Inquiry: The Journal of the Virginia Community Colleges

Volume 24 | Number 1

Article 5

5-7-2021

Coping and Suicide Among At-Risk Community College Students

Laura E. Martin Liberty University, Imartin87@liberty.edu Lynn Bohecker Liberty University, Irbohecker@liberty.edu

Follow this and additional works at: https://commons.vccs.edu/inquiry



Part of the Higher Education Commons, and the Student Counseling and Personnel Services

Commons

Recommended Citation

Martin, L. E., & Bohecker, L. (2021). Coping and Suicide Among At-Risk Community College Students. Inquiry: The Journal of the Virginia Community Colleges, 24 (1). Retrieved from https://commons.vccs.edu/inquiry/vol24/iss1/5

This Article is brought to you for free and open access by Digital Commons @ VCCS. It has been accepted for inclusion in Inquiry: The Journal of the Virginia Community Colleges by an authorized editor of Digital Commons @ VCCS. For more information, please contact tcassidy@vccs.edu.

Coping and Suicide Among At-Risk Community College Students

Laura E. Martin and Lynn Bohecker

The authors investigated the complex relationships of coping associated with suicide risk among community college students. Survey responses were obtained from 733 participants. A multiple linear regression demonstrated that maladaptive coping such as self-distraction, substance use, and denial were predictive factors of suicide among students in the 18–29 age group. Self-distraction and denial were significant coping protective factors of suicide risk for students aged 29–67. Implications for increasing suicide awareness and prevention in education are discussed.

ollege is supposed to be a time of new beginnings and ideas. For many U.S. students, however, this transition to college is heightened by vulnerability that puts them at risk of increased mental health issues, including suicide. The frequency and severity of mental health issues among college students have increased in recent years (Gallagher, 2014; Conley et al., 2020; Eisenberg et al., 2016). Twelve percent of college students reported that they considered suicide in 2018 (American College Health Association [ACHA], 2018). Suicide is a crucial issue facing students and administrators as the second leading cause of death among college-aged students (Hedegaard et al., 2018). The current study investigated the complex relationships of coping and stress associated with suicide risk among 733 community college students.

Factors Related to Adolescent and Young Adult Suicide

The suicide rate jumps significantly in young adulthood and varies by gender. The proportion of men to women who complete suicide is between 4:1 and 5:1 (Liotta et al., 2015). Women make more suicide attempts and use methods such as overdosing that increase survival rates (Liotta et al., 2015). Men tend to attempt suicide in more violent ways that lead to immediate death. Among young adults aged 15–24, suffocation accounts for nearly three-quarters of suicides among women, while firearms are the most common means of suicide among men (Hedegaard et al., 2018).

The rates of suicidal ideation are similar for both groups: 3.5% for men and 3.9% for women (Han et al., 2014).

Students of color, first-generation students, LGBTQ students, international students, and students from low socioeconomic status (SES) backgrounds face unique mental health burdens and barriers to care. LGBTQ adolescents attempt suicide at a rate triple that of their straight peers (Hottes et al., 2016). Barriers to help seeking in this popular include feelings of hopelessness, substance use disorders, low self esteem, and stigma (National LGBT Health Education Center, 2018). The rate of suicide also varies by level of educational achievement. Individuals under 25 with a high school education die by suicide at double the rate of those over 25 with a college degree (Phillips & Hempstead, 2017).

Spirituality and Religion

Religious beliefs may be an important coping strategy for young adults. Exploring the behaviors, values, and opinions of Millennials regarding religion is an integral part of understanding the generation. Young people today are less likely than their parents and grandparents to be affiliated with organized religion. A quarter of the Millennial generation members do not identify with any faith at all and are often described as "nones". Twenty-seven percent of Millennials say they attend worship services at least once a week compared with 41% of adults aged 30 and older. Similarly, fewer than 50% of people under 30 engage in daily prayer compared with more than 69% of older American adults (Pew Research Center, 2015).

Millennials affiliated with a particular religion are more intensely dedicated to that particular faith than individuals in previous generations. Millennials who identify with a specific faith generally consider themselves *strong* members of their faith bodies. However, Millennials generally consider themselves more spiritual than religious (Pew Research Center, 2015). Spirituality is perceived as

warmer than religion and is associated with love, inspiration, wholeness, depth, personal growth, and meditation. Millennials are also more willing to talk about subjects such as homosexuality, abortion, and evolution than their elders (Pew Research Center, 2015). Studies in the educational context have demonstrated a significant relationship between religiosity and students' substance use (Singleton, et al., 2004; Bahr & Hoffman, 2008; Wells, 2010). One study reported that at least for college students, *friends* are a more significant influencer on substance use than one's own level of religiosity, meaning religion was not a protective factor for substance use (Abbot et al., 2019).

Drug and Alcohol Use

When considering risk factors for suicide, those who use drugs and alcohol are especially vulnerable. Known for the disinhibition effects, substances are a popular coping mechanism among young adults. Indeed, alcohol abuse among college students has historically been of particular concern for campuses across the nation. Bachrach and Read (2017) examined the relationship between alcohol abuse and stress among college students, finding a direct relationship between significant stress and drinking. Specifically, another study of 1100 undergraduates reported that college students who regularly consume high quantities of alcohol are more prone to suicide (Lamis, Malone & Jahn, 2014). Legal intoxication (individuals with blood alcohol concentrations of .08% or higher) account for 22% of deaths by suicide (Pompili, et al., 2010), revealing those who have an alcohol dependence are 10 times more at risk for suicide than the general population (Wilcox, Conner, & Caine, 2004).

A growing number of college students use drugs such as Adderall, an amphetamine prescribed to treat attention-deficit/hyperactivity disorder. Adderall is thought to increase a person's focus and allow them to stay awake longer, making it desirable among college students trying to

cram for exams or party longer (Jardin, Looby, & Earleywine, 2011). For these reasons, the authors, therefore emphasis that treating drug and alcohol use is key to reducing suicide rates.

Community College Students

While all college students must learn to navigate the transition to college, the challenges facing community college students are unique. Many community college students are first-generation college students, which disadvantages them in many ways. Generally speaking, first-generation students have lower academic aspirations (Pike & Kuh, 2005) and are less likely to persist and graduate (Swanson et al., 2017) than other students. Many delay entry into higher education.

SES is another factor affecting the success of community college students. Lower retention rates have been found among community college students from lower SES backgrounds (Cohen & Brawer, 2003; Eagan et al., 2015). Students from lower SES backgrounds often work more hours off-campus than students from higher SES backgrounds and thus have less time for studying (Lohfink & Paulsen, 2005). Community college students are less likely than other students to remain in school. One study found that eight years after starting college, 43% of community college students had dropped out (Shapero et al., 2012). Adapting to the rigor of college, forming new peer relationships, financial struggles, and the unavailability of needed classes are the top reasons students leave (Bowman, et al., 2019; Carter, et al., 2013).

Many Millennials are embracing community college. Nearly half of all undergraduates attend community college (American Association of Community Colleges [AACC], 2016). Community colleges are economically viable options, offering students diverse programming while allowing the students to stay local, making the decision easy for many students.

However, not enough community college students finish what they start (AACC, 2016). Only 29% of students who began pursuing an associate degree at a two-year institution in 2010

completed that degree (National Center for Education Statistics, 2016). There are a few main reasons why students drop out. Given the high cost of college, many students are unable to afford tuition; some find that the stress of balancing tuition and the demands of a job becomes too much. Academic difficulties are also a variable. Some students do not find success in their coursework, which leads to discouragement and withdrawal (Bowman, et al., 2019; Carter, et al., 2013). Others leave because of life changes that cause hardship: marriage, the birth of a child, or the death of a parent. Part of helping students navigate the challenges of college is providing them with tools that permit the development and revision of goals in the context of current data. Stuart et al. (2014) suggested that community colleges must "find concrete ways to increase students' college—career alignment—the connection between students' college experiences, career goals, and their employment opportunities" (p. 12).

Mental Health Services on College Campuses

In the span of several years, there has been an increasing realization that college students are in need of more mental health services. While 63% of U.S. college students report feeling anxiety, depression, and stress, the highest levels of anxiety occur during the transition to college (ACHA, 2018; Conley et al., 2020). Research has demonstrated more college students are accessing services with increasingly serious issues that impact their ability to be academically and socially successful (Francis & Horn, 2017; Hardy et al., 2011; Hunt & Eisenberg, 2010). In a recent survey, 1 in 10 reported attempting suicide, 1 in 3 indicated that they take psychiatric medication, 1 in 4 reported self-injuring, and 1 in 3 indicated having experienced a traumatic event (Center for Collegiate Mental Health [CCMH], 2019). As the severity and complexity of student mental health problems grow, it will become increasingly important for college counseling professionals to be prepared to work with

campus departments and healthcare professionals to create an appropriate systemic response to students' needs.

Another survey regarding the mental health of college students found that in the past two decades, the number of college students presenting with clinical depression and suicidal tendencies has quadrupled (Reetz, et al., 2016). Given that college counselors work closely with students throughout their college journeys, they must be equipped to identify when a student's mental health becomes a risk factor for a crisis. Another study offered similar findings, concluding that mental health is a significant concern for U.S. community college students (Eisenberg et al., 2016).

Researchers found that nearly half of community college students have experienced a mental health condition ranging from anxiety and depression to suicidal ideas, self-injury, or an eating disorder (Eisenberg et al., 2016).

Concern about students' mental health needs is on the rise (Schwartz & Kay, 2009; Hunt & Eisenberg, 2010). While it is clear that students are suffering, the situation is compounded by the fact that most students with mental health issues are not receiving adequate help (Gallagher, 2014; Wood, 2012). Decreasing financial support, few counseling professionals, and the stigma and common misperceptions associated with mental health are reasons for the lack of adequate treatment of students with mental health concerns (NHMA, 2010). Without sufficient mental health services on college campuses, students' campus life experience and academic performance are affected (Wood, 2012). Meeting students' mental health needs should be a top priority for college communities (Wood, 2012) and administrators should be concerned about students' mental health because mental health is linked to retention, enrollment, and academic achievement.

The Present Study

A growing body of literature has reported the vulnerable transitional period during college when individuals are at risk of mental health concerns, including suicide. Spirituality and religion may be important for positive coping while studies have shown drug and alcohol use is on the rise for negative coping for college students dealing with stress. An increasing number of students are choosing to attend community colleges, many of which do not have mental health resources to meet student needs. There is a dearth of literature on how college students cope with mental health symptoms and even less that is focused on community college students at risk of suicide. Thus, our primary research question was, "What are the coping tendencies among community college students at risk of suicide?"

Method

A convenience sampling method was used to recruit participants. The registrar's office at a large East Coast community college sent an email to enrolled students requesting their participation in this study. The response rate for this study was 20%. The anonymized online survey (i.e., participants' student identification numbers were encrypted) included information about the university's mental health resources and the phone number for a national suicide hotline. The college's institutional review board approved this study.

Participants

Participants younger than 18 years old were excluded from the study. The sample consisted of 733 students and demographic data is show in Table 1. Given the considerable focus on the alarming rates of suicidal ideation and attempts among college students, several additional Likert questions were included in this study. Students were asked about their personal history with suicide

in the past year. Six students responded that they had attempted suicide in the past year (0.8%), 67 students responded that they had seriously thought about committing suicide in the past year (9.2%), and 22 students had made a plan for attempting suicide in the past year (3.0%).

Table 1 Demographic Characteristics of Participants (n = 733)

Characteristic	п	%
Gender	181	24.7
Male	550	75.0
Female	330	73.0
Age		
18-28	416	56.7
29-39	177	24.1
40-67	141	19.2
Ethnicity		
Caucasian	615	77.5
African American	93	11.7
Hispanic	97	12.2
American Indian	23	2.9
Asian	38	4.8
Middle Eastern	7	1
Pacific Islander/Hawaiian Native	7	1
Other	52	6.5
Living arrangements		
With parents or guardian	320	43.7
Off-campus	318	43.3
Other	92	12.6
First-generation college student		
Yes	389	49
No	404	51
Religion		
Christian	527	66.5
Jewish	9	1.1
Muslim	16	2.0
Buddhist	21	2.6
Hindu	8	1.0
Atheist or agnostic	101	12.7
Prefer not to answer	111	14.0

Measures

Patient Health Questionnaire 9

Depression and suicide ideation were measured using the Patient Health Questionnaire 9 (PHQ-9), a 9-item instrument based on the DSM-V criteria for depression. The PHQ-9 is a free and easily accessible assessment that can be found at this link:

https://www.med.umich.edu/linfo/FHP/practiceguides/depress/phq-9.pdf. This instrument asks a respondent to indicate the frequency of various symptoms over the past two weeks and follows the standard scoring to diagnose major depression. Suicide ideation was operationalized using the ninth question of the PHQ-9: "Thoughts that you would be better off dead or of hurting yourself in some way." The PHQ-9 has been shown to have high internal consistency in college students' surveys with a Cronbach's alpha of 0.84 (Spitzer et al., 2006). The PHQ-9 is also a valid instrument. Meta-analyses have demonstrated that the PHQ-9 has sensitivity from 77% to 80% and specificity from 92% to 94% for diagnosing major depression. The PHQ-9 has been validated as internally consistent, and results are highly correlated with diagnoses by clinicians in multiple age groups and racial/ethnic groups (Eisenberg et al., 2011).

Brief-COPE

The Brief-COPE assessment (Carver et al., 1989) is used to examine how individuals respond when confronted with difficult or stressful events in their lives. This assessment is a free and easily accessible assessment that can be found at this link:

https://local.psy.miami.edu/faculty/ccarver/sclBrCOPE.phtml. The Brief-COPE includes questions such as "I express my negative feelings" and "I turn to work or other activities to take my mind off things." Overall, the scale measures positive reframing, social support, and instrumental support. This measure has 28 questions. Respondents respond to the questions using a 4-point

Likert scale with the following options: 1 (*I usually don't do this at all*), 2 (*I usually do this a little bit*), 3 (*I usually do this a medium amount*), and 4 (*I usually do this a lot*). The Brief-COPE scale has 14 subscales, four of which were used in this study: religion, denial, self-distraction, and substance use.

Religion

To address the research questions, participants were asked two questions related to religion, one on the Brief COPE and the other on the demographic survey. The two questions were (1) How important is religion in your life and (2) What is your religious affiliation? The importance of religion was measured using a 5-point Likert scale with the following responses: 1 (*very important*, 2 (*important*), 3 (*neutral*), 4 (*unimportant*), and 5 (*very unimportant*). The importance of faith was dichotomized as 1 (*very important* and *important*) or 0 (*unimportant* and *very unimportant*). Students who responded 3 (*neutral*) to this question were excluded.

Results

Suicide appears to be a prevalent issue among college students. The mean score on the PHQ-9 for the total sample was 7.10 (SD = 5.59), a score corresponding to mild depression. Slightly over 8.1% (n = 60) scored in the moderately severe depression range (scores 15–19) and 3.3% (n = 24) had PHQ-9 scores indicative of severe depression (scores 20–27). Twenty-three (3.3%) students answered "yes" when asked if they had made a plan for attempting suicide in the past year. Also, 68 (9.3%) students reported that they had seriously thought about attempting suicide in the past year. Altogether 12.6% of students indicated that they had seriously thought about or made a plan for suicide in the past year.

Coping tendencies help individuals respond when they are confronted with difficult or stressful events in their lives. Self-distraction had the highest mean among the various coping tendencies of 4.71 (SD= 1.49). The mean score for religion on the Brief-COPE scale was 4.46 (SD = 2.25). The mean score for denial was 2.79 (SD = 1.34), and the mean score for substance use was 2.43 (SD = 1.12).

To address the research question, a multiple linear regression was run on two groups according to age to predict the risk of suicidal behavior based on the coping tendencies of self-distraction, denial, and substance use. A significant regression equation was found for the 18–28 year old students, F(4,362) = , p < .000, with an R^2 of .159. The individual predictors were examined further and indicated that self-distraction (Beta = .119, t(2.329) = p = .020), denial (Beta = .101, t(1.974) = p = .049), and substance use (Beta = .304, t(5.984) = p = <.05) did significantly predict risk of suicidal behavior. Religion did not significantly predict the risk of suicidal behavior (Beta = -.064, t(-1.325) = .186).

Using the enter method for participants who were 29 years old and older, a significant regression equation was found, F(4,277) = 0.000, with an R^2 of .069. The individual variables were examined further. Self-distraction (Beta = 0.137, t(2.261) = 0.025) and denial (Beta = 0.122, t(2.015) = 0.045) were found to be significant coping tendencies of suicidal behaviors. Religion (Beta = 0.082, t(-1.406) = 0.161) and substance use (Beta = 0.101, t(1.679) = 0.094) did not significantly predict values of reported of suicidal behavior.

Discussion

Counselors are crucial to student success at all levels college. This study provides information for college counselors to stay current on mental health trends and better understand the landscape of mental health among college students so that they can better prepare, educate and treat students who are at risk for suicide. This research opens the door to discussions between counselors and parents, students, and college personnel to maximize efforts to treat students' mental health

issues proactively before tragedy strikes. That way, professional counselors can refine their skills and talents to recognize the coping tendencies to identify students who may be at risk. Moreover, our study focuses on the important but relatively understudied population of community college students.

When we examined the individual contributions of the variables in our multiple regression, we generally found that substance use was the most significant predictor of suicidal behaviors in college students who were 18-28 years old and that self-distraction was the most significant coping tendency for college students who were 29-67 years old. When we examined the frequency of substance use, we looked at both questions related to substance use. The first question asked, "I've been using alcohol or other drugs to make myself feel better" (M = 1.24, S.D. = .622), and the second question asked, "I've been using alcohol or other drugs to help me get through it" (M = 1.20, S.D. = .554). Interpreting the beta coefficient for this factor, we can see that substance use contributed to 30.4% of the model for students who were 18-28 years old. The role of substance use is critical to explore in future work because it is possible that some students who use this coping tendency frequently or severely are in a self-perpetuating cycle in which alcohol or drug use impairs their mood and functioning. This impaired functioning increases one's susceptibility to suicide. Another concerning result of this study is that substance use had the highest mean for any of the maladaptive coping tendencies (including those not included in this survey but included on the Brief-COPE scale). Substance abuse is often long-lasting and reoccurring and has lifelong consequences for one's emotional, physical, and mental well-being. This begs the question of many college counselors: Which came first: Significant alcohol use or suicidal behaviors?

Based on questions from the PHQ-9, students in both age groups who were at risk of suicidal behaviors also cited denial as a significant coping factor (saying to myself "this isn't real" and "I've been refusing to believe that it has happened"). One possible explanation for using denial

amid stress is that it gives individuals time to adjust to the stressful or difficult situation they are facing. Denial delays the individual's need to tackle challenges by protecting the person from accepting the truth about something that has happened. For example, college students may deny that they are failing classes or struggling to cope with the adjustment of living away from home. Using denial as a means to cope can interfere with at-risk students' treatment and the ability to seek support.

Students in both age groups who were at risk of suicidal behaviors also cited self-distraction as a significant coping factor (saying to myself "I've been turning to work or I've been doing something to think about it less, such as going to movies, watching T.V., reading, daydreaming, sleeping, or shopping" and "I've been refusing to believe that it has happened"). This study suggests that behaviors that previously may have been perceived as ways to procrastinate are now known coping tendencies that act as protective factors for students who are at risk of suicidal behaviors. Self-distraction refers to the effort to attend to less disturbing aspects of a situation selectively. Students benefit when they redirect their energy from an upsetting emotion or challenging event and engage in a preferred activity such as shopping or going to the movies. When individuals are stressed or overstimulated with fear or anxiety, self-distraction triggers changes in areas of the prefrontal cortex that allow the brain to relax substantially. A college setting offers myriad opportunities for students to self-distract. Extroverted students may self-distract by enjoying a social event or a sporting outing, whereas introverted students may self-distract by attending a play or reading. Parents or teachers may think that self-distracting behaviors put students at risk of behaviors that hinder success. For example, sleeping too much or too long may interfere with academic success. However, these results demonstrate that these behaviors, which were once viewed as impeding academic success, may be healthy coping tendencies for students with psychological concerns. Students may recognize that their mental health status has deteriorated and intentionally chose to

self-distract as a way to ward off suicidal behaviors. Students who use self-distraction as a coping tendency may be preserving their energy for facing future obstacles. Feeling overwhelmed is the most common stressor among college students. The message of this, if heeded, is valuable:

Separating from external stressors is a self-management strategy with cascading effects. This study demonstrates that students' efforts to cope with the stressors of college life are thereby adaptive coping tendencies.

Religion was not a significant individual contributor to the model for any age group. This is a notable finding because this is counter to what previous studies have found. This study's data suggest that suicide knows no boundaries or limitations on those who perceive religion as very important in their lives.

Limitations

Several limitations of this study are worth noting. First, the sample size was limited to one college with multiple campuses spread across a large geographic area. It is difficult to assess the impact of regional differences on the results and generalize them.

A second limitation stems from the anonymity utilized during the survey process. Although all of the measures of the PHQ-9 and Brief-COPE scale are well known and commonly used in research, they are also all self-report measures. Although self-report measures may be the most practical approach for measuring sensitive topics such as mental health or academic success and failure, they are subject to response bias.

Implications

These empirical findings have important clinical implications for understanding how

Millennial college students cope and for examining their help seeking behaviors. As professional

counselors know, college students have many competing demands on their time: Heavy course loads, social activities, and homework assignments consume a significant amount of time. For many students who are undecided about seeking professional help, a lack of time, and the inconvenience of the scheduling process may be variables they consider as barriers. As such, the ways students cope informs the clinical services they receive.

These current findings confirm that students' unmet mental health needs are a significant barrier to succeeding at college. Students often turn to school personnel as a first option when mental health concerns first arise. Despite increased national attention to college students' mental health, the landscape of clinical services provided on college campuses has changed and not necessarily for the better. This study can provide insight into the metamorphosis that has occurred in the college counseling world. Gone are the days where college counseling centers provided students with moral and vocational guidance or character development skills. Centers now include consultation, case management, teaching, training, supervision, assessments, outreach and prevention services, career planning, crisis and emergency services, and more depending on the needs of the institutions with which they are associated. The level of services is often dictated by the size of a given center's budget, the number of employees who work at the center, and the type and size of the associated institution (e.g., vocational/technical college, community college, four-year university), as well as institutional priorities. At most institutions, counseling staff are increasingly tasked with serving on committees that receive, evaluate, and act on reports of student behaviors that cause concern among faculty, staff, and administrators. Therefore, the context for counseling services at higher education institutions is exceedingly complex and not designed for a one-size-fitsall approach.

To address the range and volume of services needed, counselors should consider opportunities to integrate mental health promotion and prevention into their overarching systemic

outcomes. Having programs to address needs beyond counseling, such as poverty and food insecurity, would a way to capture more students for proactive treatment. Additional investments in student mental health might include suicide prevention programs in which all staff members and students are trained to screen for suicide ideation and suicidal behaviors.

Recommendations for Future Research

The study reveals a variety of possibilities and recommendations for future research concerning Millennials and college success. Improving our understanding of Millennials and their mental health on college campuses is extremely important in an era of limited economic resources and growing demand for counseling services.

First, it is necessary to replicate the current study with a sample size inclusive of other community colleges to increase generalizability. The current study identified the subgroup of students at risk for suicide or suicidal ideation, and their lifestyle behaviors and values warrant additional attention. Moreover, an examination of barriers to help-seeking among community college students with an elevated risk of suicide students has yet to be completed. Such an examination would expand our knowledge of the unique needs of Millennial college students.

Conclusion

Because mental illness among college students continues to be a significant academic and social issue, this study strengthens and extends strategies to forge greater treatment efficacy. The data collected in the current study may provide the opportunity to improve suicide prevention on college campuses, primarily as society seeks to invest in young people's lives through the pursuit of well-being. While further research is needed to understand other psychosocial factors that may contribute to suicide and suicide ideation, this study emphasizes the need to identify and address

Martin and Bohecker: College Suicides

predictive tendencies among students at risk of suicide on community college campuses. Upon future research and continued collaboration, those who serve college students will be able to advance a comprehensive mental health platform to reduce and prevent suicidal behaviors.

References

- Abbott, J., Lamphere, R., & Mcgrath, S. A. (2019). College students' alcohol and substance use:

 Religiosity as a protective factor. *Journal of Alcohol and Drug Education, 63*(3), 61-87.

 https://search.proquest.com/docview/2367795760?pq-origsite=gscholar&fromopenview=true
- American Association of Community Colleges [AACC]. (2016). 2016 Community college fast facts. https://www.aacc.nche.edu/research-trends/fast-facts/
- American College Health Association. (2018). American college health association National college health assessment II: Undergraduate student reference group data report fall 2018.

 https://www.acha.org/documents/ncha/NCHA-
 - II Fall 2018 Undergraduate Reference Group Data Report.pdf
- Bachrach, R. L., & Read, J. P. (2017). Peer alcohol behavior moderates within-level associations between posttraumatic stress disorder symptoms and alcohol use in college students.

 *Psychology of Addictive Behaviors, 31(5), 576–588. https://doi.org/10.1037/adb0000285
- Bahr, S. J., & Hoffmann, J. P. (2008). Religiosity, peers, and adolescent drug use. *Journal of Drug Issues*, 38(3), 743–769. https://doi.org/10.1177/002204260803800305
- Bowman, N. A., Jarratt, L., Polgreen, L. A., Kruckeberg, T., & Segre, A. M. (2019). Early identification of students' social networks: Predicting college retention and graduation via campus dining. *Journal of College Student Development*, 60(5), 617-622. https://doi.org/10.1353/csd.2019.0052
- Carver, C.S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, *4*(1), 92-100.

 https://link.springer.com/article/10.1207/s15327558ijbm0401_6

- Center for Collegiate Mental Health. (2019). 2018 Annual report. (Publication No. STA 19-180).

 https://sites.psu.edu/ccmh/files/2019/01/2018-Annual-Report-1-15-2018-12mzsn0.pdf

 Cohen A., & Brawer, F. (2003). The American Community College (4th ed.). Jossey-Bass.
- Conley, C. S., Shapiro, J. B., Huguenel, B. M., & Kirsch, A. C. (2020). Navigating the college years:

 Developmental trajectories and gender differences in psychological functioning, cognitiveaffective strategies, and social well-being. *Emerging Adulthood*, 8(2), 103-117.

 https://doi.org/10.1177/2167696818791603
- Eagan, K., Stolzenberg, E. B., Bates, A. K., Aragon, M. C., Suchard, M. R., & Rios-Aguilar, C. (2015). The American freshman: National Norms Fall 2015. *Higher Education Research Institute,*UCLA. https://www.heri.ucla.edu/monographs/TheAmericanFreshman2015.pdf
- Eisenberg, D., Goldrick-Rab, S. Lipson, S. & Broton, K. (2016). Too distressed to learn? Mental health among community college students. *Wisconsin HOPE Lab*.

 https://hope4college.com/wp-content/uploads/2018/09/Wisconsin HOPE Lab-Too Distressed To Learn.pdf
- Eisenberg, D., Hunt, J., Speer, N., Zivin, K. (2011). Mental health service utilization among college students in the United States. *The Journal of Nervous and Mental Disease*, 199(5), 301-308. https://doi.org/10.1097/NMD.0b013e3182175123
- Eisenberg, D., Speer, N., & Hunt, J.B. (2012). Attitudes and beliefs about treatment among college students with untreated mental health problems. *Psychiatric Services*, *63*(7): 711-713. https://doi.org/10.1176/appi.ps.201100250
- Francis, P. C., & Horn, A. S. (2017). Mental health issues and counseling services in U.S. higher education: An overview of recent research and recommended practices. *Higher Education Policy*, 30(2), 263-277. https://doi.org/10.1057/s41307-016-0036-2

- Gallagher, R. P. (2014). National survey of college counseling centers 2014 (Monograph Series No. 9V). The International Association of Counseling Services, Inc. http://d-scholarship.pitt.edu/28178/1/survey_2014.pdf
- Han, B., McKeon, R., & Gfroerer, J. (2014). Suicide ideation among community-dwelling adults in the United States. American Journal of Public Health, 104, 488 -497.
 https://doi.org/10.2105/AJPH.2013.301600
- Hardy, J. A., Weatherford, R. D., Locke, B. D., DePalma, N. H., & D'Iuso, N. T. (2011). Meeting the demand for college student concerns in college counseling centers: Evaluating a clinical triage system. *Journal of College Student Psychotherapy*, 25(3), 220-240.
 https://dx.doi.org/10.1080/87568225.2011.581929
- Hedegaard, H., Curtin, S.C., & Warner, M. (2018). Suicide mortality in the United States 199 2017 (NCHS Data Brief No. 330). National Center for Health Statistics.

 https://www.cdc.gov/nchs/data/databriefs/db309.pdf
- Hottes, T.S., Bogaert, L., Rhodes, A.E., Brenna, D.J., Gesink, D. (2016). Lifetime prevalence of suicide attempts among sexual minority adults by study sampling strategies: a systematic review and meta-analysis. *American Journal of Public Health, 106*(5):1-12.

 https://doi.org/10.2105/AJPH.2016.303088
- Hunt, J. B., & Eisenberg, D. (2010). Mental health problems and help-seeking behavior among college students. *Journal of Adolescent Health*, 46(1), 3-10.

 https://doi.org/10.1016/j.jadohealth.2009.08.008
- Jardin, B., Looby, A., Earleywine, M. (2011). Characteristics of college students with attention-deficit hyperactivity disorder symptoms who misuse their medications. *Journal of American College Health*, *59*(5), 373-377. https://doi.org/10.1080/07448481.2010.513073

- Lamis, D. A., Malone, P. S., & Jahn, D. R. (2014). Alcohol use and suicide proneness in college students: A proposed model. *Mental health and substance use, 7*(1), 59–72. https://doi.org/10.1080/17523281.2013.781535
- Liotta, M., Mento, C., & Settineri, S. (2015). Seriousness and lethality of attempted suicide: A systematic review. *Aggression and Violent Behavior*, 21, 97 109. https://doi.org/10.1016/j.avb.2014.12.013
- Lohfink, M.M., & Paulsen, M.B. (2005). Comparing the determinants of persistence for first-generation and continuing-generation students. *Journal of College Student Development*, 46(4), 409-428. https://doi.org/10.1353/csd.2005.0040
- National Center for Education Statistics [NCES]. (2016). The integrated postsecondary education data system (IPEDS), statistical data and information on postsecondary institutions. https://nces.ed.gov/ipeds
- National LGBT Health Education Center. (2021). Suicide risk and prevention for LGBTQ People.

 https://www.lgbthealtheducation.org/wp-content/uploads/2018/10/Suicide-Risk-and-Prevention-for-LGBTQ-Patients-Brief.pdf
- Pew Research Center (November, 2015). FactTank: News in the numbers. Millennials are less religious than older Americans, but just as spiritual. *Pew Research Center*.

 http://pewrsr.ch/1N9ak2b
- Phillips, J. A., & Hempstead, K. (2017). Differences in U.S. suicide rates by educational attainment, 2000-2014. *American Journal of Preventative Medicine*, 53(4), 123-130. https://doi.org/10.1016/j.amepre.2017.04.010
- Pike, G.R., & Kuh, G.D. (2005). First-and-second-generation college students: A comparison of their engagement and intellectual development. *Journal of Higher Education*, *3*(76), 276-300. https://doi.org/10.1080/00221546.2005.11772283

- Pompili, M., Serafini, G., Innamorati, M., Dominici, G., Ferracuti, S., Kotzalidis, G. D., Serra, G., Girardi, P., Janiri, L., Tatarelli, R., Sher, L., & Lester, D. (2010). Suicidal behavior and alcohol abuse. *International Journal of Environmental Research and Public Health, 7*(4), 1392–1431. https://doi.org/10.3390/ijerph7041392
- Reetz, D. R., Bershad, C., LeViness, P., & Whitlock, M. (2016). The association for university and college counseling center directors annual survey.

 https://www.aucccd.org/assets/documents/aucccd%202016%20monograph%20-%20public.pdf
- Savin-Williams, R.C., & Ream, G.L. (2003). Suicide attempts among sexual-minority male youth.

 Journal of Clinical Child and Adolescent Psychology, 32, 509 522.

 https://doi.org/10.1207/S15374424JCCP3204_3
- Schwartz, V. & Kay, J. (2009). The crisis in college and university mental health. *Psychiatric Times*, 26(10), 32-34. https://www.psychiatrictimes.com/view/crisis-college-and-university-mental-health
- Shapero, D., Dundar, A., Chen, J., Ziskin, M., Park, E., Torres, V., & Chiang, Y. (2012). National student clearinghouse research center. Completing college: A national view of student attainment rates. http://nscresearchcenter.org/wp-content/uploads/NSC_Signature_Report_4.pdf
- Singleton, A., Mason, M. & Webber, R. (2004). Spirituality in adolescence and young adulthood: A method for a qualitative study. *International Journal of Children's Spirituality*, *9*(3), 247–61. https://doi.org/10.1080/1364436042000292176
- Spitzer, R. L, Kroenke, K., Williams, J. B. W., & Lowe, B. (2006). A brief measure for assessing generalized anxiety disorder. *Archives of internal medicine*, 166(10), 1092-109. https://doi.org/10.1001/archinte.166.10.1092.

- Stuart, G.R., Rios-Aguilar, C., & Deil-Amen, R. (2014). How much economic value does my credential have?: Reformulating Tinto's Model to study students' persistence in community colleges. *Community College Review*, 42(4), 1-15. https://doi.org/10.1177/0091552114532519
- Swanson, N., Vaughan, A., & Wilkinson, B. (2017). First-year seminars: Supporting male college students' long-term academic success. *Journal of College Student Retention: Research, Theory & Practice, 18*(4), 386-400. https://doi.org/10.1177/1521025115604811
- Wells, G. M. (2010). The effect of religiosity and campus alcohol culture on collegiate alcohol consumption. *Journal of American College Health*, *58*(4), 295–304. https://doi.org/10.1080/07448480903380250
- Wilcox, H.C., Conner, K.R., & Caine, E.D. (2004). Association of alcohol and drug use disorders and completed suicide: An empirical review of cohort studies. *Drug and Alcohol Dependence*, 76: S11–S19. https://doi.org/10.1016/j.drugalcdep.2004.08.003
- Wood, M. (2012). The state of mental health on college campus. *Inquire: The Journal of the Virginia Community Colleges, 17*(1), 5 15. https://commons.vccs.edu/inquiry/vol17/iss1/1/