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A Case Series of Individual Six-Week Cognitive Behavioral Therapy With Individually Tailored Manual-Based Treatment Delivery for Depressed College Students With or Without Suicidal Ideation

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Abstract Despite their prevalence, depression and suicidal ideation (SI) are relatively unaddressed problems in the college student population. There are limited individual treatment studies targeting this population. Nine students ($M = 19.33$ years of age; $SD \pm .87$) with depressive symptoms and/or SI were enrolled in 6-weeks of individual cognitive behavioral therapy (CBT) with a individually tailored manual-based treatment delivery. Measures were given before and after treatment. Primary results, presented as a case series, suggested decreases in depression across students and an overall downward trend in SI. As a secondary analysis, paired samples *t* tests showed significant decreases in both depression and SI. In summary, short-term, individually tailored manual-based CBT may be beneficial for reducing depressive symptoms and SI among college students. More research is needed to determine the best clinical interventions and targeted treatments for this vulnerable population.

Keywords Depression · Suicidality · Shot-term treatment · Cognitive-behavioral therapy (CBT) · Undergraduate

Introduction

Suicide is the third leading cause of death among young people (15–24 year olds), after accidents and homicides (Barrios et al. 2000), and the second leading cause of death for

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individuals between the ages of 25–34 (Reid 2010). These numbers may actually underestimate the problem, as there are approximately 100–200 suicide attempts for every completed suicide in the general population (Goldsmith et al. 2002). The American College Health Association reported that nearly half of college students suffer from significant depression and that approximately 95 % of students who commit suicide are clinically depressed (American College Health Association 2007). In general, up to 15 % of individuals with depression eventually commit suicide (Davies et al. 2001). The literature also suggests that rates of depression among college students are increasing: 18 % of undergraduates in 2008, compared to 10 % in 2000, reported being diagnosed with depression (American College Health Association 2000, 2008).

The primary strategy identified in the Healthy People 2010 National Health Promotion and Disease Prevention objectives for reducing suicide is to increase treatment for depression (US Department of Health and Human Services 2010). However, there are only a few studies examining treatments for depression in the college population. In a recent study of college students, approximately 24 % of students with depression reported seeking treatment (American College Health Association 2008; Hunt and Eisenberg 2010). In our study, less than 20 % of students who reported suicidal ideation (SI) received mental health treatment (Kisch et al. 2005). Another study showed that Emotional Freedom Techniques (i.e., exposure, cognitive reprocessing, and somatic stimulation) reduced depression among college students with scores in the moderate/severe range on the Beck Depression Inventory (BDI) (Church et al. 2012). However, this study did not examine treatment effects on SI. Another international study showed that group Cognitive behavioral therapy (CBT) significantly improved post-treatment depression and stress in a Jordanian college cohort with significant depressive symptoms (Hamdan-Mansour et al. 2011). This sample consisted of 55 % males (45 % female), most of whom were not working, all of whom spoke Arabic, and attended the same university. It is possible that this study's generalizability could be limited in scope due to the fact that the sample lacked geographic and cultural variability. In a recent meta analysis examining group-based interventions for stress, a variety of mindfulness, cognitive, and behavioral interventions were found to be effective at reducing stress, anxiety, and depression among college students (Regehr et al. 2013). Again, the effects of the treatment on SI were not examined in this study. Finally, a study of the effectiveness of social problem-solving therapy for college students found that this approach was more effective than supportive therapy at reducing loneliness, hopelessness and depression. However, problem-solving therapy was not more effective than supportive therapy at reducing SI (Lerner and Clum 1990).

The effectiveness of psychosocial interventions for reducing suicidal behavior is unclear (Comtois and Linehan 2006). Some have questioned the utility of treating depression as a means of reducing suicidality (Linehan 2008; Nock et al. 2012; Nock et al. 2009). One randomized clinical trial showed that Dialectical Behavior Therapy (DBT) groups for college students with three or more symptoms of Borderline Personality Disorder resulted in a significantly greater reduction in SI compared to the control condition (Pistorello et al. 2012). In 1984, the University of Illinois instituted a program that required any student threatening or attempting suicide to receive 4 sessions of professional assessment, which included: a risk assessment, reconstructing the events leading up to the threat, a lifetime history of the students' suicidal intent, a review of the

university's policy towards self-welfare and the consequences of violating that policy, and exploring any issues that may have triggered the suicide threat/attempt. The suicide rates on the campus decreased from 6.91 to 3.78 suicides per 100,000 enrolled students during the first 21 years of the program, representing a reduction of 45.3 % (Joffe 2008).

It has been suggested that a treatment plan that emphasizes collaboration with the patient and developing a strong therapeutic alliance might be crucial for the effective treatment of depression and suicidality (Jobes 2000). Cognitive behavioral therapy (CBT) can be delivered in a flexible manual-based format, allowing therapists to deliver CBT techniques to meet the individual needs of the patient. For example, Levitt et al. (2007) utilized a flexible manual-based CBT (ranging from 12 to 25 sessions) and found reductions in PTSD and depression symptoms in survivors of the 911 terrorist attacks (Levitt et al. 2007). In another study, outpatients with anxiety disorders were treated with flexible protocol-based CBT. The investigators found that non-targeted anxiety and mood disorders improved with the flexible application of CBT for the principal anxiety disorder. In this study there was no way to determine the focus of each session (Davis et al. 2010). In summary, flexible manual-based CBT may be helpful for both depression and anxiety.

In cross-sectional screenings for depression and SI in college students, conducted by our program during the past 10 years, we found that approximately 10 % of students endorsed the statement, "I have thoughts of killing myself, but I would not carry them out" (Farabaugh et al. 2012b). These data likely represent an under-estimation of the true number of students with SI, given that the screening was not mandatory or routinely administered. This paper extends our previous work by reporting on the effects of an intervention given to a small sample of students with depressive symptoms and/or SI. We discuss potential benefits of a 6-week individual tailored CBT for these students. These findings may help to guide intervention strategies to reduce depression and SI in the college population.

Method

Students were recruited through a college-based depression and suicide screening conducted by the Massachusetts General Hospital (MGH), Depression Clinical and Research Program (DCRP) at a university in the northeastern United States. The procedures of the screening have been described in detail elsewhere (Farabaugh et al. 2012b). Briefly, students were given a verbal description of the study, and, if interested, received a consent form and packet of self-report questionnaires. In return for completing the questionnaires, students were given a $10 voucher for his/her participation and a list of mental health resources in the area. A research assistant scored the instruments to determine if a student met criteria for a brief interview with a study clinician (BDI total score $\geq$13 and/or BDI #9 Suicide Item score >0).

A MD or PhD level clinician from the DCRP interviewed eligible students. A plan for emergency evaluation was made if a student was deemed at imminent, serious suicidal or homicidal risk. Students who screened positive

(BDI $\geq$13 and/or BDI #9 >0) were offered the 6-week individual CBT intervention. Students signed another consent form if they wished to participate in CBT. Eligible students who declined the interview or the CBT intervention, were given a list of mental health resources and encouraged to seek treatment.

Inclusion criteria for the CBT intervention: English speaking (citizenship was not assessed), age 18–24, at least moderate depressive symptoms (BDI $\geq$ 13) and/or SI (BDI Suicide Item #9 >0). Exclusion criteria: Imminent risk for suicidal or homicidal acts (in such cases, referrals for emergency evaluation for inpatient admission were made); an unstable serious medical condition; the following self-reported diagnoses: bipolar disorder, schizophrenia, delusional disorder, and/or psychotic disorders not otherwise specified.

The 6-week CBT intervention was based on the Sequenced Treatment Alternatives to Relieve Depression (STAR*D) manual, which follows the approach developed by the cognitive therapy research group at the University of Pittsburgh (Shaw 1984). There have been other manuscripts reporting the benefits of this CBT manual (Farabaugh et al. 2012a; Thase et al. 2007; Wisniewski et al. 2007). Therapists chose modules, such as psychoeducation, behavioral activation, cognitive restructuring, and/or exposure, depending on the presenting issues. This flexible treatment delivery allowed the therapist to concentrate on the factors deemed most relevant to each student-e.g., SI, substance use, impulsivity, poor problem solving, etc. (please see Table 3). As part of the treatment, all subjects were given psychoeducation on depression and anxiety. Students completed a battery of measures pre- and post-intervention.

Clinical Measures Administered

- The Demographic Questionnaire (unpublished; available upon request) is a 13-item questionnaire assessing basic demographic information (e.g., age, sex, race/ethnicity, GPA, year in school) and general health.
- The Beck Depression Inventory (BDI; Beck et al. 1961) is a 21-item measure that includes questions about core symptoms of depression (e.g., sadness, guilt, disappointment, irritability, thoughts of suicide, indecisiveness, insomnia, and loss of appetite). Each item is scored 0, 1, 2, or 3, with higher scores indicating greater depressive severity. The BDI has good internal consistency ($\alpha = .85$; Reynolds and Gould 1981).
- The BDI #9 Suicide Item (BDI #9; Beck et al. 1961). The BDI Suicide Item includes four response choices: (0) *I don't have any thoughts of killing myself*, (1) *I have thoughts of killing myself, but I would not carry them out*, (2) *I would like to kill myself, and* (3) *I would kill myself if I had the chance.* A score of 1 or higher indicates presence of SI in the past week.
- The Suicidal Behaviors Questionnaire-Revised (SBQ-R; Osman et al. 2001) is a self-report measure comprised of four questions measuring past suicide plans, recent SI, history of verbalization of suicidal intent or plan, and future likelihood of a suicide attempt (items 1–4, respectively): (1) *Have you ever thought about*

or attempted to kill yourself? (score: 1–4a/b), (2) *How often have you thought about killing yourself in the past year?* (score: 1–5), (3) *Have you ever told someone that you were going to commit suicide, or that you might do it?* (score: 1–3a/b), (4) *How likely is it that you will attempt suicide someday?* (score: 1–6). Osman et al. (2001) found that a total score of ≥ 7 on the SBQ-R reflected elevated suicide risk, whereas a total score of less than 7 reflected low suicide risk. The SBQ-R has strong internal consistency at $\alpha = .88$ (Osman et al. 2001) and very strong test–retest reliability ($\alpha = .95$) (Cotton et al. 1995).

Results

Nine students (mean age $= 19.33 \pm .87$) completed 6 weeks of flexible manual-based CBT. The majority of the students were female (8 out of 9) and Caucasian (6 out of 9). The demographic characteristics of the students are listed in Table 1. In Table 2, the frequencies of the responses to the suicidality measures pre- and post-treatment are presented (BDI #9 and SBQ-R).

Primary results are presented as a case series in Table 3. At baseline, 8 of 9 students reported threshold depressive symptoms (BDI ≥ 13), and 7 students reported SI (BDI #9 > 0 and/or SBQ-R ≥ 7). One student had SI at baseline, but did not meet the threshold for depression (BDI $= 12$). At the end of treatment, 5 of the 8 students with depression at baseline had dropped below the threshold (BDI < 13) and every student's BDI trended downwards, resulting in a large reduction in depressive symptoms overall. Results also indicated downward trends in SI scores post-treatment, especially on the BDI #9. However, the reduction in suicidality was not as pronounced as the reduction in depression (please see Fig. 1).

In secondary analyses, we used a series of paired samples t tests, despite the small sample size, to explore changes on measures of depression and suicidality before and after 6 weeks of CBT (Table 3). These analyses demonstrated significant reductions on the BDI total score, BDI #9, and SBQ-R total score post-treatment (significance levels set at $p < .05$).

Discussion

During recent years, several university suicides have received significant media attention. As a result, there have been increased efforts to study depression and youth suicide, as well as to develop college-based suicide prevention programs (Eisenberg et al. 2011). This pilot study offered a 6-week tailored manual-based psychosocial treatment for college students with depressive symptoms with or without SI. Our main finding was that this short-term, manual-based, and flexible treatment approach reduced depression and, to a lesser extent, SI, in college students.

Table 1 Demographic variables of the students ($n = 9$)

	Mean (SD)
Age ($n = 9$)	19.3 (.87)
	n (%)
Year in school ($n = 9$)	
Freshman	2 (22.2)
Sophomore	3 (33.3)
Junior	3 (33.3)
Senior	1 (11.1)
Gender ($n = 9$)	
Male	1 (11.1)
Female	8 (88.9)
Ethnicity ($n = 9$)	
Black, not of hispanic origin	0
Hispanic	3 (33.3)
White, not of hispanic origin	6 (66.7)
American Indian or Alaskan native	0
Asian or Pacific islander	0
Other	0

College students with elevated BDI scores at baseline ($\geq$13) demonstrated a significant reduction in depressive symptoms after 6 weeks of CBT ($p < .001$). This finding replicates previous reports from the small body of literature in this area. In an earlier study, Peden et al. (2001) found that 6 weeks of group CBT was effective for reducing depressive symptoms in college with mild to moderate symptoms of depression when compared to a no treatment control group. In a more recent study, Seligman et al. (2007) found that for college students with mild to moderate depressive symptoms, 8-weeks of a CBT "workshop" (i.e., groups of 10 students that met 1 $\times$ per week for 2 h) reduced depressive and anxiety symptoms, compared to an assessment only control group. In a relatively large study of Jordanian university students ($N = 84$) with significant depressive symptoms (15 $\geq$ BDI), a group CBT intervention (10 weeks $\times$ 45 min; 11 students per group; CBT) was compared to a control (no intervention offered). Students demonstrated post-intervention improvements in depression, levels of stress, and more adaptive coping (i.e., decreases in avoidant strategies) (Hamdan-Mansour et al. 2011). Our study extends this small body of literature and suggests that a short-term treatment may be useful for reducing depressive symptoms in this population.

In addition to finding a reduction in depressive symptoms after 6 weeks of CBT, we found a smaller reduction in SI across different measures of suicidality (SBQ-R total and BDI #9) from baseline to endpoint. Others have also found that psychosocial interventions, such as CBT and Problem Solving Therapy (PST), show promise for reducing suicidal behavior in a general adult population (Brown et al. 2005; Stewart et al. 2009; Tarrier et al. 2008). In a college population, Pistorello et al. (2012) found that DBT was beneficial for reducing complex suicidality

Table 2 Frequency table for suicidality items

	Pre-therapy	%	Post-therapy	%
BDI Item #9				
(0) I don't have any thoughts of killing myself	3	33.3	6	66.7
(1) I have thoughts of killing myself, but i would not carry them out	5	55.6	3	33.3
(2) I would like to kill myself	1	11.1	0	0
(3) I would kill myself if I had the chance.	0	0	0	0
Total	9		9	
SBQ-R Item 1- Have you ever thought about or attempted to kill yourself?				
(1) Never	1	11.1	2	22.2
(2) It was just a brief passing thought	3	33.3	3	33.3
(3a) I have had a plan at least once to kill myself but did not try to do it	2	22.2	2	22.2
(3b) I have had a plan at least once to kill myself and really wanted to die	2	22.2	1	11.1
(4a) I have attempted to kill myself, but did not want to die	0	0	1	11.1
(4b) I have attempted to kill myself, and really hoped to die	1	11.1	0	0
Total	9		9	
SBQ-R Item 2- How often have you thought about killing yourself in the past year?				
(1) Never	2	22.2	3	33.3
(2) Rarely (1 time)	2	22.2	1	11.1
(3) Sometimes (2 times)	2	22.2	4	44.4
(4) Often (3–4 times)	1	11.1	0	0
(5) Very often (5 or more times)	2	22.2	1	11.1
Total	9		9	
SBQ-R Item 3- Have you ever told someone that you were going to commit suicide or that you might do it?				
(1) No	8	88.9	7	77.8
(2a) Yes, at one time, but did not really want to die	0	0	2	22.2
(2b) Yes, at one time, and really wanted to do it	1	11.1	0	0
(3a) Yes, more than once, but did not want to do it	0	0	0	0
(3b) Yes, more than once, and really wanted to do it	0	0	0	0
Total	9		9	
SBQ-R Item 4- How likely is it that you will attempt suicide someday?				
(0) Never	1	11.1	2	22.2
(1) No chance at all	2	22.2	1	11.1
(2) Rather unlikely	1	11.1	5	55.6
(3) Unlikely	5	55.6	1	11.1
(4) Likely	0	0	0	0
(5) Rather likely	0	0	0	0
(6) Very likely	0	0	0	0
Total	9		9	

Table 3 Individual case summaries

Case year (age) gender	Background	Interventions used	BDI total score			BDI #9			SBQ-R total score		
			Pre	Post	Change	Pre	Post	Change	Pre	Post	Change
1 Junior (20) female	Depression and SI. Social stressors around relationship issues	Mood monitoring and self-care (eating specifically). Problem-solving around relationships, test anxiety and perfectionism. Cognitive restructuring to address core beliefs around likeability. Behavioral activation	20	16	4	0	0	0	7	6	1
2 Sophomore (19) female	Depression. Social stressors around relationship issues	Mood monitoring and thought records. Cognitive restructuring on likeability and exposure to thoughts of being disliked	22	10	12	0	0	0	6	5	1
3 Freshman (18) female	Depression and SI. Social stressors around relationship issues and adjusting to college	Mood monitoring and thought records. Cognitive restructuring on internalized messages from parents. Exposure to expression of emotions	16	8	8	1	0	1	10	10	0
4 Sophomore (19) female	Depression and SI. Family stressors. Self injurious behaviors	Mood monitoring and self care (eating specifically). Behavioral activation (e.g., yoga). Cognitive restructuring to address core beliefs around likeability. Reappraisals	25	18	7	1	1	0	10	8	2
5 Freshman (19) female	Depression. Social stressors around adjusting to college and productivity expectations	Mood monitoring and thought records around productivity. Cognitive restructuring on advocating for self and exposure to social situations. Relaxation and anxiety management skills	20	9	11	0	0	0	3	3	0
6 Sophomore (19) female	Depression and SI. Social stressors around isolation	Mood monitoring and self care (eating specifically). Thought records on anxiety producing thoughts. Cognitive restructuring on unhelpful thoughts around self in relationships (negative core beliefs) and exposure to social situations	25	11	14	1	0	1	13	11	2
7 Junior (19) male	Mild depression and SI. Social stressors around dating and managing social situations	Mood monitoring and thought records on reactivity and interpersonal sensitivity. Cognitive restructuring on negative beliefs about self. Exposure to social situations and dating	12	7	5	2	1	1	12	10	2

Table 3 continued

Case year (age) gender	Background	Interventions used	BDI total score			BDI #9			SBQ-R total score		
			Pre	Post	Change	Pre	Post	Change	Pre	Post	Change
8 Junior (19) female	Depression and SI. Social stressors around eating concerns and attachment concerns. Self-injurious behaviors	Mood monitoring and thought records on negative self thoughts, especially weight. Behavioral activation (e.g., exercise)	34	27	7	1	0	1	10	8	2
9 Senior (22) female	Depression and SI. Social stressors around social situations and relationship issues	Mood monitoring. Cognitive restructuring around vulnerability in interpersonal relationships. Exposure to social situations	21	8	13	1	1	0	7	7	0
Total mean (95 % confidence interval)			21.7 (16.91–26.42)	12.7 (7.63–17.60)	9.0***	.78 (.27–1.29)	.33 (−.05 to .72)	.45*	8.67 (6.24–11.10)	7.56 (5.55–9.56)	1.11*
Cohen's d					1.46			.67			.35

* $p < .05$; ** $p < .01$; *** $p < .001$

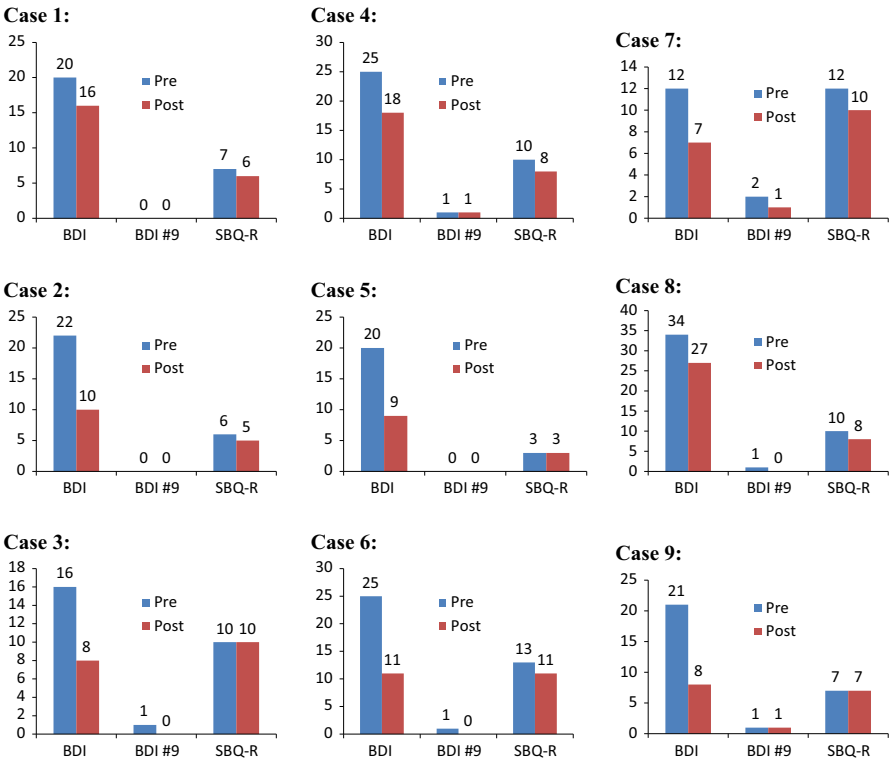

Fig. 1 Depression and suicidality Pre/post scores by case

(defined as: BDI #9 $\geq$1, at least one lifetime act of non-suicidal self-injury or attempt, and three or more borderline personality criteria on the SCID-II), including a reduction in suicidality, increased social functioning, decreased depression, and reduced use of psychotropic medications (Pistorello et al. 2012).

A few students in the present study who scored a 0 on the BDI #9 post-treatment, indicating no thoughts of suicide in the past week, still had scores of 7 or greater on the SBQ-R, which indicates elevated suicide risk. This discrepancy is likely due to the difference in time frames for the two measures. Unlike the BDI, the SBQ-R does not specifically capture suicidal thinking in the past week, as it is not a time limited instrument. Instead, the SBQ-R indicates overall suicide risk (including past and future attempts). Also, the only individual item on the SBQ-R that is likely to change pre/post-treatment is item number 4, which focuses on future suicide risk rather than past suicidality. Finally, it is noteworthy that, for 2 students (cases 4 and 9), although depressive symptoms decreased, SI (BDI #9) did not. This finding indicates that, in some cases, treating depression may not result in improvement in suicidality, which has been suggested previously (Linehan 2008).

Limitations

Our results should be considered within the context of the study's limitations. First, this was a pilot study with a small sample size ($N = 9$). Second, the study allowed for clinician flexibility and sessions were not taped for adherence/fidelity to the manual. Ideally, future studies could develop a manual tailored specifically for suicidality and depression in the college population. Still, this study did provide naturalistic evidence that time limited CBT can be effective in a flexible format. Third, this pilot study did not have a control group. Without a control group we cannot rule out the possibility that the observed results were due to factors such as time, history, or regression to the mean. Fourth, the generalizability of these findings is limited due to the gender bias, self-selection of the sample, and the fact that all participants attended one university. Fifth, we did not assess living situation (i.e., students could be living in a dorm on campus or in a city apartment), nor did we assess whether in-state residency, both of which may have impacted students' stress levels. Lastly, we did not systematically collect data on past psychiatric treatment; thus, some subjects may have previously received psychosocial interventions.

Conclusion

Suicide prevention strategies typically focus on identifying individuals at high risk for suicide, as well as reducing the prevalence of risk factors. Ideally, programs would build on our knowledge base of risk factors for suicide in order to design and conduct efficacy and effectiveness field trials to examine psychosocial interventions for suicidal behavior. Clearly, there is a crucial need to continue developing and testing suicide prevention programs for college aged populations (Kisch et al. 2005). Such programs may require augmentation of standard mental health treatments, identification and treatment of mood disorders, working alongside key university personnel, and carefully measuring all aspects of suicidality (Mann et al. 2005). Twenty-five percent of all individuals between 18–24 are in college full or part-time, suggesting that a large proportion could be reached through college-based suicide prevention efforts (US Department of Health and Human Services 2001).

Short-term and flexible interventions, like the one utilized in this study, may have particular utility given that college counseling centers tend to be understaffed, underfunded, and overwhelmed by the needs of distressed students. Oftentimes, college counseling centers are heavily reliant upon trainees and have notably limited resources (Watkins et al. 2012). It appears there is a critical need to continue to build the evidence base with regard not only to the content of interventions, but to length and format (e.g., flexibility of treatment delivery) as well. Non-specific factors, such as therapeutic alliance, would also be important to measure in future studies. Additionally, given our preliminary finding that CBT reduced SI, future studies might consider using validated measures of suicidality to monitor subjects longitudinally following treatment, assessing suicide attempts and completions.

In our study, the small sample size and flexible delivery of the intervention did not allow us the ability to assess whether specific modules or CBT techniques

differentially impacted the findings. However, the study did provide preliminary evidence that a short-term (i.e., 6-week) and tailored CBT can be effective in the college population. Future studies could assess whether specific modules, as well as the order of delivery of such modules, might influence treatment outcome. Future studies could also compare flexible application of CBT techniques to more rigid applications of CBT. Though, of note, there has been a call to move evidence-based treatments into more flexible and naturalistic "real-world" settings to enhance accessibility of treatments (Westfall et al. 2007). Finally, it is also possible that effective interventions may be delivered in novel ways—e.g., delivered through Skype, email, smart phone applications, and other technological advances (Trockel et al. 2011).

This study provided preliminary evidence demonstrating that short-term CBT with flexible treatment delivery may be helpful for college students with depressive symptoms and/or SI. Psychosocial interventions have the potential to provide a student with concrete strategies and skills to cope with academic and social pressures, mental health issues, developmental and transitional dilemmas, and general communication and problem-solving issues. The public health significance of this treatment is particularly compelling, given the vulnerability of this particular age group (American College Health Association 2011; Turner et al. 2012; Wingo et al. 2013).

References

American College Health Association. (2000). *National college health assessment: Reference group executive summary, fall 2000*. Baltimore: Author.

American College Health Association. (2007). American college health association national college health assessment Spring 2006 reference group data report. *Journal of American College of Health, 55*(4), 195–206.

American College Health Association. (2008). *National college health assessment: Reference group data report, spring 2008*. Baltimore: Author.

American College Health Association. (2008). *National college health assessment: Reference group executive summary fall 2008*. Baltimore: Author.

American College Health Association. (2011). *ACHS-National health assessment II: Reference group executive summary spring 2011*. Hanover: Author.

Barrios, L. C., Everett, S. A., Simon, T. R., & Brener, N. D. (2000). Suicide ideation among US college students: associations with other injury risk behaviors. *Journal of American College Health, 48*(5), 229–233.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4*, 53–63.

Brown, G. K., Have, T. T., Henriques, G. R., Xie, S., Hollander, J., & Beck, A. T. (2005). Cognitive therapy for the prevention of suicide attempts. *Journal of the American Medical Association, 294*(5), 563–570.

Church, D., De Asis, M. A., & Brooks, A. J. (2012). Brief group intervention using emotional freedom techniques for depression in college students: A randomized controlled trial. *Depression Research and Treatment, 2012*, 1–7.

Comtois, K. A., & Linehan, M. M. (2006). Psychosocial treatments of suicidal behaviors: A practice-friendly review. *Journal of Clinical Psychology, 62*(2), 161–170.

Cotton, C. R., Peters, D. K., & Range, L. M. (1995). Psychometric properties of the suicidal behaviors questionnaire. *Death Studies, 19*, 391–397.

Davies, S., Naik, P. C., & Lee, A. S. (2001). Depression, suicide, and the national service framework. *BMJ, 322*(7301), 1500–1501.

Davis, L., Barlow, D. H., & Smith, L. (2010). Comorbidity and the treatment of principal anxiety disorders in a naturalistic sample. *Behavior Therapy, 41*(3), 296–305.

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.

Farabaugh, A., Alpert, J., Wisniewski, S. R., Otto, M. W., Fava, M., Baer, L., & Thase, M. E. (2012a). Cognitive therapy for anxious depression in STAR*D: What have we learned? *Journal of Affective Disorders, 142*(1), 213–218.

Farabaugh, A., Bitran, S., Nyer, M., Holt, D. J., Pedrelli, P., Shyu, I., & Fava, M. (2012b). Depression and suicidal ideation in college students. *Psychopathology, 45*(4), 228–234.

Goldsmith, S. K., Pellar, T. C., Kleinman, A. M., & Bunney, W. E. (2002). *Reducing suicide: A national imperative*. Washington, DC: The National Academies Press.

Hamdan-Mansour, A. M., Al-Gamal, E., Puskar, K., Yacoub, M., & Marini, A. (2011). Mental health nursing in Jordan: An investigation into experience, work stress and organizational support. *International Journal of Mental Health Nursing, 20*(2), 86–94.

Hunt, J., & Eisenberg, D. (2010). Mental health problems and help-seeking behavior among college students. *Journal of Adolescent Health, 46*(1), 3–10.

Jobes, D. A. (2000). Collaborating to prevent suicide: A clinical research perspective. *Suicide and Life Threatening Behavior, 30*(1), 8–17.

Joffe, P. (2008). An empirically supported program to prevent suicide in a college student population. *Suicide and Life Threatening Behavior, 38*(1), 87–103.

Kisch, J., Leino, V., & Silverman, M. (2005). Aspects of suicidal behavior, depression, and treatment in college students: results from the spring 2000 national college health assessment survey. *Suicide and Life Threatening Behavior, 35*(1), 3–12.

Lerner, M. S., & Clum, G. A. (1990). Treatment of suicide ideators: A problem-solving approach. *Behavior Therapy, 21*(4), 403–411.

Levitt, J. T., Malta, L. S., Martin, A., Davis, L., & Cloitre, M. (2007). The flexible application of a manualized treatment for PTSD symptoms and functional impairment related to the 9/11 World Trade Center attack. *Behaviour Research and Therapy, 45*(7), 1419–1433.

Linehan, M. M. (2008). Suicide intervention research: A field in desperate need of development. *Suicide and Life-Threatening Behavior, 38*(5), 483–485.

Mann, J. J., Apter, A., Bertolote, J., Beautrais, A., Currier, D., Haas, A., & Hendin, H. (2005). Suicide prevention strategies: A systematic review. *Journal of the American Medical Association, 294*(16), 2064–2074.

Nock, M. K., Deming, C. A., Chiu, W. T., Hwang, I., Angermeyer, M., Borges, G., et al. (2012). Mental disorders, comorbidity, and suicidal behavior. In M. K. Nock, G. Borges, & Y. Ono (Eds.), *Suicide: Global Perspectives from the WHO World Mental Health Surveys* (pp. 148–163). New York: Cambridge University Press.

Nock, M. K., Hwang, I., Sampson, N. A., & Kessler, R. C. (2009). Mental disorders, comorbidity and suicidal behavior: Results from the National Comorbidity Survey Replication. *Molecular Psychiatry, 15*(8), 868–876.

Osman, A., Bagge, C. L., Guitierrez, P. M., Konick, L. C., Kooper, B. A., & Barrios, F. X. (2001). The Suicidal Behaviors Questionnaire-Revised (SBQ-R): Validation with clinical and nonclinical samples. *Assessment, 5*, 443–454.

Peden, A. R., Rayens, M. K., Hall, L. A., & Beebe, L. H. (2001). Preventing depression in high-risk college women: A report of an 18-month follow-up. *Journal of American College Health, 49*(6), 299–306.

Pistorello, J., Fruzzetti, A. E., MacLane, C., Gallop, R., & Iverson, K. M. (2012). Dialectical behavior therapy (DBT) applied to college students: A randomized clinical trial. *Journal of Consulting and Clinical Psychology, 80*(6), 982–994.

Regehr, C., Glancy, D., & Pitts, A. (2013). Interventions to reduce stress in university students: A review and meta-analysis. *Journal of Affective Disorders, 148*(1), 1–11.

Reid, W. H. (2010). Preventing suicide. *Journal of Psychiatric Practice, 16*(2), 120–124.

Reynolds, W. M., & Gould, J. W. (1981). A psychometric investigation of the standard and short form Beck Depression Inventory. *Journal of Consulting and Clinical Psychology, 49*(2), 306.

Seligman, M. E., Schulman, P., & Tryon, A. M. (2007). Group prevention of depression and anxiety symptoms. *Behaviour Research and Therapy, 45*(6), 1111–1126.

Shaw, B. F. (1984). Specification of the training and evaluation of cognitive therapists for outcome studies. In J. B. W. Williams & R. L. Spitzer (Eds.), *Psychotherapy Research: Where we are and where we should go?: Proceedings of the 73rd Annual Meeting of the American Psychopathological Association, New York City, March 3–5, 1983* (pp. 173–189). New York: Guilford Press.

Stewart, C. D., Health, M., Quinn, A., Plever, S., Clin, M., & Emmerson, B. (2009). Comparing cognitive behavior therapy, problem solving therapy, and treatment as usual in a high risk population. *Suicide and Life Threatening Behavior, 39*(5), 538–547.

Tarrier, N., Taylor, K., & Gooding, P. (2008). Cognitive behavioral interventions to reduce suicide behavior: A systematic review and meta-analysis. *Behavior Modification, 32*(1), 77–108.

Thase, M., Friedman, E., Biggs, M., Wisniewski, S., Trivedi, M., Luther, J., & Rush, A. (2007). Cognitive therapy versus medication in augmentation and switch strategies as second-step treatments: A STAR* D report. *American Journal of Psychiatry, 164*(5), 739–752.

Trockel, M., Manber, R., Chang, V., Thurston, A., & Tailor, C. B. (2011). An e-mail delivered CBT for sleep-health program for college students: effects on sleep quality and depression symptoms. *Journal of clinical sleep medicine: JCSM: official publication of the American Academy of Sleep Medicine, 7*(3), 276.

Turner, D. P., Thompson, M. E., Huber, L. R. B., & Arif, A. A. (2012). Depressive symptoms and academic performance of North Carolina college students. *Mental Health, 73*(3), 169–175.

US Department of Health and Human Services, (2001). *National strategy for suicide prevention: goals and objectives for action*. Rockville, MD: US Public Health Service (document No SMA3517). Retrieved from www.mentalhealth.org/suicideprevention.

US Department of Health & Human Services. (2010). *Mental health and mental disorders Healthy People 2010*. Washington, DC: Government Printing Office.

Watkins, D. C., Hunt, J. B., & Eisenberg, D. (2012). Increased demand for mental health services on college campuses: Perspectives from administrators. *Qualitative Social Work, 11*(3), 319–337.

Westfall, J. M., Mold, J., & Fagnan, L. (2007). Practice-based research—"Blue Highways" on the NIH roadmap. *JAMA, 297*(4), 403–406.

Wingo, J., Kalkut, E., Tuminello, E., Asconape, J., & Han, S. D. (2013). Executive functions, depressive symptoms, and college adjustment in women. *Applied Neuropsychology Adult, 20*(2), 136–144.

Wisniewski, S., Fava, M., Trivedi, M., Thase, M., Warden, D., Niederehe, G., & Rush, A. (2007). Acceptability of second-step treatments to depressed outpatients: a STAR* D report. *American Journal of Psychiatry, 164*(5), 753–760.