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Combined MI + CBT for Depressive Symptoms and Binge Drinking Among Young Adults: Two Case Studies

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Abstract

There are high rates of comorbidity between heavy drinking and depressive symptoms among college students, often resulting in severe alcohol-related consequences. No empirically supported treatment exists that concurrently addresses both of these problems in this population. Research with college students has demonstrated that brief motivational interventions (BMIs) reduce heavy drinking and alcohol-related consequences, and that cognitive behavioral therapy for depression (CBT-D) is effective in reducing depressive symptoms. Thus, a program combining BMI and CBT-D appears ideal for college students with co-occurring binge drinking and depressive symptoms. This manuscript presents the rationale and format of a BMI + CBT-D treatment protocol for this population, and provides a case example of a female college student who received the protocol and experienced improvement in depressive symptoms, a reduction in alcohol use and alcohol-related negative consequences, and an increase in readiness to change alcohol consumption. We discuss theoretical and clinical implications of these findings, and suggest directions for future research.

Keywords

binge drinking; depressive symptoms; cognitive behavioral therapy treatment; brief motivational interviewing; college students

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Heavy drinking among college students is considered the number 1 public health hazard and the primary source of preventable morbidity and mortality for the 8 million American college students (Hingson, Heeren, Winter, & Wechsler, 2005; Wechsler, Moeykens, Davenport, Castillo, & Hansen, 2002). Heavy episodic drinking, or "binge" drinking, is defined as consuming 4 standard drinks for women and 5 standard drinks for men in 2 hr (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2004). Binge drinking is consistently associated with significant consequences such as motor vehicle accidents (the second leading cause of death for young adults; Barrios, Everett, Simon, & Brener, 2000), unsafe sex, accidental injuries, and poor classroom performance (Marlatt & Roberts, 1998; Wechsler et al, 2002). It is estimated that each year, in the United States, approximately 1,800 students die from injuries related to alcohol, 599,000 are injured because of drinking, 400,000 have unprotected sex, and more than 100,000 report having been too intoxicated to know if they consented to having sex (Hingson & Zha, 2009). For a considerable number of college students, binge drinking develops into an alcohol use disorder (AUD), including alcohol abuse or alcohol dependence (Courtney & Polich, 2009). Large scale surveys indicate that, of the 8 million college students in the United States, between 6% and 11% of students met *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* criteria for alcohol dependence and between 6% and 31% met criteria for alcohol abuse over the past year (Dawson, Grant, Stinson, & Chou, 2004; Knight et al., 2002; Slutske, 2005).

Depressive disorders are also prevalent among college students (American College Health Association, 2008; Garlow et al, 2008), particularly among young adults in college with AUDs or who drink heavily. For example, B. E. Miller, Miller, Verhegge, Linville, and Pumariega (2002) noted an association between alcohol abuse and symptoms of depression among college athletes. Deykin, Levy, and Wells (1987) observed that college students who meet criteria for alcohol abuse were 3.6 times more likely to have a history of major depressive disorder than those who did not. Moreover, it has been shown that binge-drinking college students are 4.5 times as likely as their non-binge-drinking peers to meet criteria for dysthymia (Dawson et al, 2004). Lastly, among college students, several studies have linked greater alcohol consumption with more severe depressive symptoms, poor mental health, and psychological distress (Geisner, Larimer, & Neighbors, 2004; Pedrelli et al., 2011; Weitzman, Nelson, Lee, & Wechsler, 2004).

Among college students who drink heavily, depressive symptoms are a significant risk factor for short-term and long-term negative outcomes. Specifically, Geisner and colleagues (2004) observed that students who binge drink and have depressive symptoms report a higher number of alcohol related problems than those who only binge drink. Our group has observed that, among drinking college students, depressive symptoms are directly associated with a greater number of alcohol related negative consequences (Pedrelli et al. 2010). Similarly, Park and Grant (2005) noted, among college students, an association between negative affect and alcohol-related negative consequences. Finally, college students with depressive symptoms are more likely to experience drinking-related problems such as engaging in unsafe sex, falling behind at work, and engaging in vandalism than healthy students (Weitzman et al, 2004).

Concurrent Drinking and Depression: Theory and Research

Social learning theory (SLT) provides a theoretical framework for explaining the co-occurrence of heavy alcohol use and depressive symptoms in the adult population. Specifically, SLT describes alcohol as a negative reinforcer and postulates that alcohol consumption is motivated by a desire to reduce aversive emotional states. Therefore, drinking occurs when individuals have positive expectations about the outcome of alcohol use and have no alternative skills to cope with their tension and stress (Bandura, 1986). Similarly, Marlatt and Gordon (1985) propose that drinking is likely in situations in which individuals have low self-efficacy to cope with a stressful situation and expect that alcohol will enhance their coping. Consistent with this model, individuals who drink to regulate their negative affect may not experience sustained improvement if they receive treatment solely for their alcohol use. Perhaps for this reason, depressed mood plays a major role in relapse among individuals with heavy drinking and is associated with worse outcomes (Cornelius et al., 2004; Greenfield et al., 1998; Marlatt & Gordon, 1985). Therefore, providing the individual with alternative coping strategies for depression may be an important component in reducing relapse risk in treatment for alcohol use disorders. Thus, treatment approaches for individuals with hazardous drinking and depressive symptoms may be more effective if they include modalities addressing both depressed mood and alcohol use.

Research supports the concurrent treatment of depression and alcohol use. One study showed that adding cognitive behavioral therapy for depression (CBT-D), an empirically supported treatment for depression, to inpatient standard treatment for alcohol dependence with comorbid depressive symptoms was associated with more abstinent days long-term than adding relaxation training, an intervention without support for depression (Brown, Evans, Miller, Burgess, & Mueller, 1997). More recent research in noncollege settings support the notion that interventions addressing both depressive symptoms and hazardous alcohol use may lead to a more stable and better outcome in both conditions than an intervention addressing only alcohol. Lydecker and colleagues (2010) reported that at the end of treatment, both depressed substance dependent veterans receiving an integrated therapy for substance use and depression and depressed substance dependent veterans receiving substance-only therapy experienced a reduction of depressed symptoms as well as alcohol use. However, the former group maintained improvement over time, whereas the latter experienced a worsening of symptoms and more alcohol use at the 6-month follow-up.

Psychosocial Treatment of Binge Drinking in the College Setting

Empirically supported treatments have been developed to address either heavy alcohol use or depression in the college student population. Heavy drinking has been reduced by brief motivational interventions (BMIs), which are brief interventions that incorporate motivational interviewing (MI), defined as a "client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence" (W. R. Miller & Rollnick, 2002, p. 25). MI combines both style (e.g., empathy) and technique (e.g., reflective listening) to create an atmosphere of collaboration during the session. Brief Alcohol Screening and Intervention for College Students (BASICS; Dimeff, Baer, Kivlaha, & Marlatt, 1999), a specific BMI developed for college students, uses individualized

personal feedback sessions to enhance students' motivations to change high-risk drinking behaviors and reduce alcohol-related consequences. Originally tested with voluntary students using professional counselors, efficacy studies have shown this brief, individual motivational feedback intervention significantly reduced alcohol consumption and negative consequences with effects remaining through 2- and 4-year follow-ups (Baer, Kivlahan, Blume, McKnight, & Marlatt, 2001; Marlatt & Roberts, 1998). Since this original efficacy study, several adapted BMIs have been tested with voluntary and mandated samples (e.g., Barnett, Murphy, Colby, & Monti, 2007; Borsari & Carey, 2000; Borsari & Carey, 2005; Larimer et al., 2001; Murphy et al., 2004, 2001). This research led Larimer and Cronce (2002, 2007) to conclude that BMIs appear to be more effective for reducing alcohol use in college students than education, values clarification (determining how alcohol use influences personal values and goals), and normative education (providing accurate information regarding peer alcohol use and approval of drinking).

Psychosocial Treatment of Depression in the College Setting

CBT-D is a psychosocial intervention that postulates that individuals who are prone to depressive symptoms have latent dysfunctional beliefs developed during childhood that become primed in the context of negative events (Beck, Rush, Shaw, & Emery, 1979). Originally developed for aults, CBT-D teaches techniques to examine dysfunctional beliefs that perpetuate depression and to develop more accurate and helpful ones that alleviate depression. CBT-D may be an ideal treatment approach for those young adults with negative beliefs about themselves and depressive symptoms because it provides helpful strategies to address and change negative self-views. Young adulthood is a period of critical developmental milestones, during which individuals are forming schemas about themselves, their future, and others (Arnett, 2000), as well as a time of increased life stressors unique to this age group. Moreover, CBT-D's focus on behavioral activation, which consists of increasing engagement in activities that improve mood and enhance feelings of mastery, may provide effective nondrinking strategies to cope with depressive symptoms.

CBT-D has been shown to be an effective treatment for depressive symptoms by numerous studies. A series of meta-analyses summarizing these findings have shown that CBT-D is superior to wait-list and placebo control in the treatment of unipolar depression (Butler, Chapman, Forman, & Beck, 2006; Dobson, 1989; Gloaguen, Cottraux, Cucherat, & Blackburn, 1998), and in preventing relapse (Gloaguen et al, 1998). Although most studies examining the effectiveness of CBT-D for depression have been conducted with adults, several investigations support the effectiveness of CBT-D for depressive symptoms among young adults. Peden, Ravens, Hall, and Beebe (2001) showed that young women in college who attended a brief CBT-D program experienced a significant decrease of depressive symptoms and negative thinking. Similarly, Seligman, Schulman, and Tryon (2007) reported that, at the end of treatment, college students with mild to moderate depressive symptoms enrolled in a CBT-D therapy program had fewer depressive symptoms than their peers in the control group. Finally, Cukrowicz and Joiner (2007) examined a computer-based CBT-D intervention for symptoms of anxiety and depression in a nonclinical population of college students. They observed that the students in the CBT-D condition had lower depressive scores than their peers in the control group consisting of education on anxiety and

depressive disorders. Moreover, although originally developed for adults, CBT-D is an individualized flexible approach that can be tailored to the developmental needs of specific populations (Arean & Cook, 2002; Compton et al, 2004). Thus, CBT-D appears to be an ideal candidate for the treatment of depressive symptoms among college students who also binge drink.

MI + CBT-D for College Students

Numerous empirical findings point to the feasibility and advantages of an approach combining MI and CBT-D. In a meta-analytic review of MI, Burke, Arkowitz, and Menchola (2003) showed that MI yields a moderate effect size when used as an adjunct or prelude to other interventions. Furthermore, several studies have shown support for combining MI with CBT for a range of populations with substance use problems. An integrated approach of MI and CBT-D has been successfully employed in the treatment of maritally distressed women with alcohol problems (Kelly, Halford, & Young, 2000). CBT for substance misuse, enhanced with MI sessions, has been shown effective for cocaine users (McKee et al., 2007). Haddock and colleagues (2003) observed an improvement of functioning in individuals with schizophrenia and substance disorders following an intervention combining CBT for substance misuse and MI. Westra (2004) employed MI as an adjunct to CBT-D to address resistance among patients with depression. Moreover, there is preliminary evidence for the effectiveness of a combined CBT-D and MI approach for patients with substance misuse and depression. Hides and colleagues (2010) observed improvement of depressive symptoms and a reduction of alcohol problems among adolescents and young adults (age 15-25 years) with depression and substance misuse receiving integrated CBT-D + MI and case management. Baker and colleagues (2010) noted an improvement of alcohol use and depressive symptoms among adult patients with current depressive symptoms and hazardous use receiving CBT-D + MI.

In light of the support for BMIs for reducing heavy alcohol use in college students and for the effectiveness of CBT-D in various populations, we decided to develop a protocol combining BMI and CBT-D for co-occurring binge drinking and depressive symptoms in college students tailored for young adults. In this article we describe the treatment protocol and one example of its application. The BMI and CBT-D protocol was developed in the context of a study examining effective interventions for binge drinking and depressive symptoms among college students.

BMI + CBT-D Protocol

Age-Related Needs

The present treatment protocol was catered toward the needs of college students, a population with a particular set of developmental challenges, with binge drinking and depressive symptoms. The college years correspond to a period of emerging adulthood during which identity formation in the areas of love, work, and worldview and the transition from dependence to semi/full independence occur (Arnett, 2000). Thus, the protocol is tailored to explore and address developmental problems common to college students including academic pressures, separation from family, career planning, development of a

support system different from the one in adolescence, fulfillment of responsibilities in numerous environments including school and work, effective communication with significant others and family of origin, budgeting, and self-care (i.e., eating regularly, sleep hygiene).

Sequence of Modules

The BMI + CBT-D protocol consists of seven sessions: the first two include BMI addressing heavy alcohol use and the following five sessions correspond to a CBT-D protocol that focuses on depressive symptoms. As noted by other studies (i.e., the COMBINE study; W. R. Miller, 2004), beginning treatment with MI techniques enables to address the ambivalence about changing alcohol use and about being in treatment experienced by some patients (Moyers & Houck, 2010). In addition, by beginning treatment with a personalized feedback on alcohol use and alcohol-related negative consequences, safety issues are immediately discussed and negative consequences associated with risky alcohol use may be reduced. This is particularly critical for binge-drinking college students given the high alcohol-related negative consequences experienced by this population. This sequence allows to link the drinking behaviors extensively assessed and the discussed alcohol use patterns to the depressive symptoms that will be discussed next.

This order of administration is also consistent with previous studies showing that when combining MI techniques with other psychosocial treatments starting with this approach is feasible and acceptable (Kelly et al, 2000; McKee et al., 2007). Moreover, an approach using a sequence combining MI techniques with CBT-D has been used for the treatment of co-occurring depressive symptoms and hazardous alcohol use in adults (Baker et al, 2010), for substance misuse together with psychoses (Barrowclough et al., 2009), and for marijuana abuse and dependence in young adults (Dennis et al., 2004).

Brief Motivational Intervention—The BMI content of the BMI + CBT-D protocol draws largely from the BASICS (Dimeff et al, 1999) protocol. Consistent with the MI approach (W. R. Miller & Rollnick, 2002), the program focuses on facilitating intrinsic change in addictive behaviors by mobilizing patients' own resources rather than prescribing or teaching a particular course of action. Specifically, during the program clinicians follow five MI strategies: express empathy and acceptance of current behavior; develop discrepancy between current behaviors and personal goals; avoid direct confrontation to prevent increase of resistance; deflect resistance by using reflective statements and by reframing individual's statement toward increase discrepancy; and support self-efficacy and individuals' beliefs that they can succeed at change. During the BMI module, as well as throughout the intervention, clinicians' communication style is consistent with these principles and includes the use of OARS: open-ended questions, affirmations, reflective listening, and summaries. During the first BMI session, the clinician review with the student the personalized feedback form (PFF) that summarizes a range of information collected during the baseline assessment. The PFF includes information on various topics such as the frequency and amount of the student's alcohol use and when the student is provided his/her typical and peak blood alcohol content (BAC) in the past month. The BACs is calculated using the Matthews and Miller (1979) equation at an average metabolism rate of 0.017 g/dL

per hour. In addition, the student is provided a comparison of his/her average alcohol use with national norms of college students' alcohol consumption (from Meilman, Presley, & Cashin, 1997). For example, the student and the interventionist discuss where his/her current drinking would place his/her in relation to other students—in the case presented, her alcohol use placed her at the 98th percentile for typical drinking and at the 99th percentile for heaviest drinking week (see Appendix). National percentiles have been used in previous studies (Borsari & Carey, 2005; Borsari, O'Leary Tevyaw, Barnett, Kahler, & Monti, 2007) to place the participants' alcohol use in context. Furthermore, other researchers have developed campus-specific percentiles to place the student's alcohol use in a campus-specific context (e.g., Carey, Henson, Carey, & Maisto, 2009). Moreover, the alcohol-related negative consequences reported by the student during the assessment are reviewed to make salient the effect of alcohol use on his/her life and facilitate readiness to change. Using MI interaction techniques, the student's reactions to the information presented are elicited and the readiness to change drinking behaviors is explored. At the end of the first session, the student is asked to express a personal goal with regards to drinking and to record his/her alcohol use until the following meeting on a monitoring card. In the case the student expresses desire to reduce alcohol consumption strategies to attain his/her goal are reviewed. During the second BMI session, the clinician reviews whether the goal with regard to alcohol use was achieved. In the cases the student accomplishes the established goal, the clinician reviews the strategies that enabled him/her to do so and enhances self-efficacy. If the student consumes more alcohol than agreed upon during the previous session, the clinician explores strategies that may enable him/her to achieve his/her alcohol consumption goal in the future.

Cognitive Behavioral Therapy for Depression—The CBT-D module included in the treatment protocol is based on principles outlined in Beck and colleagues' (1979) manual and on strategies employed by a previous study involving college students with depressive symptoms (Peden and colleagues, 2001). During Session 3 of the protocol (the first CBT-D session), the clinician inquires about the nature of the student's depressive symptoms, and afterward introduces the cognitive-behavioral model of depression. Specifically, the clinician illustrates the cognitive triad by providing definitions of negative automatic thoughts, of feelings, and of behaviors and by describing their associations with examples from the student's personal experience. Sessions 4 and 5 focus primarily on teaching cognitive restructuring, which is a key component of CBT-D and consists in (a) identifying negative automatic thoughts that occur in the presence of sad mood, (b) identifying distortions in the negative automatic thoughts (i.e., mind reading distortion such as "my friends do not care about me"), (c) gathering evidence that dispute negative unhelpful thoughts, and (d) identifying statements that are more accurate, helpful, and improves the student's mood. During these sessions, inaccurate thoughts at the bases of alcohol use are also examined. During Sessions 4 and 5, the student's goals for treatment are identified as well as negative thoughts preventing their attainment. In this context, it is also examined whether alcohol consumption is an obstacle for the achievement of the student's goals. For example, if the student's objective is improvement of depressive symptom, the clinician explores the role of alcohol use in their persistence. Session 6 focuses on behavioral activation as well as relaxation training. During this meeting, the student identifies several

activities associated with pleasure and/or mastery and is asked to commit to engage in at least two of them. Participation in these activities is expected to improve the student's mood, which will provide a critical example of enhancing mood opportunities alternative to alcohol consumption. The relaxation training techniques that are reviewed are progressive muscle relaxation and diaphragmatic breathing. Session 7 consists of reviewing the entire protocol and of identifying and consolidating techniques found helpful by the student. Lastly, possible future difficulties are identified and strategies to cope with them are examined to prevent relapse. At the end of each meeting, the student is asked to complete homework assignments tailored to the topics covered during the sessions. The completion of the assignments facilitate the implementation and practice of techniques learned during the sessions. For example, homework assignment for Session 4 consists of identifying dysfunctional thoughts preventing the attainment of therapy goals. At the beginning of each session the clinician reviews the assigned homework and addresses noncompliance. Throughout the treatment protocol when student appears ambivalent about the agenda topic discussed, the clinician may use MI communication style to examine his/her ambivalence. For example, MI techniques may be used to identify goals for treatment or to examine ambivalence about completing the homework assignments.

Case Example

Procedure

To further elucidate our treatment protocol here, we present its application with one patient (TD; not her real initials). TD received the intervention in the context of a study investigating the feasibility, acceptability, and effectiveness of the BMI + CBT-D protocol here described among students with binge drinking and depressive symptoms. Study participants were recruited via online advertising, by putting flyers on campuses, and by conducting mental health screenings on college campuses. Interested participants completed a baseline assessment and those eligible were randomized to receive BMI + CBT-D or an intervention combining alcohol education and CBT-D. TD self-referred to the study after having seen it advertised on a widely used online classifieds website by the name of *Craigslist*.

Upon signing the consent form, TD completed a baseline battery of questionnaires. She met eligibility criteria for being enrolled in the study and was randomized to and received the BMI + CBT-D protocol. She completed the first follow-up assessment at the end of the therapy protocol, approximately 8 weeks from baseline and the second one approximately 16 weeks from baseline. Therapy was administered by the first author who is a licensed clinical psychologist trained in the delivery of both BMIs and CBT-D. TD was chosen to exemplify the application of this intervention because she was the first patient who completed the CBT-D protocol with sufficient recorded information to recreate her treatment course.

Measures

Psychiatric Diagnostic Screening Questionnaire (PDSQ)—The PDSQ (Zimmerman & Mattia, 1999) is a self-report scale including 90 items designed to screen for

the most common DSM-IV axis I disorders encountered in outpatient mental health settings. It includes 13 subscales (major depressive disorder, bulimia, posttraumatic stress disorder, panic disorder, agoraphobia, social phobia, generalized anxiety disorder, obsessive-compulsive disorder, alcohol abuse/dependence, drug abuse/dependence, somatization, hypochondriasis, and psychosis) that have demonstrated to achieve good to excellent levels of internal consistency, test–retest reliability, and discriminant, convergent, and concurrent validity (Zimmerman & Mattia, 2001). In this study, it was used as an initial screen for major depression, and the diagnosis was then verified by the first author.

Beck Depression Inventory (BDI)—The BDI (Beck et al., 1961) is a 21-item self-report measure assessing both psychological and physical depressive symptoms experienced by the patients in the previous week. Each item can be scored on a scale from 0 to 3 with higher scores indicating greater severity of depression.

Daily Drinking Questionnaire (DDQ)—The DDQ (Collins, Parks, & Marlatt, 1985) is a self-report questionnaire that asks to estimate, in the previous month, number of drinks consumed in a single day and the number of hours spent drinking that day, during a typical drinking week, and during a heavy drinking week. The DDQ includes the definition of 1 drink as corresponding to 10–12 oz can or bottle of beer, 4 oz glass of wine, and 1.25 oz shot of 80% proof liquor. This measure has been used extensively with college students (e.g., Borsari & Carey, 2000, 2005) and was administered at baseline.

Timeline Followback (TLFB)—The TLFB (Sobell & Sobell, 1992; Sobell, Brown, Leo, & Sobell, 1996) is a self-reported calendar-assisted measure that is based on participants' retrospective account of alcohol consumption over a specified period. The TLFB has been shown to have excellent reliability (Sobell, Maisto, Sobell, & Cooper, 1979) and high content, criterion, and construct validity in clinical and nonclinical populations (Allen & Columbus, 1995). The TLFB was administered at the follow-up assessments. The estimates of alcohol use at the follow-ups were based on information collected via the TLFB.

Readiness to Change Questionnaire (RTCQ)—The RTCQ (Rollnick, Heather, Gold, & Hall, 1992) is a 12-item questionnaire based on Prochaska and DiClemente's (1986) stages-of-change model. It records at which stage of change respondents are in relation to changing heavy drinking.

Drinker Inventory of Consequences (DrInC)—The DrInC (W. R. Miller, Tonigan, & Longabaugh, 1995) is a self-administered questionnaire including 50 items measuring negative consequences of alcohol use in five areas: interpersonal, physical, social, impulsive, and intrapersonal. Each item inquires about lifetime and past 3-month occurrence of adverse consequences. The subscales are combined to assess total number of adverse consequences.

Case Study

Baseline Functioning

TD was a 20-year-old Caucasian, female, senior college student. Prior to starting the study, she had stopped attending college for several months because of health problems and was planning to return to school the following semester. She was first diagnosed with major depressive disorder during her teens and took antidepressant medications for approximately 1 year. She stopped taking medications because she had felt better. She reported having experienced depressive episodes with full recovery several times in her lifetime. She reported one suicide attempt during her teens but denied having had suicidal ideation in the previous 5 years. The PDSQ indicated that TD met criteria for depression. Overall, she reported on the PDSQ and on the BDI that during the previous 2 weeks she had been sad (but not every day), had had low appetite and motivation, and difficulties with concentration, fatigue, oversleeping and making decisions. She was mildly depressed, as indicated by a BDI total score equal to 16 and by the therapist's clinical assessment. Regarding substance use, TD reported smoking cannabis from once weekly to once monthly. At baseline assessment, TD reported heavy drinking both during a typical drinking week and on a heavy drinking week in the previous month. Moreover, she reported several alcohol-related negative consequences (DrInC = 21). She was in contemplation stage with regard to readiness to change her alcohol consumption.

Treatment Course

The first two sessions focused on reviewing TD's alcohol use summarized in a PFF (see Appendix), and on increasing her self-efficacy with regard to changing alcohol use. Specifically, during these sessions the clinician created an atmosphere of collaboration and elicited TD's reactions to the information provided to her. Moreover, the clinician used reflection statements to highlight the discrepancy between her current drinking behavior and her personal goals. For example, the clinician elicited comments on this discrepancy by using open-ended questions such as "how does this look to you"; "what do you make of the fact that." First, TD's total number of weekly drinks she consumed during a typical week and during a heavy drinking week was reviewed. TD expressed surprise at the number of drinks she reported and stated that consuming 33 drinks per week was "out of my ideal health plan." Furthermore, she was surprised that, relative to national norms of alcohol consumption among college students, she was in the 98.4th percentile for a typical drinking week and was in the 99.6th percentile for a heavy drinking week. These numbers were especially shocking to TD because she indicated that her friends drank more than she did. The clinician used this opportunity to discuss perceived norms and to review that individuals who drink heavily often have the inaccurate perception that their alcohol use corresponds to the norm because they tend to spend time with peers with similar patterns of drinking behaviors. Subsequently, the definition of heavy drinking was presented and the frequency of heavy drinking episodes during her typical drinking week and heavy drinking week were reviewed. Afterward, the BAC level corresponding to TD's alcohol consumption was computed and she reflected on the sizable difference between the BAC limit under which is legal to drive: 0.08, and her peak BAC during a heavy drinking episode (0.23). TD was particularly interested to examine the time needed by one's body to metabolize ethanol

because it emerged that the day after a heavy drinking episode, she would continue to have alcohol in her body until early afternoon. When alcohol-related negative consequences were reviewed, TD acknowledged that heavy alcohol use would affect negatively her sleep, eating and smoking habits, motivation, ability to experience pleasure, and spiritual life. Moreover, the clinician and TD identified an association between her heavy alcohol consumption and the depressive symptoms she reported experiencing frequently such as anhedonia, low motivation, and difficulty sleeping. Discovering a connection between specific heavy drinking episodes and TD's subsequent poor athletic performance led her to become concerned of the effect of alcohol on her physical endurance. The sum of these strategies including the PFF, the review of college students drinking norms, and the discussion of TD's alcohol-related negative consequences facilitated TD's movement to a greater readiness to change her drinking behavior. At the end of the first session, TD committed to consuming no more than 3 drinks per drinking episode, to avoid heavy drinking, and no more than 15 drinks per week because she did not want to drink more than 5 days a week. Furthermore, she agreed to record her alcohol use until the following meeting on a monitoring card. Several strategies to reduce drinking were also presented to provide assistance in accomplishing her alcohol use goal (PFF, Appendix).

TD returned 1 week later for Session 2. She and the clinician reviewed her self-reported alcohol use since the previous meeting, the conditions in which she drank heavily prior to attending the program, and the strategies that would help her comply with her alcohol use goal. She stated that heavy drinking episodes were associated with starting to drink early in the day, "to relax after a hard day," with going out to several venues and drinking at each venue, and with drinking several shots of hard liquor in close time proximity. TD reflected further on her drinking goals and she reiterated that she wanted to consume no more than 15 drinks per week. In an effort to meet her goal regarding reducing alcohol use, TD committed to implement the four following strategies: (a) refrain from drinking prior to 6 p.m., (b) keep a mental count of the number of drinks consumed if she were to attend several venues, (c) after consuming a shot of hard liquor wait at least 30 min before drinking again, (d) and refrain from staying out until early in the morning. Moreover, strategies were explored, including refusal skills, on how to cope with situations where friends would offer her alcohol. She noted that she was planning to always have a drink in her hands, which she would consume slowly, to be able to decline offers more easily.

The subsequent five sessions focused on addressing depressive symptoms by using CBT-D strategies. MI techniques continue to be used throughout CBT-D, especially when TD experienced ambivalence regarding changing behaviors or thoughts that were contributing to her depression. Symptoms that TD would experience during depressive episodes were reviewed, and she reported mostly physical complaints such as difficulty with sleep, appetite, concentration, low energy, and low motivation. She added that when depressed, she would be less productive and unable to enjoy things she usually would enjoy. She indicated that although, currently, she was experiencing depressive symptoms, she was still able to attend to her main responsibilities. Sessions 3, 4, and 5 reviewed cognitive restructuring techniques with particular focus on identifying and challenging thoughts preventing the attainment of personal goals. Furthermore, the therapist and TD specifically explored whether the level of alcohol use reported at baseline was an obstacle toward these goals. TD

identified, as goals for therapy, wanting to decrease her procrastination as well as improving her eating and sleeping routine.

The first area that was addressed was TD's tendency to procrastinate. TD reported that she expected herself to be involved and perform equally well in all of the following areas: fulltime job, school, church-related responsibilities, running, relationship with family and friends, and house chores. She noted that this expectation would lead to an overly busy schedule, and consequently to low energy, to feelings of being overwhelmed and hopeless, to anhedonia, and ultimately to avoidance and procrastination. Her expectations were caused by several factors. First, because of her health history, TD anticipated becoming depressed again ("I will crash"), leading to the cognitive distortion "I should be prepared by getting ahead." To be prepared in the case of a relapse of depressive symptoms, TD developed unrealistic goals that she was unable to achieve. Nevertheless, she reported thinking "I should push myself to meet these goals," leading to feeling overwhelmed and with low motivation. The focus on feeling overwhelmed provided an opportunity to link her alcohol use to her depression. Specifically, TD stated that she would cope with feeling overwhelmed with consuming alcohol because "alcohol will help me relax." However, the feedback provided about the biphasic response to alcohol during the BMI clarified that using alcohol would lead to even lower motivation and increased lethargy.

Another area of clinical focus was the patient's reported fear to disappoint others and the moderate distress she would experience if others had a negative view of her. These fears led her to push herself to perform highly across multiple areas to avoid others' negative judgment. She recognized that her belief "I cannot disappoint anyone" corresponded to an *all or nothing thinking* cognitive distortion. Furthermore, she noted *should* statements such as "I should make everyone around me happy." She added that she would also engage in *mental filter* cognitive distortions such as dwelling on negative comments while ignoring positive ones. Upon examining TD's cognitive distortions, she acknowledged that her expectations were unrealistic. Thus, the clinician—using Socratic questioning, functional analysis, and by examining the accuracy of TD's unhelpful thinking—identified and pointed out to her these associations including the one between being overcommitted and feeling overwhelmed and the one between feeling overwhelmed and avoidance and procrastination. Thus, she identified the areas she considered more important and she organized her time accordingly. Moreover, in the context of cognitive restructuring, she acknowledged that there was no absolute certainty that she would have a full major depressive episode again and that it was unnecessary to engage in all her activities. Lastly, she recognized that it was not possible to make everyone around her happy. The reorganization of her time and priorities lowered her feeling of being overwhelmed, her hopelessness, and her procrastination and led to an improvement of her sleep schedule (because she allotted more time for it), self-efficacy motivation, and ultimately of her productivity. These exercises led to a decrease in hopelessness. Furthermore, she recognized that consuming alcohol to cope with low motivation and feeling overwhelmed was unhelpful. Thus, she confirmed her commitment to consume no more than 15 drinks per week.

On examining sources of TD's sleeping difficulties, it emerged that she would often go to sleep late because of going out with friends. She reported thinking "If I say no to my friends

when they ask me out they will stop calling me and they will not like me anymore." The accuracy of these thoughts were examined and alternative more helpful thoughts were identified such as "In order to both maintain my friendships, and sleep sufficiently, I can continue to go out with my friends but less frequently and when I go out I can come home at 12 rather than 2 a.m." Moreover, sleep hygiene guidelines were reviewed, including information regarding the negative effect of alcohol consumption on sleep quality. This is an example where MI techniques were used to highlight the discrepancy between TD's goal to improve her sleep and her desire to drink. Sleep difficulties had also been discussed during Session 1 when alcohol related negative consequences were reviewed. Lastly, thoughts that prevented TD from having a regular routine that would facilitate better sleep were examined.

Session 6 included a review of the importance of engaging in pleasant activities to prevent negative mood and anxiety management techniques. Given that TD was already involved in numerous activities, the protocol focused on strategies to prioritize them rather than on identifying new ones. With regard to anxiety management, TD practiced, in session, diaphragmatic breathing and progressive muscle relaxation under the guidance of the clinician.

During the last session, the clinician and TD reviewed her progress toward reaching her goals and strategies to maintain her improvement. She indicated that she intended to maintain a manageable routine and to continue to consume no more than 15 drinks per week. Moreover, TD noted that during the treatment program, she found particularly helpful learning about the role alcohol use had in her life, learning which categories of cognitive distortions would describe her unhelpful thoughts, and practicing relaxation techniques. As a strategy to prevent depression relapse, the clinician and TD explored situations as well as unhelpful thoughts that may trigger future depressive symptoms and CBT-D techniques she could employ in those contexts. TD indicated that difficulty with time management, with finances, and with her family could lead to feelings of distress. With regard to time management, she planned to remind herself to prioritize her responsibilities. Furthermore, she planned to ask her friends about their savings to challenge her belief that she *should* save more money. She would cope with the unhelpful thought that she *should* make her family happy by thinking "I can improve my family situation but it is not my responsibility to fix it." When strategies were explored on how to integrate the information learned during the protocol in her life, TD stated that she was planning to review the handouts when in distress and to use the relaxation techniques, particularly diaphragmatic breathing, on a regular basis. With regard to alcohol use, she indicated that she intended to maintain her lower alcohol consumption by continuing to use the strategies identified during the protocol such as avoid drinking prior to 6 p.m., keep a mental count of the number of drinks consumed, after consuming a shot of hard liquor wait at least 30 min before drinking again, refrain from staying out until early in the morning, and go out less often.

Results

Postintervention Change

As can be seen in Figure 1, TD experienced significant reductions in her depressive symptoms. Specifically, TD experienced a 65% reduction of depressive symptoms at the first follow-up, treatment gains that were maintained at the second follow-up.

With regard to alcohol consumption, Figure 1 depicts the scores on measures at baseline and both follow-up assessment time points. TD reported consuming, on average, at the 8 weeks follow-up 9.00 drinks weekly and at the 16 weeks follow-up 9.20 drinks per week. This was a considerable decrease from baseline when she reported consuming 20.50 drinks during a typical week and 33.00 drinks on a heavy drinking week. Of note is the fact that she reported drinking less than the amount she committed to consume during the BMI protocol (15.00 drinks per week). Furthermore, she reported drinking on average 1.80 drinks per drinking episode at the first follow-up and on average 2.24 drinks per drinking episode at the second follow-up. This represents more than a 50% reduction from her reported baseline alcohol use: TD reported consuming 4.10 drinks per drinking episode during a typical week and often consuming as much as 6.50 drinks per drinking episode during a heavy drinking week.

TD's consequences from alcohol use also decreased. For example, at the first follow-up she no longer reported that alcohol had negatively affected her sleep, her finances, and her motivation and that she had felt ashamed because of her alcohol use. In addition, TD also displayed changes in her readiness to change alcohol use over the course of the treatment and follow-ups. Specifically, TD's readiness to decrease alcohol use moved from the contemplation stage at baseline to the action stage at the first follow-up, and remained in the action stage at the second follow-up.

Discussion

This case study demonstrates the use of a BMI + CBT-D treatment protocol tailored for treating college students with heavy alcohol use and depressive symptoms. Our client presented to treatment exhibiting both heavy drinking and depression. TD attended all the sessions and did not express resistance to review her drinking behavior. Furthermore, she participated actively during all the sessions, promptly identified goals for reduction of alcohol use as well as goals for treatment for depression, and she completed 80% of the homework assignments. At the end of treatment, TD reported consuming less alcohol than at baseline and drinking less per drinking episode. The reduction in alcohol consumption persisted at the second follow-up. Similarly, her depressive symptoms severity decreased in the context of the treatment protocol and the improvement persisted at the second follow-up assessment. Specifically, she scored in the normal range according to the BDI at both follow-ups (Figure 1). Although TD reported consuming more than the 7 weekly standard drinks recommended by NIAAA for women (NIAAA, 2004), she reported on average adhering to NIAAAs recommendation to drink less than 3 standard drinks per drinking episode, thus reducing her binge drinking and her risk for negative consequences. Because alcohol related negative consequences are significantly greater among college students with frequent binge drinking (Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994), it is

likely that TD's reduction of binge drinking episodes are associated with the reduction in her reported alcohol-related problems.

In our work combining BMI and CBT-D for depression, a few key issues emerged. First, it is critical to tailor available interventions to the specific needs of this population. Students tend to seek help for depressive symptoms but are less interested in treating their binge drinking, which they mostly do not consider problematic (Blanco et al., 2008; Eisenberg, Golberstein, & Gollus, 2007). Given the high prevalence of binge drinking among depressed students, treating this hazardous behavior among those seeking help for their depressive symptoms may be an ideal strategy to decrease this high-risk behavior. Treatment protocols combining MI + CBT-D have been developed for the treatment of adults and adolescents with dual diagnoses and preliminary findings support their effectiveness (Baker et al, 2010; Hides et al, 2010). That said, although these protocols include MI strategies, they usually do not include BMI techniques that have been found critical for binge-drinking college students, such as norms clarification and providing personalized feedback (Lewis & Neighbors, 2006; Walters, Bennett, & Miller, 2000; Walters, Vader, Harris, Field, & Jouriles, 2009). Moreover, the protocols available may not generalize to college students who are at a difficult developmental stage. Thus, our protocol represents a combination of current evidence-based treatments, and findings suggest the feasibility of an intervention combining BMI and CBT-D for binge-drinking college students with depressive symptoms.

Second, the seven-session protocol appears to be an ideal length for this population. Although most CBT-D protocols available in the existing body of literature are at least 12 weeks long, several studies have shown that individuals with mild to moderate depressive symptoms improve with shorter interventions (Peden et al., 2001; Seligman et al, 2007; Shapiro et al, 1994). During the summer or winter breaks, young adults often leave their college town for extended time. Thus, treatment programs for this population should take into consideration possible disruptions. In this context, treatment programs emphasizing coping skills may be particularly helpful because they may provide tools for dealing with distress when students are away for breaks and unable to receive support from a clinician. Designing each therapy session as a single standing alone teaching unit, providing specific skills, may address the problem of interruption of therapy or early termination. For example, sessions may focus on teaching specific techniques such as cognitive restructuring, deep breathing, behavioral activations, and on addressing specific problems such as procrastination or sleep difficulties. In this scenario, students would benefit from each therapy meeting regardless of the total number of sessions attended. Lastly, homework assignments and handouts should be strongly emphasized as an aid to remember topics reviewed during sessions in case students do not have the opportunity to return. These strategies would provide students with resources when they do not have access to counseling.

Third, TD's course of treatment suggests several potential mechanisms of behavior change (MOBC). MOBC are defined as processes or events that lead to therapeutic improvement (Kazdin, 2007; Kazdin & Nock, 2003). Identifying MOBC in the context of an intervention may have implications for human interactions outside the therapeutic context, thus improving interventions for at-risk college students and may also inform the design and

implementation of BMIs for various health behaviors in other populations (Burke et al., 2003; Hettema, Steele, & Miller, 2005). Drinking behavior is described by the SLT model (Bandura, 1986) as a desire to reduce aversive emotional states and young adults may engage in binge drinking to decrease negative affect and may not reduce alcohol use unless provided with skills to cope with negative affect. Specifically, among college students, higher negative affect is associated with greater alcohol consumption (Geisner et al., 2004; Pedrelli et al., 2011; Weitzman et al., 2004) and drinking to cope is a commonly reported drinking motive in this population (Park & Levenson, 2002). Alcohol consumption to regulate affect has been hypothesized by other models. For example, Marlatt and Witkiewitz's (2005) model of relapse posits that relapse is more likely to occur when at-risk individuals are in high-risk situations and lack the skills to cope with these situations. Thus, reduction of TD's depressive symptoms may have contributed to the reduction of her alcohol use. Moreover, given that alcohol is a depressant, the decrease of TD's alcohol intake may have contributed to the amelioration of her depressive symptoms, which were mostly of a physical nature. It appears that there was a bidirectional relationship with regard to improvement of depressive symptoms and alcohol such that the reduction of alcohol intake led to increase motivation and energy and decreased distress that enabled TD to continue to maintain lower alcohol intake. Similarly, emotion dysregulation has been implicated as a risk factor for alcohol use (Cooper, Frone, Russell, & Mudar, 1995), and TD's improvement could have also been because during the BMI sessions, TD learned the association between consuming alcohol and feeling "stressed" and she opted to learn skills to regulate her mood alternative to consuming alcohol. For example, when "stressed" rather than consuming alcohol to cope with it, TD may have used techniques learned during the treatment protocol including relaxation strategies or may have challenged her inaccurate thoughts or may have used better self-care strategies including better sleep hygiene. Thus, the motivation to regulate her mood with skills rather than with alcohol that was fostered in the context of the BMI sessions together with the improved ability to regulate her mood with CBT skills may have mediated TD's outcome.

Another mediator of behavior change could have been TD's improved sleep. Given that poor quality sleep among college students is associated with lower mood and higher alcohol use (Lund, Reider, Whiting, & Prichard, 2010), there may have been a synergic effect where the intervention's focus on sleep hygiene together with the reduction of alcohol use may have led to better sleep, resulting in better mood and alleviation of depression. Notably, at the screen on Item 16 of BDI that inquires about sleep, TD endorsed a 3 corresponding to "I wake up several hours earlier than I used to and cannot get back to sleep." However, at both follow-up assessments, TD endorsed a 1 on Item 16 of the BDI that correspond to "I do not sleep as well as I used to." Results point to treating heavy alcohol use and binge drinking concurrently.

The transtheoretical model (TTM) of change developed by Prochaska et al. (1992), postulates that behavior change follows a series of stages (precontemplation, contemplation, action, and maintenance) and that discussing changing a behavior before the individual is ready to change it may encounter resistance (Prochaska & Velicer, 1997). Given that most students with heavy drinking are in precontemplative stage with regard to changing their alcohol use (Smith & Tran, 2007; Vik, Carello, Tate, & Field, 2000), and that MI techniques

aim at matching patients' readiness to change, this approach may be an ideal fit for binge-drinking young adults seeking treatment for depression who may not perceive their alcohol use as problematic (W. R. Miller & Rollnick, 2002). Consistent with MI objective to facilitate patients' move along the continuum of readiness toward behavior change, we observed that at the end of treatment, TD had progressed from the contemplation stage to the action stage with regard to reducing her alcohol use. TD's move to action stage is consistent with previous findings that MI effectiveness is mediated by increase in readiness to change (Apodaca & Longabaugh, 2009). Decrease in TD's alcohol consumption may also be explained by the presence of change talk throughout the BMI sessions and of a commitment to a well-defined plan to decrease her alcohol intake. Previous findings have shown that presence of change talk predicts outcome (Apodaca & Longabaugh, 2009; Moyers et al, 2007). MI techniques aim at strengthening patients' self-efficacy and responsibility for and commitment to change (Rollnick & Miller, 1995). Self-efficacy has been shown to predict decrease drinking among substance dependent adults with comorbid depression (Glasner et al., 2007; Ramsey, Brown, Stuart, Burgess, & Miller, 2002) and may also predict response to treatment among college students with binge drinking and depressive symptoms. Future research may examine whether these mechanisms of action mediate response to BMI + CBT-D programs for depressed and heavy drinking college students.

Although impulsivity is often implicated with regard to alcohol use in college students (Baer, 2002), limited information is available with regard to its role in TD's alcohol consumption and its reductions. TD learned how to address her drive to consume alcohol in the context of BMI. For example, one of the strategies explored to decrease drinking included delaying alcohol use by drinking water while consuming alcohol and waiting 30 min after having consumed a shot of liquor prior to consuming another one. This strategy may correspond to urge surfing and may have enabled her to develop the ability to better control her impulse to consume alcohol.

We acknowledge that this case study, although promising, is of limited generalizability to other college students. TD was a senior in school, lived with a roommate, worked full-time, and she reported smoking marijuana. TD's marijuana use was not targeted because the primary purpose of the original study was to examine a treatment protocol for binge drinking and depressive symptoms and the manual was developed to focus on these two problems. Moreover, TD's alcohol use and depressive symptoms were monitored via self-report methods. Although there is no indication that college students systematically underreport their drinking (Borsari & Muellerleile, 2009), it is possible that she may have reported an improvement in these areas to please the clinician. In addition, TD's improvement could have been caused by factors other than the MI + CBT-D intervention including the passage of time, assessment, or maturation effects. The presentation of one case study naturally limits greatly the inferences on the effectiveness of the intervention; however, the primary aim of this manuscript was to illustrate the application of a treatment protocol combining BMI + CBT-D and not to support its effectiveness. In the future, randomized controlled studies on BMI + CBT-D for depressive symptoms and binge drinking in college students will provide information regarding its effectiveness.

TD had mild depressive symptoms of depression (BDI = 16) when she started treatment, which may have facilitated her high engagement and compliance with treatment goals and homework. Patients with more severe depressive symptoms may have more difficulties with compliance and may not experience the improvement experienced by TD. When patients present without having completed the homework, the clinician may conduct a functional analysis to identify obstacles that prevented compliance at a behavioral (he/she forgot to complete it; lost it) and cognitive level ("this is not helpful"; "I do not have time"). Moreover, one of the advantages of having a therapist skilled in MI is that the ambivalence regarding homework completion can be explored and resolved. In other words, homework compliance becomes the target behavior of MI, and as a result the therapist collaborates with the patient to explore barriers for completion as well as a menu of options to increase compliance. Ideally, the patient creates his/her own homework assignments to make their completion and outcomes as relevant and intrinsic as possible.

Admittedly, patients with severe depressive symptoms may have more difficulties than TD with changing unhelpful behaviors that may lead to less improvement than that observed in TD. For example, severe low energy or anhedonia may be obstacles to engage in pleasant and activities and severe low self-esteem and cognitive distortions may prevent improvement of depressed mood. Thus, with depressed patients, more time may be needed to be devoted on specific goals and on specific unhelpful thoughts slowing the process of improvement. Therefore, MI can be used in this context to increase motivation to implement CBT skills including behavioral activation strategies and cognitive restructuring strategies to develop more accurate thinking that patients may use on their own outside the therapy context. Although more severe patients may implement fewer changes in a short time, they may still learn the skills that they may generalize in other areas upon the completion of the therapy. Thus, this approach may be feasible for severe patients because it has been shown that in some cases, more severe patients benefit more from CBT (Button, Wiles, Lewis, Peters, & Kessler, 2012; Spek, Nyklícek, Cuijpers, & Pop, 2008). Future RCT studies may examine whether the BMI + CBT-D protocol is effective for patients with more severe symptoms of depression. Depressive symptoms in the mild range are still quite common among college students, for example 12% of college students reports mild depression and 41.4% of these students experience enough distress to seek treatment (Eisenberg & Chung, 2012). As such, this protocol could be helpful for many students seeking help who are mildly depressed.

In summary, we developed a protocol combining BMI and CBT-D for college students with binge drinking and depressive symptoms and introduced its application on one patient who experienced improvement in both areas of symptoms. Randomized controlled studies ought to be conducted to investigate the effectiveness of this treatment protocol.

Appendix: Personalized feedback for TD

Drinking Patterns

According to the information you provided at baseline, in the past month, during a *typical week* the number of occasions you drank was **5 times a week**. The average amount you

drank on each occasion was **4.1 drinks** and during a typical week, you reported that you consumed a total of drinks per week ranging from 11.0 to 30.0 (Median = 20.5). During *the heaviest drinking week*, in the past month, the number of occasions you drank was **6 times a week**. The average amount you drank on each occasion was **6.6 drinks** and during the heaviest drinking week, you reported that you consumed a total of **33.0** drinks.

Comparison to National Average

Comparing your typical amount of drinks on a *typical week* to other college students across the country, your percentile rank was **>98.4**. This percentile represents the percentage of students of your gender who drink as much or less than you do; in your case, **98.4%** of the students across the country drink as much or less than you do, and it also means that **1.6%** drink more than you do.

Comparing your amount of drinks *on the heaviest drinking week* to other college students across the country, your percentile rank was **>99.6%**. This percentile represents the percentage of students of your gender who drink as much or less than you do; in your case, **99.6%** of the students across the country drink as much or less than you do, and it also means that **0.4%** drink more than you do.

Heavy Drinking Episodes

Heavy drinking episodes are defined as having 4 or more drinks on one occasion for women. At baseline, you reported on a typical week, last month **3** heavy drinking episodes and during your heaviest drinking week **4** heavy drinking episodes.

Blood Alcohol Concentration

At baseline, on a *typical occasion* when you drank, your blood alcohol concentration (BAC) was from **0.058** to **0.121**. In the past month, on the *heaviest drinking* occasion, your peak BAC was **0.232**. For sake of comparison, the legal limit for driving in Massachusetts is **0.08**.

Risks Associated With Drinking

Alcohol Related Consequences

From the information you provided during the baseline assessment, you reported experiencing the following consequences in the previous month as a result of your use of alcohol:

- After drinking, I have had trouble with sleeping, staying asleep, or nightmares.
- I have been unhappy because of my drinking.
- Because of my drinking I have not eaten properly.
- I have felt guilty or ashamed because of my drinking.
- I have had money problems because of my drinking.
- I have smoked more when I am drinking.

- I have lost interests in activities and hobbies because of my drinking.

- My spiritual or moral life has been harmed by my drinking.

- My drinking has gotten in the way of my growth as a person.

- I have spent too much or lost a lot of money because of my drinking.

Tips to Reduce Drinking

If you are interested in reducing your alcohol use, and your risk of experiencing alcohol-related problems, here are some things you can try:

- Don't bring credit cards or ATM cards out with you when you go out to bars or clubs.

- Think about what to expect when I go out and what my limit is for how much I want to drink.

- Have a plan in place ahead of time for how you'll get home if you're out drinking.

Avoid:	*Do*:
• Drinking games	• Drink slowly and using small sips
• Punch or other bowl drinks, because you don't know how strong they are	• Keep track of the number of drinks you have had
• Drinking shots or other hard liquor	• Drink water or nonalcoholic drinks after an alcoholic drink
• Mixing different types of alcohol together (e.g., shots and beer)	• Eat before going out
• Leaving your drink untended	• Pace your drinking—set an amount of time for each drink
• Drinking and driving	
• Getting in the car with someone that has been drinking at all	

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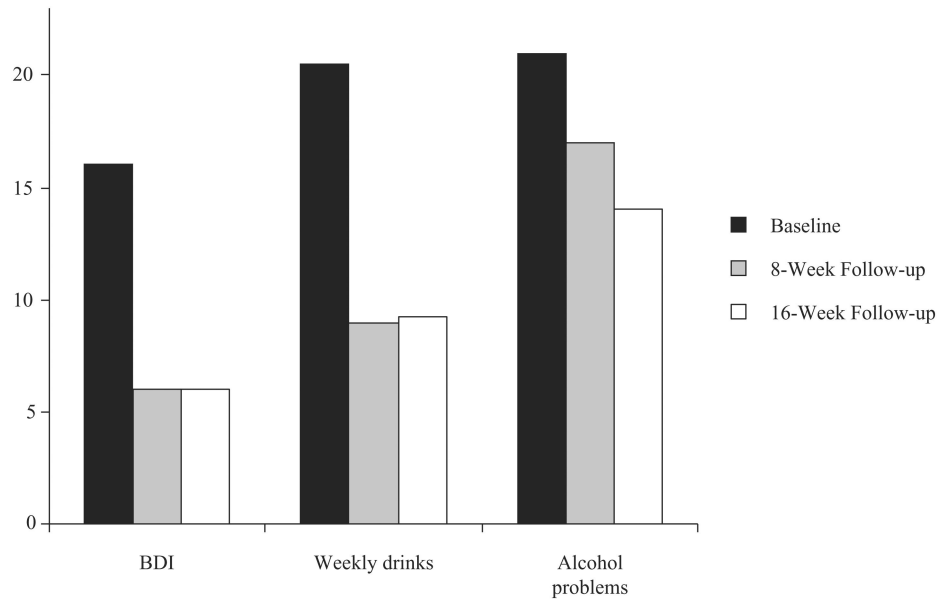
Figure 1.
Change in depression, risky drinking, and alcohol problems from screening to follow-ups 1 and 2.