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Evaluating Help-Seeking Behavior among At-Risk College Students Using the Interactive Screening Program, 2012-2016

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An abstract of
A thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
in partial fulfillment of the requirements for the degree of
Master of Public Health in Executive MPH program
2016

Abstract

Evaluating Help-Seeking Behavior among At-Risk College Students Using the Interactive Screening Program, 2012-2016

BY
Maggie G. Mortali

Background: Suicide is a serious public health problem and a leading cause of death among college and university students. Depression and substance use disorders remain the most significant risk factors for suicide, although many at-risk students are often the least likely to seek mental health services. In an ongoing effort to address this problem, the American Foundation for Suicide Prevention (AFSP) developed and implemented the Interactive Screening Program (ISP) at colleges and universities nationwide. **Methods**: This study utilized data from the ISP at Emory University's Counseling and Psychological Services (CAPS) from 2012 to 2016. Chi-square distribution tests were used to determine differences in level of risk between students who independently accessed the ISP website (self-initiated responders) and students who were directed to the ISP website via email invitation (roll-out responders). Chi-square distribution tests were used to determine differences between self-initiated responders and roll-out responders for each point of program engagement: reviewing the counselor's response; exchanging dialogue messages with the counselor, and; requesting an appointment to meet with the counselor in person. **Results**: A total of 1,059 students completed the screening questionnaire; 1,058 (99.9%) were designated as high or moderate risk. Among those designated at high or moderate risk, only 4.8% were getting any type of counseling or therapy. Of the 1,059 participants, 192 (18.1%) were roll-out responders and 867 (81.9%) were self-initiated. The rate of current suicidal thoughts, plans or behaviors was significantly higher among the self-initiated group (44.5%) versus the roll-out group (28.1%). The rate of program engagement was high for both groups. **Conclusions**: The significant difference in level of risk between students who independently accessed the ISP website and students who were directed to the ISP website via email invitation provides considerable evidence that students in distress are looking for help, and that they are looking for help online. The Interactive Screening Program identified a significant number of distressed students who were not currently utilizing mental health services. This online method of outreach proved effective in engaging at-risk students and connecting them to mental health services.

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Introduction

The second leading cause of death among college students (Schwartz, 2006a), suicide is a significant public health problem that affects individuals, families, and communities across the United States. Suicide claims more lives than war, murder, and natural disasters combined. In addition to the devastating toll on families and communities emotionally and socially, suicide also costs the United States over $44 billion annually (American Foundation for Suicide Prevention [AFSP], 2015). Findings show that between 6.5 and 7.5 per 100,000 suicide deaths are reported among college students (Schwartz, 2006a). Each year, 18 percent of undergraduate students and 15 percent of graduate students report having seriously considered attempting suicide in their lifetimes (Schwartz, 2011) with between 40 and 50 percent reporting multiple episodes of serious suicidal thoughts (Drum, 2009). During a developmental period when mental health conditions and suicide risk increases dramatically (Garlow et al., 2008) more resources and strategic approaches are needed to reach students at risk. The college campus provides an ideal setting for suicide prevention initiatives as mental health services are available to students and help-seeking behavior can be developed and encouraged.

Depression and substance use disorders remain the most significant risk factors for suicide deaths and attempts among young people (Haas, 2008). However, many college students with mental health problems do not seek mental health services (Nordberg et al., 2013) often causing conditions to be under-diagnosed and therefore untreated. One study reported that only 36 percent of university students with major depression had received mental health services in the previous year (Eisenberg, Hunt, & Speer, 2012), while another study reported that among students with a substance use disorder, only 4 percent

had received treatment (Eisenberg, Hunt, Speer, & Zivin, 2011). Among college students who seriously considered attempting suicide, over half had not received professional help (Drum, 2009). Furthermore, based on data from the National Survey of College Counseling Center Directors, over 85 percent of students who died by suicide had not sought help at their college counseling center (Gallagher, 2014). Thus, what is needed is a comprehensive method for identifying and engaging at-risk students into mental health services.

In an ongoing effort to address this problem, the American Foundation for Suicide Prevention (AFSP) developed and implemented the Interactive Screening Program (ISP) at colleges and universities across the United States (Interactive Screening Program [ISP], 2016). This initiative identifies students who may be at risk for suicide via an email invitation offering them the opportunity to participate in an anonymous online screening (ISP, 2016). Using an interactive approach, a campus counselor reviews student responses and posts a confidential personalized assessment on the secure ISP website, which students can retrieve using their self-assigned user ID and password (ISP, 2016). Via the ISP website, students have the option of exchanging online dialogue messages with the counselor and are encouraged to contact the counselor for an in-person appointment (ISP, 2016). Given the demonstrated effectiveness of college counseling in improving student mental health problems, ISP seeks to reduce students' barriers to help-seeking by connecting them to a campus counselor who can support student help-seeking and engage students into campus mental health services.

The primary purpose of this study is to examine help-seeking behaviors and treatment engagement among at-risk students using the American Foundation for Suicide

Prevention's (AFSP) Interactive Screening Program (ISP) at Emory University's Counseling and Psychological Services (CAPS). This study explores the following research questions:

Question 1: Will there be a difference in level of risk between students who independently access the ISP website (self-initiated responders) and students who are directed to the ISP website via email invitation (roll-out responders)?

(H_1) Students who independently access the ISP website (self-initiated responders) will be at higher risk than students who are directed to the ISP website via email invitation (roll-out responders).

(H_O) There will be no difference in level of risk between students who independently access the ISP website (self-initiated responders) and students who are directed to the ISP website via email invitation (roll-out responders)

Question 2: Will there be a difference in engagement with the program and treatment services between students who independently access the ISP website (self-initiated responders) and students who are directed to the ISP website via email invitation (roll-out responders)?

(H_1) Students who independently access the ISP website (self-initiated responders) will have higher rates of engagement with the program and treatment services than students who are directed to the ISP website via email invitation (roll-out responders).

(H_O) There will be no difference in engagement with the program and treatment services between students who independently access the ISP website (self-

initiated responders) and students who are directed to the ISP website via email invitation (roll-out responders)

To answer the research questions, a secondary data analysis of ISP data and program process outcomes collected from the implementation of the Interactive Screening Program (ISP) from September 1, 2012 to August 31, 2016 at Emory University's Counseling and Psychological Services (CAPS) was conducted.

The current study seeks to expand the knowledge of student help-seeking to inform best practices for college and university counseling centers outreach efforts to increase treatment engagement among at-risk students. Furthermore, the study seeks to make recommendations for ways in which counseling centers can expand their efforts by offering a variety of methods for students to connect with counseling center services.

In addition to understanding the different ways in which college students explore and engage in campus counseling services, it is important to understand how counseling centers can identify at-risk students and encourage service utilization. Therefore, a secondary purpose of this study is to evaluate the ISP to determine its effectiveness as a method for identifying students at-risk and engaging them in mental health services.

Definition of Terms

At-Risk: At-risk is a term used to describe a student who is struggling with mental health conditions, has emotional or behavioral problems, and/or other risk factors that put he or she at-risk for suicide. *Help-seeking*: Help-seeking behavior for a health problem is defined as a problem focused, planned behavior, involving interpersonal interaction with a selected health-care professional (Cornally & McCarthy, 2011). *Roll-Out:* A roll-out is when the counseling center sends email invitations to select groups of students to

participate in ISP. *Roll-Out Responders*: Roll-out responders is the term used for students who participate in ISP from an email invitation. *Self-Initiated Responders:* Self-initiated responders is the term used for students participate in ISP by finding the link to the ISP website independently.

Review of the Literature

In recent years, college student suicide and mental health conditions have become a major concern for colleges and universities across the country (Haas, 2010). While it has often been assumed that college students generally have better mental health than their peers who do not attend college, suicide remains a leading cause of death among college and university students (Jed Foundation, 2016).

Late adolescence and early adulthood is a challenging developmental period which coincides with the onset of many mood, anxiety and substance use disorders (Garlow et al., 2008). For college students, the stress of general age-related transitions is commonly intensified by the many social and academic stressors intrinsic to campus life, increasing the likelihood of mental health problems (Garlow et al., 2008). In a study by Blanco et al., (2008) researchers conducted a data analysis from a large national epidemiological health survey to examine the prevalence of mental health conditions and rates of treatment among individuals attending college and their non-college peers. Similar to other research outcomes among these groups, researchers found mental health conditions to be present in roughly equal proportions of eighteen to twenty-four-year-olds who attend, and do not attend, college (Blanco et al., 2008). Over forty-five percent of respondents in each group were reported to have at least one mental health condition in the year prior to the survey, in most cases, a mood, anxiety, or substance use disorder (Blanco et al., 2008). Furthermore, this analysis showed that, among those with mental health conditions, students received mental health treatment at lower rates than non-students (eighteen and twenty-one percent respectively) (Blanco et al., 2008). These

findings underscore the importance of prevention interventions aimed to increase treatment engagement among college-aged individuals.

The 2015 National College Health Assessment (NCHA), a large-scale national survey of college students, found that in the past year, one in three college students reported "feeling so depressed that it was difficult to function," and one in ten said they had "seriously considered attempting suicide" (American College Health Association [ACHA], 2015). Alarmingly, that same survey found that despite the availability of free or low-cost mental health services on most college and university campuses, only 26.6% of depressed students were receiving mental health treatment (ACHA, 2015). Because untreated or inadequately treated mental disorders are the leading cause of suicide in adolescents and young adults (Haas et al., 2008), these survey findings point to college students as an at-risk population for intentional self-harm behavior.

Due to the omission of school enrollment from officially collected data on suicide death, suicide rates among college students remains limited (Haas, 2010). The current reported annual suicide rate for college students is 6.5 per 100,000 per year, half the rate of 13.2 per 100,000 for age, gender, and race matched individuals in the general population (Schwartz, 2006a). Looking at data from 4-year institutions, the institutions on which the suicide rate is based, the suicide rate among full-time undergraduate students is 7.27 per 100,000 and 1.41 per 100,000 among full-time graduate students (Schwartz, 2006). When part-time undergraduate and graduate students at 4-year institutions are included, the suicide rates increase to 9.05 per 100,000 and 3.07 per 100,000 respectively (Schwartz, 2006).

Regardless of the frequency with which college students die by suicide, there is convincing evidence that those who are most at risk for suicide have low rates of utilizing campus mental health services (Haas, 2010). The National Survey of College Counseling Centers, which has been conducted annually since 1980, has consistently shown that fewer than twenty percent of college students who die by suicide had sought services from their campus counseling center (Gallagher, 2014). In 2014, the most recent year for which data are available, only fourteen percent of students who died by suicide were reported to have sought counseling center assistance within the past year (Gallagher, 2014).

Recognizing that many at-risk college students do not receive mental health treatment, Downs and Eisenberg (2012) explored how attitudes, beliefs, and social network factors relate to help-seeking among suicidal students. To examine this relationship, researchers administered an online survey to a random sample of undergraduate and graduate students form fifteen universities across the United States (Downs & Eisenberg, 2012). Among the 8,487 students who took the survey, 543 (6.4%) reported serious thoughts of suicide within the past year (Downs & Eisenberg, 2012). In their analysis, researchers found that the overall level of perceived stigma (perceptions of others' attitudes) was much higher than personal stigma (one's own attitudes) as reasons for not getting mental health treatment (Downs & Eisenberg, 2012). That said, personal stigma was associated with lower odds of treatment use among suicidal students (Downs & Eisenberg, 2012). In addition, researchers found that among suicidal students who engaged in mental health treatment, perceived need, beliefs about treatment effectiveness, and contact with other individuals engaged in mental health services were all positively

correlated with treatment use (Downs & Eisenberg, 2012). To this end, researchers identified the need for campus strategies that identify facilitators and barriers to treatment in an effort to enhance student help-seeking among target populations (Downs & Eisenberg, 2012). Strategies that aim to address students' mental health needs and highlight the importance of utilizing campus counseling services will help to reduce barriers to help-seeking and encourage treatment engagement among at-risk students.

Efforts aimed at reaching students at elevated risk for suicidal behavior should be sensitive to perceived barriers to help-seeking (Czyz, Horwitz, Eisenberg, Kramer, & King, 2013), as barriers may be more prevalent among college students with a lifetime history of suicide ideation (Arria et al., 2011). Arria et al., (2011) found that of those experiencing suicidal ideation in college, forty-four percent did not seek treatment. Treatment barriers reflected ambivalence about treatment need or effectiveness, stigma, and financial concerns (Arria et al., 2011). In addition, students who are considering suicide or engaging in self-harm behaviors may be deterred from seeking help due to involuntary removal or mandatory leave-of-absence policies that some colleges and universities have enacted in an effort to protect from lawsuits that have followed student suicide deaths at other institutions (Appelbaum, 2006; Haas, 2010). These and other barriers to seeking mental health services clearly need to be addressed and resolved if treatment rates are to be increased among students who are at risk for suicide. The low rate of service utilization among at-risk groups is problematic, especially because research shows that help-seeking has the potential to reduce suicidal behavior.

Many factors appear to contribute to students' reluctance to seek mental health services. When a young adult college student perceives stigma or discrimination of

depression from family and friends, they may be less likely to seek university counseling for depression or other mental health concerns (D'Amico, Mechling, Kemppainen, Ahern, & Lee, 2016). Negative attitudes toward mental health treatment, sometimes rooted in past experiences, have been found in a surprisingly high percentage of young adults (Haas, 2010). Other barriers to treatment among young people include the fear of being stigmatized by others and cultural beliefs that equate mental health problems with weakness (Haas, 2010). In one study examining college student barriers to help-seeking, researchers found that personal stigma was significantly and negatively associated with measures of help-seeking, including perceived need and use of psychotropic medication, therapy, and nonclinical sources of support, whereas perceived stigma was not significantly associated with help-seeking (Eisenberg, Downs, Golberstein, & Zivin, 2009). Educating college students about mental health disorders and treatments, enhancing knowledge about available services, and addressing limited access to long-term care might improve treatment rates for students suffering from mental health conditions (Bohon, Cotter, Kravitz, Cello, & Garcia, 2016).

To better access students in distress, particularly those at risk for suicide, and to address barriers to seeking mental health assistance, the American Foundation for Suicide Prevention (AFSP) developed the Interactive Screening Project (ISP). First implemented in 2002 in partnership with two participating universities, ISP is an interactive, online program designed to help identify students with mental health concerns, and encourage them to get help by connecting them with appropriate mental health services on or off campus. Beliefs, attitudes, fears, and concerns about treatment prevent many distressed

students from seeking mental health support ISP reduces these barriers by ensuring anonymity in students' online communications.

The effectiveness of the ISP for undergraduate students has been documented in a 3-year study of undergraduates on two southeastern campuses: a private, urban university and the main campus of a large state university (Garlow et al., 2008; Haas et al., 2008). Researchers found that approximately 8 percent of students invited to participate in the program submitted an online questionnaire (N=1,162), with over 90 percent of respondents indicating a clinically meaningful level of emotional distress (Haas et al., 2008). Among students with moderate to severe levels of depressive symptoms and/or current suicidal ideation, over 92 percent were not currently receiving any type of counseling or therapy (Haas et al., 2008). About 40 percent of such students engaged in anonymous online dialogues with the counselor, 20 percent attended an in-person evaluation session, and approximately 14 percent entered treatment as recommended by the counselor (Haas et al., 2008). Students who engaged in the online dialogues with a counselor were three times more likely than others to receive in-person evaluation and treatment (Haas et al., 2008).

The significant societal cost and personal tragedy of suicide call for more efforts to identify students who are at risk and link them to available mental health services. The current study evaluates how ISP can be utilized by counseling centers to help in identifying at-risk students and engaging them into services. Recognizing that there are often barriers to seeking mental health services, this study examines the effectiveness of different outreach methods to determine the most effective ways of connecting with students in distress and whether there is a correlation between the severity of symptoms

and those who follow through with mental health services. Through analyzing data collected through the Interactive Screening Program (ISP) at Emory University's Counseling and Psychological Services (CAPS), the current study seeks to expand the knowledge of student help-seeking to inform best practices for college and university counseling centers outreach efforts to increase treatment engagement among at-risk students.

Methodology

To answer the research questions, a secondary data analysis of data and program process outcomes collected from the implementation of the Interactive Screening Program (ISP) from September 1, 2012 to August 31, 2016 at Emory University's Counseling and Psychological Services (CAPS) was conducted.

This study was carried out in accordance with the principles of the Declaration of Helsinki. All of the data gathering and analytic procedures were reviewed and approved by the Emory University Institutional Review Board (IRB). As this study involved data gathering via anonymous survey, specific signed informed consent from participants was deemed not necessary by the IRB. The information provided on the program website where the screening is conducted does contain the key elements of informed consent, and consent is implied by the student's completion of the questionnaire.

All participant and counselor-generated data transmitted over the ISP website were automatically stored and organized in an administrative section of the program website. All completed questionnaires were logged into a centralized database that differentiated self-initiated respondents and roll-out respondents. The information documented in the data report included the respondent's computer-generated ID number, tier (indicating respondents' level of distress), the dates and times the respondent submitted the questionnaire, the counselor posted the response, and the respondent returned to the website and accessed the counselor's response. Also included in the data report were coded responses to all questionnaire items, including two demographic items (gender and age), coded responses to follow-up questionnaire, if completed, the number of online

dialogues respondent exchanged with the counselor, and the outcome of the dialogue messages (if the respondent requested an appointment with the counselor).

Instrument

The American Foundation for Suicide Prevention (AFSP) developed the Interactive Screening Program (ISP), an online program to identify at-risk students and encourage them to enter into treatment (ISP, 2016). The ISP website contains a stress and depression questionnaire based on the PRIME-MD Patient Health Questionnaire and contains the nine-item Patient Health Questionnaire (PHQ-9) (Spitzer, Kroenke, & Williams, 1999); measures of intense emotional distress (anxiety, panic, rage, hopelessness, desperation, and loss of control) that have been linked to depression with suicidal ideation (SI); alcohol and drug use; disordered eating behaviors; current suicidal thoughts, behaviors, and plans and past suicide attempts; current mental health treatment; and gender and age. A final optional item asks participants to provide an email address, which is encrypted, to facilitate anonymous communication with the counselor through the program website. Each time the questionnaire is submitted, it is computer analyzed and based on specific answers, classified into one of four tiers: Tier 1A, Tier 1B, Tier 2, and Tier 3, indicating high, moderate, or low distress.

Program Procedures

Individuals who participated in ISP created a self-assigned user ID and password to complete the online stress and depression questionnaire. Following procedures previously described (Downs et al., 2014; Garlow et al., 2008; Haas et al., 2008; Moffitt et al., 2014), once participants completed and submitted their questionnaires, the program website automatically analyzed the answers and classified respondents into one of the

four tiers. Criteria for Tier 1 (high risk) included a PHQ-9 score of 15 or higher, current suicidal ideation, a PHQ-9 score of 10-14 with prior suicide attempts, intense feelings of anxiety, panic, anger, hopelessness, desperation, loss of control, or an indication that the current problems make it very or extremely difficult to function. Tier 1 was further divided into Tier 1A, which indicated any level of current suicidal ideation, and 1B, which indicated suicide risk and severe distress without current ideation. Criteria for Tier 2 (moderate risk) included a PHQ-9 score of 10-14 without a history of suicide attempt or current suicidal ideation, problems related to alcohol or drug use or eating behaviors, or an indication that current problems were making it somewhat difficult to function. Respondents who did not meet any of these criteria were designated as Tier 3 (low risk).

Immediately after the questionnaire was posted to the ISP website, the computer system generated email notifications to the designated ISP counselors at Emory University's Counseling & Psychological Services (CAPS). The email notifications indicated each respondent's tier level and provided a link to the respondent's record on the ISP website. Program guidelines called for all Tier 1 respondents to be answered within 24 hours, Tier 2 respondents within 36 hours and Tier 3 respondents within 48 hours. Within the appropriate time frame, counselors reviewed the respondents' questionnaires and created a detailed, personalized response and assessment for each participant, using a template specific to the participant's risk tier. In addition to the assessment, the counselor addressed any questions or comments left by participants in an open-ended comment box at the end of the questionnaire. Participants were invited to exchange dialogue messages with the counselor using the ISP website's messaging system, or to contact the counselor directly using the contact information provided by the

counselor, including the counselor's name, office location, and phone number. Therefore, participants maintained the ability to remain anonymous.

After the counselors posted their responses to the ISP website, the responses were accessible to participants by logging into the program website with their user ID and password they created to take the questionnaire. Respondents who provided an email address automatically received an email notification alerting them of the response with a link to the program website. Respondents could also return independently to the website and log in to view the counselor's response regardless of having provided an email address.

All Tier 1 and Tier 2 respondents were urged to contact the counselor to arrange an in-person meeting. All respondents, regardless of tier designation, were offered the option of using the website's "dialogue" feature to communicate online with the counselor while remaining anonymous. In general, the counselor's key aims in the responses were to convey interest, support and availability, and to encourage engagement, whether in-person or through the anonymous online dialogues.

All Tier 1 and 2 respondents who provided an email address were sent email reminders at 15 and then 30 days after the counselor's response had been posted to the ISP website. The email reminders urged respondents to access the counselor's response if they haven't already done so, and to follow the recommendations for follow-up. The second and final reminder contained a link to a brief Update Questionnaire for respondents who had no contact with the counselor to complete. Items inquired about how the respondent had been doing in recent weeks, and elicit reasons for not contacting

the counselor as well as the respondents' perception of what would be most helpful at that time.

Data Analysis

Data were collected after the 4-year interval (9/1/2012 – 8/31/2016) had been completed. Data reports were downloaded from the program website into a Microsoft Excel spreadsheet and were then uploaded into SPSS 22.0 (IBM SPSS Statistics 22.0) for statistical analyses. Descriptive statistics were presented as frequencies and percentages or means and standard deviations in Figure 1 and Table 1. Chi-square distribution tests were used to determine differences in level of risk between students who independently accessed the ISP website (self-initiated responders) and students who were directed to the ISP website via email invitation (roll-out responders). Chi-square distribution tests were also used to determine differences between self-initiated responders and roll-out responders for each point of program engagement: reviewing the counselor's response; exchanging dialogue messages with the counselor, and: requesting an appointment to meet with the counselor in person.

Results

One thousand fifty-nine Emory students completed the Interactive Screening Program (ISP) questionnaire during the 4-year study interval. Of the 1,059 respondents, 1,051 answered the gender demographic question. Of those, 759 (71.4%) were female, 294 (27.8%) were male, and 1 (0.1%) selected prefer not to answer. The mean age (SD) of the 984 respondents who provided their age at the end of the questionnaire was 23 (4.921).

On the basis of their responses, 823 (77.7%) of the 1,059 participants were designated as Tier 1, with 439 (53.3% of Tier 1, 41.5% overall) falling into Tier 1A and 384 (46.7% of Tier 1, 36.3% overall) into Tier 1B. 235 (22.2%) participants were designated as Tier 2, and 1 (0.1%) as Tier 3. Although almost 99.9% of the respondents indicated some level of psychological distress, only 42 (5.1%) of Tier 1 and 9 (3.8%) of Tier 2 respondents were currently receiving counseling or therapy.

More than 96% (N = 1,019) of the 1,059 respondents provided an email address at the end of the Questionnaire, which facilitated automated email notifications for almost all respondents when the counselor's assessment and subsequent Dialogue notes were posted on the ISP website. As tracked by the ISP website, 971 respondents (91.7%) returned to the ISP website to view the counselor's posted response; 413 (94.1%) of Tier 1A, 350 (91.1%) of Tier 1B, and 208 (88.5%) of Tier 2. None of the 1 Tier 3 respondents returned to the ISP website to view the counselor's assessment.

Subsequently, 508 students (52.3% of respondents that viewed the counselor's response and 48.0% of all questionnaire respondents)— all of whom were in Tier 1 or 2—engaged in 1 or more anonymous online dialogues with the counselor. High-risk students were the most likely to engage in dialogues, with 251 (49.4%) Tier 1A, and 175

(34.4%) Tier 1B respondents having at least 1 online exchange with the counselor. Of the 1,059 respondents, 192 (18.1%) were roll-out responders and 867 (81.9%) were self-initiated responders.

Figure 1. Interactive Screening Program Flowchart

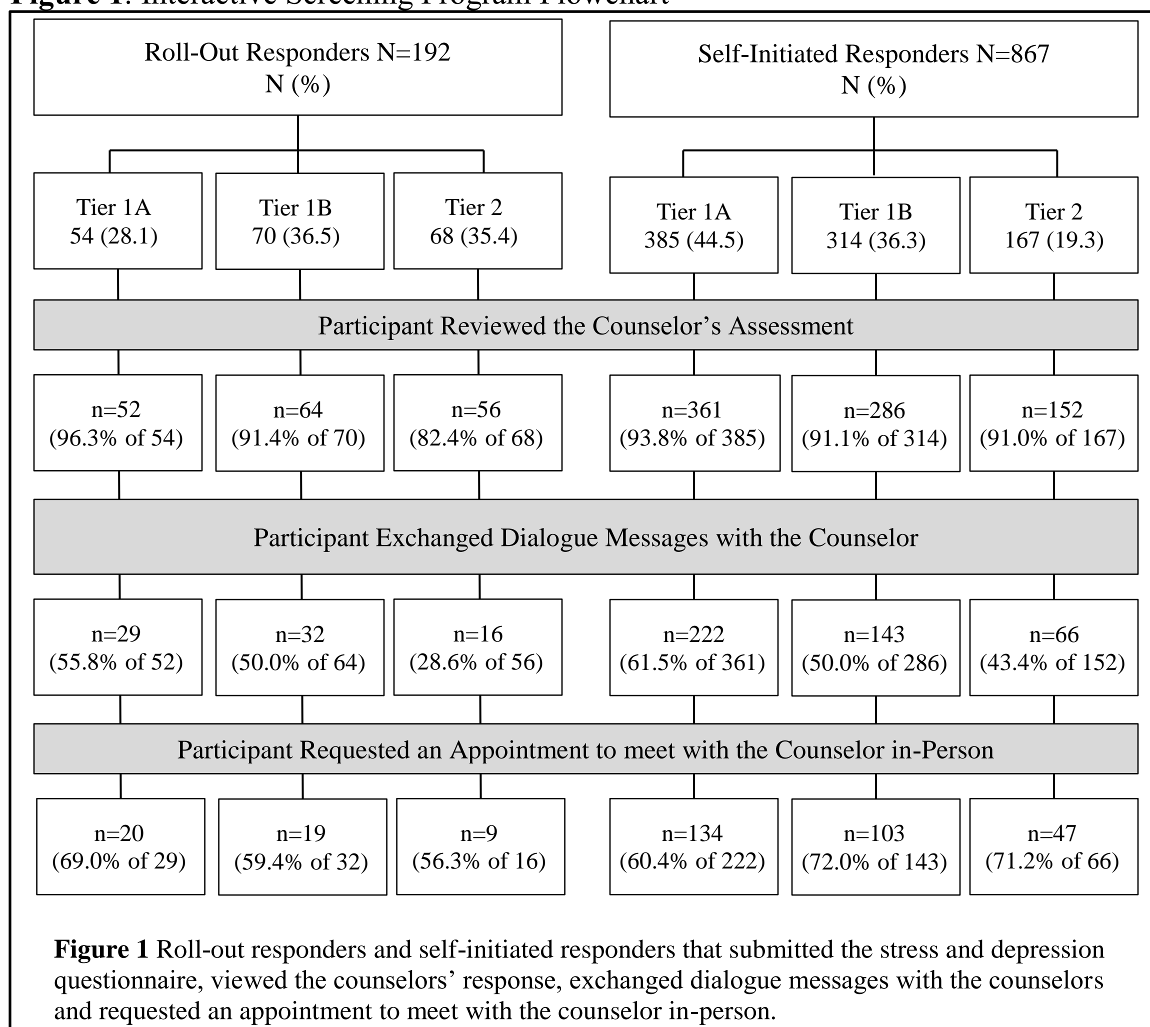


Figure 1 Roll-out responders and self-initiated responders that submitted the stress and depression questionnaire, viewed the counselors' response, exchanged dialogue messages with the counselors and requested an appointment to meet with the counselor in-person.

Of the 1,059 participants, 192 (18.1%) were roll-out responders. Of those, 54 (28.1%) were designated as Tier 1A, 70 (36.5%) were Tier 1B, and 68 (35.4) were Tier 2, with no roll-out responders designated as Tier 3. Of the 54 Tier 1A respondents and 70 Tier 1B respondents, 52 (96.3%) and 64 (91.4%) respectively, logged back into the ISP website to retrieve the counselor's response. Among the 68 Tier 2 respondents, 56 (82.4%) reviewed

the counselor's response. Furthermore, of the 52 Tier 1A participants to review the counselor's assessment, 29 (55.8%) respondents engaged in at least one dialogue with the counselor, with 20 (69.0%) requesting an appointment to meet with the counselor in person. Of the 64 Tier 1B participants who reviewed the counselor's assessment, 32 (50.0%) further dialogued with the counselor, with 19 (59.4%) requesting an appointment with the counselor. Lastly, of the 56 Tier 2 respondents who viewed the counselor's assessment, 16 (28.6%) dialogued with the counselor, with 9 (56.3%) requesting an appointment to meet with the CAPS counselor.

Of the 1,059 participants, 867 (81.9%) were self-initiated responders. Of those, 385 (44.5%) were designated as Tier 1A, 314 (36.3%) were Tier 1B, 167 (19.3) were Tier 2, and 1 (0.1%) were Tier 3. Of the 385 Tier 1A respondents and 314 Tier 1B respondents, 361 (93.8%) and 286 (91.1%) respectively, logged back into the ISP website to retrieve the counselor's response. Among the 167 Tier 2 respondents, 152 (91.0%) reviewed the counselor's response. The Tier 3 participant did not review the counselor's response. Furthermore, of the 361 Tier 1A participants to review the counselor's assessment, 222 (61.5%) respondents engaged in at least one dialogue with the counselor, with 134 (60.4%) requesting an appointment to meet with the counselor in person. Of the 286 Tier 1B participants that reviewed the counselor's assessment, 143 (50.0%) further dialogued with the counselor, with 103 (72.0%) requesting an appointment with the counselor. Lastly, of the 152 Tier 2 respondents that viewed the counselor's assessment, 66 (43.4%) dialogued with the counselor, with 47 (71.2%) requesting an appointment to meet with the CAPS counselor.

Table 1. Frequencies of Participant Demographic, Program Engagement, and Level of Distress

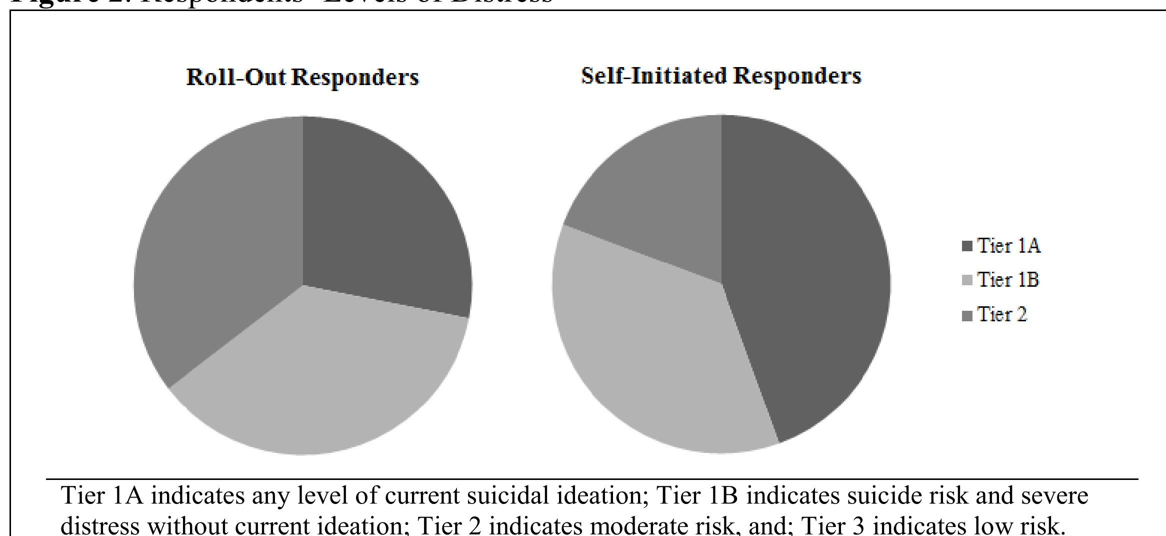
	Total N=1,059 *N* (% Yes) or *M* (SD)	Roll-Out Responders N=192 *N* (% Yes) or *M* (SD)	Self-Initiated Responders N=867 *N* (% Yes) or *M* (SD)
Mean age (years)	23 (5)	24 (5)	23 (5)
Gender (N=984)			
Female	756 (71.5)	123 (64.1)	633 (73.1)
Male	293 (27.7)	67 (34.9)	226 (26.1)
Prefer not to answer	1 (0.1)		1 (0.1)
Reviewed Counselor's Response	971 (91.8)	799 (92.3)	172 (89.6)
Dialogued with counselor	508 (52.3)	77 (44.8)	431 (53.9)
Requested Appointment	332 (65.4)	48 (62.3)	284 (65.9)
Tier			
Tier 1A	439 (41.5)	54 (28.1)	385 (44.5)
Tier 1B	384 (36.3)	70 (36.5)	314 (36.3)
Tier 2	235 (22.2)	68 (35.4)	167 (19.3)
Tier 3	1 (0.1)		1 (0.1)

Table 1 Frequencies and percentages of participant demographics, including mean age (SD) and gender, program engagement, including whether the respondent viewed the counselor's response, exchanged dialogue messages with the counselor, or requested an appointment to meet with the counselor in person, and participant level of distress

Among self-initiated responders, 44.5% were designated Tier 1A compared to 28.1% of roll-out responders. Furthermore, 19.3% of self-initiated responders were Tier 2 compared to 35.4% of roll-out responders. This showed a significant association between level of risk and how the respondent accessed the ISP website (χ^2[2, N = 1,059] =28.519, p = .000). Similar percentages of self-initiated responders and roll-out responders viewed the counselors' response (89.6% and 92.3% respectively) showing no significant difference among the two groups (χ^2[2, N = 1,058] =1.496, p = .221). Similar percentages of self-initiated responders and roll-out responders exchanged dialogue messages with the counselor (53.9% and 44.8% respectively), showing no significant difference among the two groups (χ^2[2, N = 971] =4.776, p = .029). Lastly, similar

percentages of roll-out responders and self-initiated responders (65.9% and 62.3% respectively) requested an appointment to meet with the counselor in person, showing no significant difference among the two groups ($\chi^2[2, N = 508] = 365$, $p = .546$).

Figure 2. Respondents' Levels of Distress



Tier 1A indicates any level of current suicidal ideation; Tier 1B indicates suicide risk and severe distress without current ideation; Tier 2 indicates moderate risk, and; Tier 3 indicates low risk.

Overall, 332 students—276 (83.1%) in Tier 1 and 56 (16.9%) in Tier 2—requested an appointment to meet with the CAPS counselor for an in-person evaluation. This represented 33.5% of the 823 questionnaire respondents designated as Tier 1 and 23.8% of the 235 questionnaire respondents designated as Tier 2.

Discussion

The Interactive Screening Program (ISP) provides college and university counseling centers with an effective tool for accessing previously untreated, high-risk students. The anonymity that is provided to each participant through the program's online platform reduces student barriers to seeking mental health services. Among the 823 Tier 1 students who submitted a stress and depression questionnaire, 763 (92.7%) returned to the ISP website to view the counselor's posted assessment. Of the 763 participants that viewed the counselor's response, 426 (55.8%) exchanged dialogue messages with the counselor, and of those, 276 (64.8%) requested an appointment for an in-person evaluation. These results, showing that new high-risk students connected to the counseling center through this program, offer an encouraging outcome.

Over the 4-year period, 192 students accessed the ISP website via email invitation, while 867 accessed the ISP website through an open access link on the Emory University website. Regardless of how students accessed ISP, participants engaged in the program at similar rates. Of the 124 roll-out responders designated as Tier 1, 93.5% viewed the counselor's response, 52.6% exchanged dialogue messages with the counselor, with 63.9% requesting an in-person appointment with the counselor. Among the 699 self-initiated responders designated as Tier 1, 92.6% viewed the counselor's response, 56.4% exchanged dialogue messages with the counselor, with 64.9% requesting an in-person appointment with the counselor. These results highlight the importance of offering different methods of outreach to support student help-seeking. By providing different access points to the ISP website, students at different levels of the help-seeking process are able to connect to campus mental health services.

Perhaps one of the most significant findings of this study is in regard to self-initiated responders. Over the study period, 867 students accessed the ISP website on their own. Among that group, rates of distress were significantly higher. 44.5% were currently experiencing some level of suicidal ideation plans or behaviors, compared to 28.1% of roll-out responders. The significant difference in level of risk between students who independently accessed the ISP website and students who were directed to the ISP website via email invitation provides considerable evidence that students in distress are looking for help, and that they are looking for help online. This demonstrates the importance for campus counseling centers to utilize programs like ISP that provide students with a web-based method to access and engage into campus mental health services. Engaging students in a method that feels safe and comfortable is critical to reducing barriers to help-seeking and increasing treatment engagement among at-risk students.

In addition to finding this service on their own, distressed students engaged in the program at similar, although slightly higher rates as students who were invited to participate, with 53.9% (compared to 44.8% of roll-out responders) exchanging dialogue message with the counselor and of those, 65.9% (compared to 62.3% of roll-out responders that dialogued) requested an appointment to meet with the counselor in person. Because this program offers a unique method for students to connect with counseling center services, findings from this project suggest the importance of offering a variety of methods for students to connect and engage through this type of service. For students who may be feeling disconnected from their campus community or experiencing difficulties, ISP provides a message of caring and concern and a proactive offer of

assistance. Furthermore, the program facilitates early intervention by identifying problems at a stage when they can be helped through a variety of mental health programs and services on campus.

Limitations

Although the sample sizes of the two groups (roll-out responders and self-initiated responders) were not compared as part of this analysis, it is important to note that roll-out invitations were only conducted during the 2012-2013 academic year. For the invitation roll-outs, no records were kept on the number of students who were invited to participate. Therefore, a response rate for the number of students who were invited and then submitted a questionnaire was unable to be determined. In addition, the response rate for the number of self-initiated responders who accessed the website and then submitted a questionnaire was unable to be determined as there was no method established for capturing website activity and tracking the number of users prior to questionnaire submission. There was also no measure established to determine whether students who responded to the questionnaire differed in any systematic ways from students who did not participate in ISP.

One of the main goals of ISP is to provide a method for college and university counseling centers to access previously untreated, at-risk students and engage them into mental health services. Because we do not know how many students within the entire population were actually at risk of suicide during the 5-year period, the proportion of the high-risk population identified through ISP was unable to be determined. However, the unequal percentage (99.9%) of respondents designated as Tier 1 (77.7%) or 2 (22.2%)

and the low rate of current treatment these respondents reported (5.1% for Tier 1 and 3.8% for Tier 2) confirmed that the program reached the intended target group.

Recommendations

The findings from this project highlight the importance of diversifying the approach to outreach, offering different ways for students to explore and engage in mental health services. Critical to these efforts is the ability for students to access and explore mental health services online, connect with a counselor anonymously, and receive direct feedback and support for help-seeking. Findings suggest that offering a variety of methods for accessing counseling center services will increase engagement of distressed students. Because some students may be uninformed about what mental health services are available on campus or unaware of how to get connected to such services, more proactive approaches like email invitation roll-outs helps inform those students on the various mental health services available and the different ways that they can connect with campus counseling services. Open access to the ISP website provides students who may be more self-motivated with a method to connect directly to resources that support help-seeking and service engagement. Further research could explore differences among these groups or look at differences among those students who did not engage in treatment.

Conclusion

Addressing barriers to mental health care is critical to preventing suicide. Shame, stigma, and fear of sanctions prevent many students from reaching out to get help. Implementing programs that offer students the opportunity to connect with counseling center services in a method that feels safe is imperative to preventing suicide deaths among college students. The core components of ISP - participant anonymity, allowing students to feel

more comfortable admitting their concerns, and personalized contact and interactive engagement with mental health professionals - offer an innovative method of overcoming significant barriers to help-seeking. Regardless of how students access ISP, participants who submit questionnaires show solid rates of program utilization and treatment follow-up and engagement. To that end, ISP contributes to community suicide prevention by intervening at many different levels of a comprehensive paradigm for preventing suicide.

References

American College Health Association. American College Health Association-National College Health Assessment II: Reference Group Executive Summary Spring 2015. Hanover, MD: American College Health Association; 2015.

American Foundation for Suicide Prevention (AFSP). (2015). Suicide Facts andFigures. Retrieved from: http://www.theovernight.org/?fuseaction=cms.page&id=1034

Appelbaum. (2006). Law & psychiatry: "depressed? Get out!": dealing with suicidal students on college campuses. *Psychiatr Serv, 57*(7), 914-916. doi:10.1176/ps.2006.57.7.914

Arria, Winick, Garnier-Dykstra, Vincent, Caldeira, Wilcox, & O'Grady. (2011). Help seeking and mental health service utilization among college students with a history of suicide ideation. *Psychiatr Serv, 62*(12), 1510-1513. doi:10.1176/appi.ps.005562010

Blanco, Okuda, Wright, Hasin, Grant, Liu, & Olfson. (2008). Mental health of college students and their non–college-attending peers: Results from the national epidemiologic study on alcohol and related conditions. *Archives of General Psychiatry, 65*(12), 1429-1437. doi:10.1001/archpsyc.65.12.1429

Bohon, Cotter, Kravitz, Cello, & Garcia, F. Y. (2016). The Theory of Planned Behavior as it predicts potential intention to seek mental health services for depression among college students. *J Am Coll Health*, 1-10. doi:10.1080/07448481.2016.1207646

Cornally, N., & McCarthy, G. (2011). Help-seeking behaviour: a concept analysis. *Int J Nurs Pract, 17*(3), 280-288. doi:10.1111/j.1440-172X.2011.01936.x

Czyz, Horwitz, Eisenberg, Kramer, & King. (2013). Self-reported barriers to professional help seeking among college students at elevated risk for suicide. *J Am Coll Health, 61*(7), 398-406. doi:10.1080/07448481.2013.820731

D'Amico, Mechling, Kemppainen, Ahern, & Lee. (2016). American college students' views of depression and utilization of on-Campus counseling services. *Journal of American Psychiatric Nurses Association, 22*(4), 8. doi:10.1177/1078390316648777

Downs, & Eisenberg. (2012). Help seeking and treatment use among suicidal college students. *J Am Coll Health, 60*(2), 104-114. doi:10.1080/07448481.2011.619611

Downs, Feng, Kirby, McGuire, Moutier, Norcross, Zisook. (2014). Listening to depression and suicide risk in medical students: the Healer Education Assessment and Referral (HEAR) program. *Academic Psychiatry, 38*(5), 547-553.

Drum, D. J., Brownson, C., Denmark, A. B., & Smith, S. . (2009). New data on the nature of suicidal crises in college students: Shifting the paradigm. *Prof Psychol Res Pr, 40*(3), 10.

Eisenberg, Downs, Golberstein, & Zivin. (2009). Stigma and help seeking for mental health among college students. *Med Care Res Rev, 66*(5), 522-541. doi:10.1177/1077558709335173

Eisenberg, Hunt, & Speer. (2012). Help seeking for mental health on college campuses: review of evidence and next steps for research and practice. *Harv Rev Psychiatry, 20*(4), 222-232. doi:10.3109/10673229.2012.712839

Eisenberg, D., Hunt, J., Speer, N., & Zivin, K. (2011). Mental health service utilization among college students in the United States. *J Nerv Ment Dis, 199*(5), 301-308. doi:10.1097/NMD.0b013e3182175123

Gallagher, Robert P. (2015) National Survey of College Counseling Centers 2014. Project Report. The International Association of Counseling Services (IACS).

Garlow, Rosenberg, Moore, Haas, Koestner, Hendin, & Nemeroff. (2008). Depression, desperation, and suicidal ideation in college students: results from the American Foundation for Suicide Prevention College Screening Project at Emory University. *Depress Anxiety, 25*(6), 482-488. doi:10.1002/da.20321

Haas, Koestner, Rosenberg, Moore, Garlow, Sedway, Nemeroff. (2008). An interactive web-based method of outreach to college students at risk for suicide. *J Am Coll Health, 57*(1), 15-22. doi:10.3200/JACH.57.1.15-22

Haas, A. (2010). Detecting and Engaging At-Risk Students. *Washington and Lee Journal of Civil Rights and Social Justice, 17*(1), 13.

Interactive Screening Program (ISP). (2015). American Foundation for Suicide Prevention. Retrieved from http://www.afsp.org/isp

The Jed Foundation. (2016). Starting the conversation: College and your mental health. Retrieved from http://www.jedfoundation.org/students/programs/starting-convesation-college-mental-health-guide

Moffitt, Garcia-Williams, Berg, Calderon, Haas, & Kaslow. (2014). Reaching graduate students at risk for suicidal behavior through the Interactive Screening Program. *Journal of College Student Psychotherapy, 28*(1), 23-34.

Schwartz. (2006a). College student suicide in the United States: 1990-1991 through 2003-2004. *J Am Coll Health, 54*(6), 341-352. doi:10.3200/JACH.54.6.341-352

Schwartz. (2006b). Four eras of study of college student suicide in the United States: 1920-2004. *J Am Coll Health, 54*(6), 353-366. doi:10.3200/JACH.54.6.353-366

Schwartz. (2011). Rate, Relative Risk, and Method of Suicide by Students at 4-Year Colleges and Universities in the United States, 2004–2005 through 2008–2009. *Suicide and Life-Threatening Behavior, 41*(4), 353-371. doi:10.1111/j.1943-278X.2011.00034.x

Spitzer, Kroenke, & Williams. (1999). Validity and utility of a self-report version of PRIME-MD: The PHQ Primary Care Study. *Journal of the American Medical Association* (282), 8.