicide prevention for individuals who are already engaging in risky behaviors that are strongly associated with future suicidal thoughts and behaviors.

However, caution should be made that not all online sources are appropriate and free of pro-suicide messaging. Research suggests that individuals with a higher risk of suicidal behaviors not only prefer informal and anonymous sources of support online, but suicidal individuals tend to perceive pro-suicide websites in a positive manner.^{29,30} Online help-seeking can be a double-edged sword as it is often free, accessible 24 hours a day, and there is the notion of anonymity, but it can also lead to additional risk factors as the establishment of harmful relationships, online as well as in person. Therefore, students may experience additional unexpected risks such as cyberbullying while they are attempting to find support. Caplan found that students who had lower levels of psychosocial health not only used the Internet more, but they also had a higher likelihood of adverse outcomes including psychological distress.³¹ Many emerging adults are almost always “connected” through social media and smartphones among the constantly evolving technologies and devices that promote instant access; thus, there is an assumption that they can access or provide support immediately. Moreover, while some studies have concluded that few students believe their Internet use was overall helpful, other studies have determined that excessive Internet use may have comparable consequences to binge drinking including low academic performance, difficulty maintaining interpersonal relationships and a reduction of daily functioning.^{32,33} But additional research is needed to further examine the benefits and risks of seeking help online, especially help-seeking behaviors among suicidal emerging adults.

Based on our findings, we believe that campuses should promote empirically informed online suicide prevention resources including educating students on recognizing their own or their friends’ psychological distress, how to approach students to discuss their concerns and also offer options on how to make referrals to their university’s counseling center.³⁴ Students report that personalized feedback and online counseling increases individuals’ openness to seek out professional mental health services. Further research can ascertain the strength of these initial findings, especially the longer-term mental health outcomes of students, utilizing more real-time engagement from mental health professionals.^{35, 36}

Interestingly, there were no significant findings in terms of help-seeking preferences among LGB students, especially since previous research suggests that LGB youth tend to prefer seeking support from other peers online.¹⁴ With this type of data, we can only speculate about the reasoning behind this, especially since roughly 10% of those identifying as LGB reported ideation. Therefore, further research extrapolating the help-seeking behaviors and attitudes of sexual minority college students is critical.³⁷

Our findings suggest that racial/ethnic minority students without suicidal ideation were more likely to see traditional help than non-Hispanic white students; however, similar results were not found among those who reported suicidal thoughts in the past 12 months. This finding strengthens the need to understand the motivations and levels of comfort in help-seeking among racial and ethnic minorities. While this study examined traditional and online help-seeking, our findings may be associated with previous research that suggests racial/ethnic minorities who endorse suicidal thoughts and behaviors often avoid formal sources of help-seeking due to privacy concerns are private and the belief that they should not share their problems with others.^{27,38} Potentially campuses could to use a different, more person-centered approach to suicide prevention with racial/ethnic minorities. While it is

encouraging that racial/ethnic minorities are finding that traditional supports were important during their most stressful period in the past 12 months, we need to find novel ways to address the barriers to help-seeking among those engaging in suicidal thoughts. Online resources that are culturally responsive and appropriate could potentially bridge the gap toward barriers to help-seeking found in the literature. Partnerships with celebrities and television shows can also decrease the stigma of help-seeking. For example, MTVU and the Jed Foundation created an online mental health screening tool that is geared towards college students called ULifeline that provides psychoeducation upon the completion of the survey and where they can receive help on their campus.³⁹

Although this was an exploratory study, we were surprised that older students were less likely to endorse traditional over online help-seeking regardless of ideation history. There is emerging literature on male help-seeking⁴⁰ and potential adaptations of work on middle-aged male suicide prevention that may help to inform campus efforts. As females are more likely to ideate and attempt suicide, males, regardless of age, are more likely to die by suicide.⁴¹ It was helpful to learn that male students may not find online sources were important during their time of distress, especially since prevention efforts have steered towards the assumption that males may utilize internet modalities over seeking more traditional sources of support. Interestingly, Lewis and colleagues¹⁷ found that males did not differ from females in terms of their discomfort with either online or traditional counseling. Hence, further research is needed to better understand how to encourage male students to seek out help from traditional or online sources of support. Since males were less inclined to access online resources during times of distress, universal public health efforts such as messaging help-seeking at sporting events, gatekeeper training during fraternity “rush” weeks, and potentially screening all students for distress and suicide during wellness visits at the campus health center.

Despite the study’s strengths discussed in this paper, there are several limitations. First, while large, the sample size is self-selected and not representative. Therefore, our findings cannot be generalized to the larger college population. In addition, the study is cross-sectional and participants self-reported their suicidal ideation, potentially underestimating their disclosure based on stigma related to mental health and suicidal behaviors. Moreover, as a secondary analysis, there were demographic questions that add to the shortcomings of this study. For instance, our sample, similar to many college samples, are predominately non-Hispanic white. Therefore, our findings do not speak to experiences of specific minority racial and ethnic groups. Additionally, the single question about gender identity was both a strength and a weakness. Unfortunately, the experiences of transgender individuals are often overlooked by researchers who do not inquire about gender identity; therefore, inquiring about transgender individuals is a step in the right direction. However, future research should consider the benefits of inquiring about the sex individuals were assigned at birth as well as their current gender identity.⁴²

College campuses are a key system for emerging adults and previous work has linked positive health behaviors with the ability to practice adaptive coping skills and reduced suicidal behavior.⁴³ Our results have direct implications for college campus mental health centers, specifically in terms of increasing students’ access to inclusive care on and off of

campus. The findings from the current study also suggest that students use a diverse compilation of informal and formal, but also in-person and also online coping mechanisms. While organizationally this might see a bit overwhelming to include a variety of resources to students, this can also be framed that there are many ways to engage in suicide prevention than ever before.

Conclusion

As a growing number of college students have grown up with the Internet and have more experience and comfort navigating blogs, social network sites, and chat rooms, providing empirically-informed options for our most vulnerable students is imperative. While internet therapy and online sources of support are gaining popularity with hard-to-access populations (i.e. older adults and rural communities), these types of interventions could be useful for college students who reside in populated campuses and need services but are afraid to visit their school's mental health center due to stigma. Most at-risk students reported that online services were at least moderately important, and this finding shows promise in the evolving suicide prevention field. With that said, most of the respondents, regardless of recent suicidal ideation, still reported that talking to someone in-person or over the phone was the most important resource while they were going through their recent distress in the past 12 months. Therefore, potentially a combination of both online and traditional services may provide a more effective means to decreasing students' distress, and suicidal thoughts and behaviors.

References

1. Webappa.cdc.gov. (2015). Fatal Injury Reports, National and Regional, 1999 – 2015. [online] Available at: <http://webappa.cdc.gov/cgi-bin/broker.exe> [Accessed 4 Apr. 2018].
2. Webappa.cdc.gov. (2015). Leading causes of death 1999–2015, National or Regional. [online] Available at: <http://webappa.cdc.gov/cgi-bin/broker.exe> [Accessed 4 Apr. 2018].
3. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*. 2005;62:593–602. [PubMed: 15939837]
4. Downs MF, Eisenberg D. Help-seeking and Treatment Use Among Suicidal College Students. *Journal of American College Health*. 2012;60:104–114. [PubMed: 22316407]
5. Garlow SJ, Rosenberg J, Moore JD, et al. Depression, desperation, and suicidal ideation in college students: results from the American Foundation for Suicide Prevention College Screening Project at Emory University. *Depression and Anxiety*. 2008;25:482–488. [PubMed: 17559087]
6. Morrison LL, Downey DL. Racial differences in self-disclosure of suicidal ideation and reasons for living: Implications for training. *Cultural Diversity and Ethnic Minority Psychology*. 2000 11;6(4): 374. [PubMed: 11089313]
7. Czyz EK, Horwitz AG, Eisenberg D, Kramer A, King CA. Self-reported barriers to professional help-seeking among college students at elevated risk for suicide. *Journal of American College Health*. 2013 10 1;61(7):398–406. [PubMed: 24010494]
8. Anderson M, Perrin A, Anderson M, & Perrin A “13% of Americans don’t use the internet. Who are they?”. (2016). Pew Research Center.
9. Census.gov. (2014). Computer and internet use in the United States. Current Population Survey Reports, P20–568. [online] Available at: <http://www.census.gov/history/pdf/2013computeruse.pdf> [Accessed 5 Apr. 2018].
10. Smith A, Rainie L and Zickuhr K (2018). College students and technology. [online] Pew Research Center: Internet, Science & Tech. Available at: <http://www.pewinternet.org/2011/07/19/college-students-and-technology/> [Accessed 5 Apr. 2018].

11. Luxton DD, June JD Kinn JT. Technology-based suicide prevention: current applications and future directions. *Telemedicine and e-Health*. 2011;17:50–54. [PubMed: 21214382]
12. Suicidepreventionlifeline.org. (2018). We Can All Prevent Suicide. [online] Available at: <http://www.suicidepreventionlifeline.org/getinvolved/suicide-prevention-toolkit.aspx> [Accessed 4 Apr. 2018].
13. The Trevor Project. (2018). Get Help Now – The Trevor Project. [online] Available at: <http://www.thetrevorproject.org/pages/get-help-now> [Accessed 4 Apr. 2018].
14. McDermott E Asking for help online: Lesbian, gay, bisexual and trans youth, self-harm and articulating the ‘failed’ self. *Health*. 2015;19:561–577. [PubMed: 25413341]
15. Haas A, Koestner B, Rosenberg J, et al. An Interactive Web-Based Method of Outreach to College Students at Risk for Suicide. *Journal of American College Health*. 2008;57:15–22 [PubMed: 18682341]
16. De Luca S, Lim J. Young adolescents’ help seeking behaviors and attitudes: an examination of an underserved community.
17. Lewis J, Coursol DH, Bremer KL, Komarenko O Alienation among college students and attitudes toward face-to-face and online counseling: Implications for student learning. *Journal of Cognitive Education and Psychology*. 2015;14: 28–37.
18. Luxton DD, June JD, Fairall JM. Social media and suicide: a public health perspective. *American journal of public health*. 2012;102 Suppl 2:S195–S200 [PubMed: 22401525]
19. Reddit.com. (2018). Reddit [online]. Available at: <https://www.reddit.com/>
20. Biddle L, Donovan J, Hawton K, Kapur N, Gunnell D. Suicide and the internet. *BMJ*. 2008;336:800–802. [PubMed: 18403541]
21. Minds Health. (2015). The Healthy Minds Study. [online] Available at: http://healthybodiesstudy.org/wpcontent/uploads/2014/07/HMS_national.pdf [Accessed 5 Apr. 2018].
22. Acha-ncha.org. (2011). American College Health Association-National College Health Assessment II: Reference Group Executive Summary Spring 2011. [online] Available at: http://www.acha-ncha.org/docs/acha-ncha-ii_referencegroup_executivesummary_spring2011.pdf [Accessed 5 Apr. 2018].
23. Acha-ncha.org. (2012). American College Health Association-National College Health Assessment II: Reference Group Executive Summary Fall 2011. [online] Available at: http://www.acha-ncha.org/docs/acha-ncha-ii_referencegroup_executivesummary_spring2011.pdf [Accessed 5 Apr. 2018].
24. Fassinger RE, Arseneau JR. “I’d Rather Get Wet Than Be Under That Umbrella”: Differentiating the Experiences and Identities of Lesbian, Gay, Bisexual, and Transgender People.
25. De Luca S, Yan Y, Lytle M, Brownson C. The Associations of Race/Ethnicity and Suicidal Ideation among College Students: A Latent Class Analysis Examining Precipitating Events and Disclosure Patterns. *Suicide and Life-Threatening Behavior*. 2014;44:444–456. [PubMed: 24816248]
26. De Luca SM, Franklin C, Yueqi Y, Johnson S, Brownson C. The relationship between suicide ideation, behavioral health, and college academic performance. *Community Ment Health J*. 2016;52:534–540. [PubMed: 26831304]
27. Lytle MC, De Luca SM, Blosnich JR, Brownson C. Associations of racial/ethnic identities and religious affiliation with suicidal ideation among lesbian, gay, bisexual, and questioning individuals. *J Affect Disord*. 2015;178:39–45.0 [PubMed: 25795534]
28. Wyman PA, Brown CH, LoMurray M, et al. An outcome evaluation of the Sources of Strength suicide prevention program delivered by adolescent peer leaders in high schools. *American journal of public health*. 2010;100:1653–1661 [PubMed: 20634440]
29. Seward AL, Harris KM. Offline versus online suicide-related help-seeking: changing domains, changing paradigms. *Journal of clinical psychology*. 2016 6;72(6):606–2 [PubMed: 26928393]
30. Harris KM, McLean JP, Sheffield J. Examining suicide-risk individuals who go online for suicide-related purposes. *Archives of Suicide Research*. 2009 7 16;13(3):264–76. [PubMed: 19591000]
31. Caplan SE. Preference for Online Social Interaction: A Theory of Problematic Internet Use and Psychosocial Well-Being. *Communication Research*. 2003;30:625–648.
32. Scherer K College Life On-Line: Healthy and Unhealthy Internet Use. *Journal of College Student Development*. 1997;38:6:655–65.

33. Mu KJ, Moore SE, LeWinn KZ. Internet use and adolescent binge drinking: Findings from the Monitoring the Future study. 2015;2:61–66
34. Kognito At-Risk for College Students. (2018). The role of high school teachers in preventing suicide – Suicide Prevention Resource Center. [online] Available at: <http://www.sprc.org/resources-programs/kognito-risk-college-students>. Published January 1, 1970. [Accessed 18 Sep. 2018].
35. King CA, Eisenberg D, Zheng K, Czyz E, Kramer A, Horwitz A, & Chermack S (2015). Online suicide risk screening and intervention with college students: A pilot randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 83(3), 630–636. doi:10.1037/a0038805 [PubMed: 25688811]
36. Hallfors D, Brodish PH, Khatapoush S, Sanchez V, Cho H, & Steckler A (2006). Feasibility of screening adolescents for suicide risk in “real-world” high school settings. *American Journal of Public Health*, 96, 282–287. 10.2105/AJPH.2004.057281 [PubMed: 16380568]
37. Baams L, De Luca S, Brownson C. (in press, 2018). Use of Health Services Among College Students by Gender and Sexual Identity. *LGBT Health*
38. Freedenthal S Racial Disparities in Mental Health Service Use by Adolescents Who Thought About or Attempted Suicide. *Suicide and Life-Threatening Behavior*. 2007;37:22–34 [PubMed: 17397277]
39. JED. (2018). Offer free online resources for mental health issues - JED. [online] Available at: <https://www.jedfoundation.org/offer-free-online-resource-for-mental-health-issues/> [Accessed 18 Sep. 2018].
40. Witte TK, Gordon KH, Smith PN, Van Orden KA. Stoicism and sensation seeking: Male vulnerabilities for the acquired capability for suicide. *Journal of Research in Personality*. 2012;46:384. [PubMed: 22736874]
41. AFSP. (2018). Suicide Statistics — AFSP. [online] Available at: <https://afsp.org/about-suicide/suicide-statistics/> [Accessed 4 Apr. 2018].
42. Herman JL. Best practices for asking questions to identify transgender and other gender minority respondents on population-based surveys. Los Angeles: The GeniUSS Group 2014.
43. Borowsky IW, Ireland M, Resnick MD. Adolescent Suicide Attempts: Risk and Protectors. *Pediatrics*. 2001;107:485–493. [PubMed: 11230587]

Table 1.

Demographics related to age, gender, sexual orientation, relationship status, risky behaviors and help-seeking behaviors (n=26,292)

	No SI (n = 25,247)		SI (n = 1,045)	
	Percent	SE	Percent	SE
Female	62.4	0.01	66.9	0.02**
Living with someone	89.0	0.01	87.4	0.01
Risky Behaviors	47.5	0.01	86.3	0.01***
Racial and Ethnic Minority	28.3	0.01	30.1	0.01
Partnered	65.7	0.01	26.3	0.02***
LGB	5.6	0.01	10.1	0.01***
Importance of Help-seeking (moderately important or more)				
Traditional	90.4	0.01	83.8	0.01***
Online	85.4	0.01	79.9	0.01***
	Mean	SD	Mean	SD
Age	25.58	7.99	24.27	7.17***

>.001;

**
> .01

*
> .05

Table 2.

Logistic Regression: Model 1- Traditional and online help-seeking during the worst part of their most stressful period in the past 12 months

	Online			Traditional		
	Coef	(SE)	OR (95% CI)	Coef	(SE)	OR (95% CI)
Age	-0.05	0.01	0.95(0.94-0.95) ***	-0.02	0.03	0.98(0.97-0.99) ***
Female	0.39	0.28	1.48(1.40-1.56) ***	0.87	0.51	2.38(2.15-2.63) ***
Living with someone	0.07	0.04	1.07(0.99-1.17)	0.06	0.08	1.07(0.92-1.24)
Partnered	-0.08	0.03	0.93(0.87-0.98) **	0.50	0.05	1.63(1.47-1.81) ***
Risky Behaviors	0.26	0.03	1.30(1.23-1.36) ***	0.09	0.52	1.09(0.99-1.20)
Racial/Ethnic Minority	0.01	0.03	1.00(0.95-1.06)	0.13	0.06	1.14(1.02-1.28) *
LGB	-0.05	0.57	0.96(0.86-1.06)	-0.01	0.11	0.99(0.81-1.23)
SI 12 months	-0.37	0.07	0.69(0.60-0.79) ***	-0.74	0.10	0.48(0.39-0.59) ***

*
p<.05;

**
p<.01;

p<.001

Table 3.

Logistic Regression: Model 2- Traditional and Online help-seeking reporting no suicidal ideation and suicidal ideation past 12 months

	No SI			SI		
	Coef	(SE)	OR (95% CI)	Coef	(SE)	OR (95%CI)
Traditional						
Age	-0.02	0.01	0.98 (0.97-0.98)***	0.01	0.01	1.01(0.97-1.03)
Living with someone	0.07	0.08	1.07(0.92-1.25)	-0.11	0.27	0.90(0.53-1.54)
Partnered	0.50	0.06	1.65(1.49-1.84)***	0.05	0.29	1.05(0.59-1.86)
Risky Behaviors	0.09	0.05	1.09(0.98-1.20)	0.12	0.27	1.13(0.67-1.95)
LGB	0.06	0.12	1.06(0.84-1.33)	-0.41	0.29	0.67(0.38-1.17)
Female	0.90	0.05	2.46(2.22-2.73)***	0.40	0.20	1.50(1.01-2.20)*
Racial/Ethnic Minority	0.15	0.06	1.17(1.04-1.31)**	-0.14	0.22	0.87(0.57-1.33)
Online						
Age	-0.05	0.01	0.95 (0.94-0.95)***	-0.05	0.01	0.95 (0.93-0.97)***
Living with someone	0.081	0.05	1.08 (0.99-1.18)	-0.15	0.22	0.86 (0.57-1.31)
Partnered	0.81	0.05	0.92 (0.87-0.98)	-0.07	0.14	0.93 (0.71-1.22)
Risky Behaviors	0.25	0.28	1.29 (1.22-1.36)***	0.49	0.21	1.60 (1.07-2.48)*
LBG	-0.03	0.06	0.97 (0.86-1.09)	-0.24	0.23	0.79 (0.51-1.23)
Female	0.39	0.03	1.47 (1.39-1.56)***	0.56	0.15	1.75 (1.30-2.35)***
Racial/Ethnic Minority	0.01	0.03	1.01 (0.95-1.07)	-0.15	0.15	0.87 (0.64-1.17)

*
p<.05;

**
p<.01;

p<.001