



*Article*

**Student Knowledge of Signs, Risk Factors, and Resources for Depression, Anxiety, Sleep Disorders, and Other Mental Health Problems on Campus**

Robert A. Dobmeier  
Assistant Professor  
Department of Counselor Education  
The College at Brockport

Thomas J. Hernandez  
Chair  
Department of Counselor Education  
The College at Brockport

Randi G. Barrell  
Masters Student  
Department of Counselor Education  
The College at Brockport

Donelle M. Burke  
Masters Student  
Department of Counselor Education  
The College at Brockport

Crystal M. Hanna  
Masters Student  
Department of Counselor Education  
The College at Brockport

David B. Luce  
Masters Student  
Department of Counselor Education  
The College at Brockport

Stephanie J. Catlin-Rakoski  
Masters Student  
Department of Counselor Education  
The College at Brockport

Janine M. Rowe  
Masters Student  
Department of Counselor Education  
The College at Brockport

Monica Siclare  
Masters Student  
Department of Counselor Education  
The College at Brockport

*A mixed methods study sought to assess student knowledge of signs, risk factors, and campus services available for mental health disorders. A survey was completed by 831 students and three focus groups were conducted. Respondents felt more knowledgeable about depression than about anxiety and sleep disorders. Graduate students and seniors had a keener awareness of risk factors for anxiety and sophomores were in the greatest danger of failing to recognize these risks. Males often failed to recognize signs and risk factors for mental health problems. Support groups, courses, and workshops on managing relationships, transition to college, and specific mental health disorders are advocated.*

The professional literature indicates that there are a growing number of college students that face depression, anxiety, sleep disorders, and other mental health problems (American College Health Association [ACHA], 2009; Dusselier, Dunn, Wang, & Whalen, 2005; Eisenberg, Gollust, Golberstein, & Heffner, 2007; Furr, Westefeld, McConnell, & Jenkinds 2001; Gallagher, 2005). More than 50% of students experience depression in college and 10% have suicidal thoughts (Furr et al., 2001). Suicide is the second leading cause of death among

persons of traditional college age (McCarthy & Salotti, 2006). The personal suffering of the individual and the threat to accomplishing one's life goals require that urgent attention be given to helping students to manage their mental health. The current study sought to discover if students have adequate knowledge of signs, risk factors, and resources to address mental health problems in themselves and in fellow students. With a growing number of students facing serious psychological problems on campuses, students themselves will need to recognize indicators, risk factors, and campus resources for mental, behavioral, and adjustment difficulties.

There is a range of mental health problems on college campuses for which students need assistance. Eisenberg et al. (2007) discovered that the prevalence of depression and anxiety disorders was 15.6% for undergraduates and 13.0 % for graduate students. Among college students, 14.9% reported having a diagnosis of depression at some time in the past, of which 32% were depressed in the past year, 24.5% were currently in psychotherapy, and 35.6 % were taking an antidepressant at the time of the study (ACHA, 2009). Knight et al. (2002) reported that 30% of American college students abuse alcohol. In a survey study of 411 undergraduates previously exposed to trauma, 67% experienced the death of someone close, 65% a transportation accident, 40% severe injury or illness, 35% divorce or separation, and 24% physical abuse, assault, or another traumatic event (Fortson, Scotti, Del Ben, & Yi-Chuen, 2006). Moreover, mental disorders are of growing concern among students in community colleges, including bipolar, obsessive compulsive, schizophrenia, eating, post traumatic stress, and phobias (Smith-Allen, 2005).

Among the harmful effects of mental illness in college settings, fatigue, poor concentration, depression, and anxiety undermine one's ability to be independent, which is predictive of one's level of academic achievement and quality of relationships (Brockelman, 2009). Mental health problems are also associated with college dropout (Hartley, 2010), poor

academic performance (Brockelman, 2009), substance abuse and suicidal behavior (Eisenberg et al., 2007), and campus related violence (Fallahi, Austad, Fallon, & Leishman, 2009).

In the current study, a survey about mental health problems and resources was administered to 831 students in 50 classroom administrations and a total of 13 undergraduate residents participated in three focus groups that addressed these same topics. It was anticipated that this mixed methods approach would allow in-depth as well as broad-based presentation of student views. The researchers considered that helping students to prevent the onset and exacerbation of mental health problems requires that students know how to identify mental health problems, understand how they emerge, and know how they can be resolved. Thus, the researchers sought to answer three questions: Do students know how to recognize a mental health problem in oneself or in a fellow student? Do students understand risk factors that contribute to the onset of mental health problems? Are students aware of where to seek help on campus for a mental health problem?

### **Risk Factors for Mental Health Problems**

Risk factors for mental health problems identified in the literature shed light on the social forces that contribute to the increased prevalence of psychopathology and were used to inform the development of the survey items for the current study. Studies have considered numerous contextual risk factors for college students developing mental health problems. The quality of peer and family relationships (Eisenberg et al., 2007; Lenz, 2004) and social climate and social alienation on campus (McCarthy & Salotti, 2006) have been identified as contributing to the onset of depression and addictive behavior. Juggling multiple roles such as job, parenting, and care giver, loneliness and relationship problems, and living in an increasingly dangerous and fearful world contributed to depression and other mental health problems (Osberg, 2004). Moss and Smith (2007) identified academic demands and financial problems as giving rise to

substance abuse and other mental health problems for medical students. In community college settings Smith-Allen (2005) offered that multiple, complex problems such as social withdrawal, isolation, and academic failure often result in mental health problems for students.

In addition, age and gender have been identified as potential risk factors. Eisenberg et al. (2007) discovered that being over 25 years old or a male undergraduate, sexual victimization, dealing with sexual identity issues, relationship conflicts, and substance abuse are associated with greater risk for suicidal behavior. Dusselier et al. (2005) found that women and U.S. citizens experienced greater stress than men and non-U.S. citizens, respectively, among 462 students. In the same study, chronic illness, seasonal affective disorder, mononucleosis, and sleep difficulties were significant predictors of stress as were alcohol use and conflict with a roommate, instructor, or staff member (Dusselier et al., 2005).

The willingness to access mental health services on a college campus has also been identified as a risk factor. In one study, only 20% of students who acknowledged a mental health problem sought help (Osberg, 2004). In a two-year follow-up study at a large public university, over half of the respondents had at least one mental health problem at baseline and 60% had at least one mental health problem at follow-up. Among those with a mental health problem at both points fewer than half received treatment in the intervening two years (Zivin, Eisenberg, Gollust, & Golberstein, 2009). Given the fact that most students with a mental health disorder have not sought help, it is important that students know the resources that are available on campus to increase the likelihood of their contacting them when the need arises for themselves or for a fellow student (Zivin et al., 2009).

## **Solutions and Resources on Campus**

The intent of the current study was to aid in the development of appropriate support and educational services to address the increasing need for recognition and management of mental illness on campus. In an effort to address these concerns, a range of solutions have been recommended in the literature to stem the tide of mental health problems among college students. These proposed solutions have aided in the development of the survey for the current research. Eisen et al. (2009) reported the creation of a course to enhance student mental health, wherein students participate in small-group research projects, internships, organizing forums on depression and addiction, and peer mentoring. Student campus involvement had the effect of breaking down bureaucratic barriers in the college, which was a source of alienation for students. McCarthy and Salotti (2006) advocated for student education and campus policy changes to prevent suicidal behavior. Moss and Smith (2007) recommended addressing wellness and psychological impairment in the curriculum and identifying health-promoting resources – counseling services, student support groups, academic assistance, fitness facilities, healthy food choices, and substance free campaigns. Smith-Allen (2005) suggested that knowing how to construct the delivery of mental health services in community college settings is a particular challenge that needs to be met.

## **Method**

### **Participants**

The study took place at a college in the northeastern region of the United States. Among the 831 survey respondents 63.3% identified themselves as female; 32.5% identified as college juniors, 30.4% seniors, 18.1% sophomores, 14.7% freshmen, and 4% graduate students. Participants represented a broad range of the academic departments at the college. The 13 undergraduates that participated in the focus groups lived on campus in three residence halls.

## **Procedures for Data Collection and Analysis**

Instructors at this college of approximately 8,500 undergraduate and graduate students were invited by an email forwarded to all college faculty members to accommodate administration of a mental health survey in their classes. Thirty-six of over 300 faculty responded to the invitation. The initial email was forwarded by the primary author, a graduate research instructor. Graduate researchers in the Counselor Education Department made follow-up contacts with responding faculty and took the lead in administering the survey in the classroom. Survey participation was voluntary and anonymous, with almost all students invited to participate choosing to complete the survey. Graduate students conducting the survey and focus groups were trained to provide accurate information about the study procedures, and to make a referral or seek consultation if a participant requested help for a mental health problem. The college's Institutional Review Board approved the study.

The director of campus residence programs was consulted by the primary author about conducting focus groups with undergraduate residents on their perceptions of signs, risk factors, and services for mental health problems. Graduate researchers followed up with residence directors to conduct three focus groups, each in a separate residence hall of the directors' choosing. Residents had the option to participate in the focus groups or to decline.

**Instruments.** The survey used in this study was created by the authors with the aid of the literature cited and sought to determine the students' understanding of the signs of depression, anxiety, sleep disorders, and other mental health problems, risk factors that may increase the likelihood of their onset, and resources that are available on campus to help students who face a mental health problem. No pilot was conducted with this survey. The signs/symptoms for depression, anxiety, and sleep disorders were taken from the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000).

The survey instrument was comprised of 20 multiple choice items. In addition to sex, year-in-college (freshman, sophomore, junior, or senior)/graduate student status, and age group, items asked respondents to rate on a Likert-type scale (with ratings of none, limited, adequate, or strong) their knowledge of depression, anxiety, and sleep disorders; their ability to know if a friend were struggling with depression, anxiety, or a sleep disorder; recognition of signs of depression, anxiety disorder, and sleep disorder (e.g., trouble getting to sleep); identification of problems that might bring on depression, anxiety, or a sleep disorder; and awareness of other mental health problems. The survey also presented options of how to assist a friend facing a mental health problem, awareness of campus services, and preferred campus resources to support students with mental health concerns. The eight questions posed to participants in the focus groups addressed the terms anxiety, depression, sleep disorder, and other mental health problem; signs/symptoms and risk factors for these disorders; and knowledge of the college's mental health services.

## **Results**

The first items on the survey assessed respondents' knowledge of anxiety, depression, and sleep disorders. Among the participants, 14.2% responded that their knowledge of depressive disorders was limited or none, 22.6% indicated that their knowledge of anxiety disorders was limited or none, and 50.7% indicated that they had limited or no knowledge of sleep disorders. Participants were prompted to identify other mental health problems of which they were aware. Bipolar disorder was identified by 20.3% of the respondents, schizophrenia by 17.4%, and personality disorders by 10.3%, substance abuse by 4.3%, autism or developmental disability by 3.7%, and other mental health problems, including eating disorders, was indicated by 22.7%. Just over 50% did not recognize another kind of mental health problem. Survey respondents were asked about their ability to recognize if a friend were struggling with a mental

disorder: 15% reported their ability to recognize depression as limited or none, 26% indicated their ability to identify anxiety in a friend as limited or none, and 52% their ability to identify a sleep disorder in a friend as limited or none.

### **Signs and Risk Factors of Depression, Anxiety, and Sleep Disorder**

Among the signs of depression, overeating was not recognized by 23% of the survey respondents (the No responses are presented here to emphasize what the respondents seemed to overlook and where training needs to occur), failing grades by 18.3%, sleep problems by 15.2%, and loss of appetite, feeling helpless, and feeling alone, loss of interest, depressed mood, suicidal thoughts, and feeling hopeless between 3.6% and 9%, respectively. Student awareness of signs of anxiety was narrower than their awareness of signs of depression and signs of a sleep disorder. Feelings of helplessness was not recognized as a sign of anxiety by 31.9% of the respondents, fatigue by 30.9%, and recurrent thoughts or impulses by 23.6%. Additionally, disturbed sleep was not recognized as a sign of anxiety by 18.2% of the students, agitated behavior by 17.7%, intense fear by 17.3%, and difficulty concentrating by 15.8%. Irritability, feeling on edge, and worry were not recognized by less than 13% of the participants, respectively. Whereas 15.8% of respondents failed to recognize excessive sleeping as a sign of a sleep disorder, a very small proportion, less than 4%, failed to recognize trouble getting to sleep and trouble staying asleep as problematic.

The survey also investigated student awareness of the potential for risky situations to cause the onset of symptoms of depression, anxiety, or sleep disturbance. Table 1 represents the percentage of respondents that did not see the potential for the experiences to result in a mental health problem.

Table 1

*Percentage of respondents that believe specified high-risk situations **will not** lead to depression, anxiety, or sleep disorders*

Situation	Depression	Anxiety	Sleep Disorder
Transition to college	20.0	29.0	23.7
Relationship problem	2.4	16.1	10.2
Adjusting to academic work	24.4	10.3	17.1
Family problem	3.0	14.4	12.9
Poor academic performance	18.5	10.3	27.3
Homesickness	13.6	28.9	25.0
Alienation from others	5.8	22.9	35.4
Substance abuse	11.4	21.5	22.7

It appears that there is a need for education about each one of these risk factors. Transition to college, homesickness, and alienation from others had the least recognition for their role in mental health problems and there was more ignorance about experiences contributing to anxiety and sleep disorders than those contributing to depression.

### **Perceptions of College Resources**

When asked if students would make those in authority aware if they had a friend facing a mental health problem, 80.1% of the students would not talk to a professor about the friend’s problem and 64.5% would not encourage the friend to talk to a professor; 68.5% would not talk to a Residence Assistant; 54.8% would not take the friend to the college health center; and 43.1% would not take them to the counseling center. Sixty-one percent indicated that they would not talk to the friend’s family about the problem. On the other hand, 97.1% responded that they would talk to the friend, 89.8% would encourage the friend to seek counseling, and 84.4% would encourage the friend to talk with her family. Only 12.3% indicated that they would take the friend out drinking and 6.3% would take the friend to a party.

When asked about their awareness of the existence of a counseling center on campus, 11.1% responded No, 4.4% indicated that they were not aware of the campus health center ,and

7.9% responded that they were not aware of the campus police. Student participants were also asked about additional services they perceived were needed for college students facing mental health concerns. Survey respondents offered the following suggestions: student support groups (69.5%), courses about mental health (54.6%), exercise resources (49.5%), and education sessions for students (47.9%).

**Knowledge and Risk Factors for Anxiety: Year-in-College**

Student year-in-college was associated with several interesting trends regarding anxiety problems. College freshman were less confident in their knowledge of anxiety than upper level students (see Table 2). Sophomores and juniors appear to be most susceptible to lack of recognition of at-risk situations for anxiety problems.

Table 2

*Participant reported knowledge of anxiety sources, recognizing college transition risk factors, and poor academic performance as a risk factor for anxiety by year-in-college*

	Freshman	Sophomore	Junior	Senior	Graduate
<hr/>					
Knowledge of anxiety sources					
Responding Strong	13.1	20.0	21.9	32.0	54.5
Responding Limited/None	34.4	25.4	21.9	21.3	6.1
$\chi^2=46.547$ , Cramer's V=.137, $p \leq .000$ , N=828					
<hr/>					
Not recognizing transition to college as risk factor for anxiety					
Responding No	29.5	38.0	33.2	21.1	18.2
$\chi^2=17.989$ , Cramer's V=.148, $p \leq .003$ , N=825					
<hr/>					
Not recognizing poor academic performance as risk factor for anxiety					
Responding No	9.0	15.3	12.7	6.4	6.1
$\chi^2=10.797$ , Cramer's V=.114, $p \leq .056^*$ , N = 825					

\*The p-value is above .05 alpha and is presented to show the trend with transition to college.

## **Views on Depression, Anxiety, and Sleep Disorders by Sex**

Female respondents consistently responded on the survey in a way that suggested expanded awareness of mental health problems compared to their male counterparts. Among the 13 items on the survey that addressed knowledge, signs, causes, and remedies of mental health problems, 44 of sex-based choices had a p-value of .05 or less (chi square range was 4.43 to 31.95 and Cramer's V was .07 to .2) and 24 of the choices had a p-value of .000. For every one of the 44 choices except "knowing how to help a friend with a sleep disorder," males responded no more often, indicating failure to recognize various signs, risk factors, and knowledge of mental health problems and how to help a friend experiencing a mental health problem. Female respondents were inclined to be more confident about their knowledge of anxiety and depression and if a friend were dealing with such a problem.

Strong sex differences were noted in recognition of the association of anxiety with repeated and persistent thoughts, disturbed sleep, and feelings of intense fear. Similarly, more males did not identify excessive sleepiness as a possible sign of a sleep disorder. For depression, males were more likely to discount sleep problems, loss of appetite, overeating, feeling helpless, loss of interest, and failing grades. Transition to college, adjusting to academic work in college, family problems, alienation from others, and substance abuse were missed more frequently by males as possible risk factors for mental health problems.

Relationship problems with family and friends on and off campus are perceived by most students to affect levels of anxiety, sleep problems, and depression. However, females are more likely to see relationship problems, family problems, homesickness, and alienation from others as contributing to the onset of anxiety, sleep disorders, and depression than are males. Females are more likely to recognize the impact of transition to college, adjustment to college academic work, and poor academic performance on emergence of a mental health problem than are males.

## **Focus Groups Findings**

The focus groups conducted in three campus residence halls were attended by 13 undergraduate students. Ten of the 13 respondents in the focus groups stated that lack of social supports contributed to mental health problems, especially depression. Seven indicated that anxiety was widespread on campus due to academic workload and other burdens. First-year students reported conceptual knowledge of mental health disorders, whereas upperclassmen reported more exposure to mental health problems, especially anxiety. Additionally, seven students stated that they had a friend with an eating disorder, five with obsessive compulsive disorder, four with a substance abuse problem, and three that self-mutilate. Eight students reported having stigmas toward mental health disorders, especially ADHD. Thirteen students knew the name of the building where the counseling center was located, but did not know the location of the building. Five students shared that they get information about mental health problems from the internet, three from watching movies, and two from television. In response to a question about student recommendations, participants believed that there should be increased social support for students, including coping with anxiety about graduation, more information about mental health disorders, and more student familiarity with and access to the college's counseling center. Counselor visibility should be increased in campus social settings such as dining halls.

## **Discussion**

The researchers sought to understand the extent of college student knowledge about mental health problems, their signs and causes, and related campus services. The respondents as a group had an emerging awareness of mental illnesses that have high prevalence rates in the larger society (e.g., schizophrenia, bipolar disorder, and autism). However, there appeared to be a notable lack of awareness of substance abuse and eating disorders as mental health problems and

most participants were unable to identify mental health problems other than depression, anxiety, and sleep disorders when given the opportunity to do so. The sample manifested a lack of knowledge about the degree to which certain circumstances could elicit symptoms of mental illness. Given that students on college campuses experience many risk factors for the development of mental disorders (Lenz, 2004) this knowledge gap has the potential to be a significant obstacle in the students' ability to perceive risks inherent in some social and academic contexts.

One emergent pattern is the diminishing awareness from freshman through junior years that certain experiences could serve as the genesis of anxiety symptoms. Although first-year college students expressed substantial need in this area, it was significantly less than their sophomore and junior year counterparts. It was not until the senior year that students were able to recognize certain experiences as heightening anxiety. This indicates that educational programming for first and second year students is essential for increasing awareness of risk factors for anxiety. It is strongly suggested that colleges implement developmental and comprehensive approaches to educate students about anxiety and other mental health issues.

Males were less likely to perceive that the indicated behaviors and situations are associated with anxiety, sleep disorders, or depression. This is consistent with the findings of Williams and Pow (2007) in their study of teenagers in school settings. Whereas, the Williams and Pow study looked at teenagers in schools in Scotland, it clearly points to the patterned gender differences found in this study at the college level in the United States. Indeed, their conclusion that gender specific interventions might prove to be more effective in educating young people, could certainly be applied by American student affairs practitioners in college settings as well. For example, outreach programs in residence halls could be designed to increase knowledge by all students, always with an eye towards specific gender needs.

There is clearly a need for increased efforts to educate college students about the stresses of college life, how these stresses manifest themselves behaviorally and affectively, and ultimately how one might address such symptoms. These education efforts can be provided to the entire student body through orientation programs and freshman orientation courses. Additionally, more focused training for residence hall personnel can be provided to increase knowledge about mental health problems and how to address them with students.

### **Limitations of the Study**

This study was conducted at a mid-sized public college in the northeast, which may not represent the experiences of larger or smaller campuses, those in other regions, two year, or private institutions. Convenience sampling based on cohorts in academic departments and relied on instructors to administer the survey in classes, the willingness of students to participate in the survey or a focus group, and the consent of residence directors to have the focus groups conducted in the residence halls. The study findings cannot be assumed to represent college and university populations in general or the population at the host institution. Furthermore, although the undergraduate students who participated in the survey represented a reasonable approximation of the college's student body, the limited number of graduate student participants did not reflect the graduate student population. Consequently, caution needs to be exercised in drawing connections between the findings and the status of student knowledge of mental health problems and resources in other higher education settings.

### **Future Research**

Student unwillingness to reach out to student affairs, academic, and campus health professionals when a friend has a mental health problem needs to be better understood, particularly in light of the danger of violence on college campuses. Further research should address the very distinct differences between males and females in knowledge of causes and

signs of mental health problems. It might be valuable to determine if the consistently low male recognition of causes and signs represents a lack of awareness of mental health problems, or different ways of perceiving and managing threats to mental health.

## **Conclusion**

This research confirms the need for wellness resources on the college campus as articulated by Moss and Smith (2007). Counseling center staff can serve as valuable resources, conducting outreach programs into appropriate classrooms, and increasing awareness through screening days at key stress points across the academic year (move-in days, mid-term examinations, holidays, and the end of the semester). Counseling staff can also serve to provide much needed educational programs for faculty and student affairs staff to increase awareness of key markers of mental health concerns. Most importantly, faculty and student affairs staff can create open discussions about mental health concerns with students and thus a culture of openness around issues of mental health.

Survey respondents and focus group participants had specific ideas about ways to enhance mental health services on the campus. Special courses and training workshops focusing on mental health problems were identified as ways for students to become more informed about the types, symptoms, causes, and services for mental health disorders. Although current training programs exist, the results clearly point to the need for more engaging curricula to increase mental health knowledge and skill based competencies. Support groups on campus could provide opportunities to become connected with peers for students who are alienated or facing a mental health problem. Perhaps most important about offering support group services is the creation of systems to communicate to the campus community about the existence and value of participating in such activities. There needs to be a culture whereby mental health services are not stigmatized as negative, but are seen as a healthy practice. In addition, convenient access to exercise facilities

on campus was also identified as a source of mental health. Health services can make the strong connection between mental and physical health through its programming. Again, the establishment of a culture of mental and physical health is essential to increasing student knowledge and competency.

Specific areas where education about mental health should be enhanced is in managing problematic family and peer relationships that can increase symptoms, and in awareness of the potential impact of transition to college, academic failure, and academic performance expectations on mental health. Students need greater awareness of various types of mental disorders and their behavioral indicators, particularly eating disorders, substance abuse, and disorders caused by and manifested in social alienation (i.e., schizophrenia and personality disorders). Risk factors for violent behavior, and who students should inform about peers at risk for perpetrating violent behavior, should be included in educational activities. It is essential that students and college administrators work in unison to identify situations where violence might emerge, and to work collaboratively to create an environment where the likelihood of violence is diminished. Education about mental health symptoms and risk factors should be especially geared to address the information needs of freshmen and sophomores. The impact of transfer students on mental health might make sophomores and juniors more vulnerable and in need of mental health education and support.

## References

- American College Health Association. (2009). American College Health Association - national college health assessment spring 2008 reference group data report (abridged). *Journal of American College Health, 57*(5), 477-488.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental health disorders* (Rev. 4<sup>th</sup> ed.). Washington, DC: Author.
- Brockelman, K. F. (2009). The interrelationship of self-determination, mental illness, and grades among university students. *Journal of College Student Development, 50*(3), 271-286.
- Dusselier, L., Dunn, B., Wang, Y., Shelley, M. C., & Whalen, D. F. (2005). Personal, health, academic, and environmental predictors of stress for residence hall students. *Journal of American College Health, 54*(1), 15-24.
- Eisen, A., Kushner, H., McLeod, M., Queen, E., Gordon, J., & Ford, J. L. (2009). An integrated approach to addressing addiction and depression in college students. *Journal of American College Health, 57*(4), 455-456.
- Eisenberg, D., Gollust, S. E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and correlates of depression, anxiety, and suicidality among university students. *American Journal of Orthopsychiatry, 77*(4), 534-542. doi: 10.1037/0002-9432.77.4.534
- Fallahi, C. R., Austad, C. S., Fallon, M., & Leishman, L. (2009). A survey of perceptions of the Virginia Tech tragedy. *Journal of School Violence, 8*(2), 120-135.  
doi:10.1080/15388220802074017
- Fortson, B. L., Scotti, J. R., Del Ben, K. S., & Yi-Chuen, C. (2006). Reliability and validity of an Internet traumatic stress survey with a college student sample. *Journal of Traumatic Stress, 19*(5), 709-720. doi: 10.1002/jts.20165

- Furr, S. R., Westefeld, J. S., McConnell, G. N., Jenkinds, J. M. (2001). Suicide and depression among college students: A decade later. *Professional Psychology: Research and Practice*, 32(1), 97-100. doi: 10.1037//0735-7028.32.1.97
- Gallagher, R. P. (2005). *National survey of counseling center directors* (Monograph series no. 80). International Association of Counseling Services. Retrieved from <http://www.education.pitt.edu/survey/nscdd/archive/2005/monograph.pdf>
- Hartley, M. T. (2010). Increasing resilience: Strategies for reducing dropout rates for college students with psychiatric disabilities. *American Journal of Psychiatric Rehabilitation*, 13(4), 295-315. doi:10.1080/15487768.2010.523372
- Knight, J. R., Wechsler, H., Kuo, M., Seibring, M., Weitzman, E. R., & Shuckit, M. A. (2002). Alcohol abuse and dependence among college students. *Journal of Studies on Alcohol*, 63(3), 263-270.
- Lenz, B. K. (2004). Tobacco, depression, and lifestyle choices in the pivotal early college years. *Journal of American College Health*, 52(5), 213-219.
- McCarthy, J., & Salotti, M. A. (2006). A community approach to suicide prevention: A look at American campuses. *Australian Journal of Guidance & Counseling*, 16(2), 257-264.
- Moss, S. B., & Smith, P. O. (2007). Wellness and impairment content in schools of medicine curricula in the United States and Canada. *Medical Education Online*, 12(1), 1-6.
- Osberg, T. M. (2004). A business case for increasing college mental health services. *Behavioral Health Management*, 24, 33-36.
- Smith-Allen, L. (2005). Mental health issues: A quiet danger on campuses. *Community College Week*, 17(26), 4-5.

Williams, B., & Pow, J. (2007). Gender differences and mental health: An exploratory study of knowledge and attitudes to mental health among Scottish teenagers. *Child and Adolescent Mental Health*, 12(1), 8-12. doi:10.1111/j.1475-3588.2006.00413.x

Zivin, K., Eisenberg, D., Gollust, S. E., & Golberstein, E. (2009). Persistence of mental health problems and needs in a college student population. *Journal of Affective Disorders*, 117(3), 180-185. doi:10.1016/j.jad.2009.01.001

©2011, R. Dobmeier, T. Hernandez, R. Barrell, D. Burke, C. Hanna, D. Luce, S. Catlin-Rakoski, J. Rowe, M. Siclare. *CSPA-NYS Journal of Student Affairs* is an open access journal. Authors retain the copyright to their work under the terms of the following Creative Commons license: Attribution-Noncommercial-No Derivative Works 3.0 (United States)  
<http://creativecommons.org/licenses/by-nc-nd/3.0/us/>.