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Behavioral Couple Therapy for Gay and Lesbian Couples with Alcohol Use Disorders

William Fals-Stewart, Ph.D.^{a,*}, Timothy J. O'Farrell, Ph.D.^b, and Wendy K.K. Lam, Ph.D.^a

^a School of Nursing, University of Rochester, 601 Elmwood Avenue, Rochester, New York 14642 USA

^b Harvard Medical School Department of Psychiatry, VA Boston Healthcare System, 940 Belmont Street (VAMC 116B1), Brockton, Massachusetts, 02301 USA

Abstract

Gay ($N = 52$) and lesbian ($N = 48$) alcohol use disorder (AUD) patients and their nonsubstance-abusing same-sex relationship partners were randomly assigned to equally intensive interventions consisting of: (a) behavioral couples therapy plus individual-based treatment (BCT); or (b) individual-based treatment only (IBT). This study reports two separate trials, one with gay male participants and one with lesbian female participants. For both gay and lesbian AUD patients, those who received BCT had a significantly lower percentage of days of heavy drinking during the year after treatment than patients who received IBT only. In addition, both gay and lesbian couples who received BCT reported higher levels of relationship adjustment at the end of treatment and in the year after treatment than those who received IBT only. Thus, the response of gay and lesbian couples with an alcoholic member to BCT was consistent with what has been observed with heterosexual couples.

Keywords

Gay; Lesbian; Behavioral Couple Therapy; Alcohol; Randomized Clinical Trial

1. INTRODUCTION

Although many studies have found that alcohol use disorders often have a profound corrosive effect on marriage and intimate partnerships (for a review, see Fals-Stewart, Lam, & Kelley, in press), these investigations have focused on heterosexual couples. Substance use problems are fairly common among gay and lesbian couples; recent findings have documented higher proportions of individuals reporting same-sex partners in the past year experience higher rates of substance use problems that continue into later ages compared with heterosexual counterparts (Cochran, Ackerman, Mays, & Ross, 2004). During the last 2 decades, a number of different psychosocial interventions for AUDs have been developed and have been shown to be effective (for a review, see Miller & Wilbourne, 2002). However, there is a widely recognized need for the continued empirical evaluation of these treatments with broader, more

*Corresponding author: Tel.: 1-585-276-3486; fax: 1-585-273-1270, E-mail address: william_fals-stewart@urmc.rochester.edu.

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representative AUD patient populations that have not been traditionally well-represented in the efficacy trials to date (Cochran & Cauce, 2006).

Two groups that have been under-represented in efficacy trials for the treatment of substance abuse are gay and lesbian patients with AUDs. Health services, generally, for gay and lesbian populations have been challenged by client dissatisfaction related to perceived insensitivity of health care professionals, resulting in lack of disclosure of important health information, as well as delayed treatment-seeking by homosexual patients (Schatz & O'Hanlan, 1994; White & Dull, 1998). Although some investigators have called for research on interventions for gay and lesbian patients with alcohol and other substance use disorders (e.g., Shoptow & Frosch, 2000), rigorous clinical trials in the empirical literature are scarce. Two available studies that specifically target gay males entering individual-based treatment at gay-identified agencies found significant posttreatment reductions in substance abuse (Driscoll, 1982) and increases in abstinence (Paul, Barrett, Crosby, & Stall, 1996). However, only Driscoll (1982) found follow up effects at 3-months, and neither study used a comparison group. A notable recent exception was the study by Morgenstern and colleagues (2007) that examined motivational interviewing (MI) and coping skills cognitive behavioral therapy (CTB) among gay men with AUD. Participants ($n = 89$) were randomly assigned to either four sessions of MI or 12 sessions of MI plus CBT. MI yielded better drinking outcomes during the 12-week treatment period than MI plus CBT, but posttreatment outcomes were not significantly different. These investigators argued for more rigorous clinical research on the application of these and other empirically supported interventions for AUDs with gay and lesbian patients with AUDs.

In discussion of AUDs among gay and lesbian populations, several authors have highlighted interpersonal and relationship issues as risk factors for the evolution and maintenance of problem drinking. These include, but are not limited to, homophobia and heterosexism, intimate partner violence, dyadic distress, and partner substance use (e.g., Hughes & Eliason, 2002; National Institute on Alcohol Abuse and Alcoholism, 2004; Weinberg, 1994). Recent evidence suggests that gay and lesbian couples may experience added stress associated with their sexual minority status that can negatively impact relationship quality (Otis, Rostosky, Riggle, & Hamrin, 2006). Consequently, clinicians and researchers have called for health service strategies for gay and lesbian patients that address relationship status and the role of partners and other significant family members during treatment (Bonvicini & Perlin, 2003). Thus, it would seem that an empirically supported treatment that emphasizes relationship issues might hold particular promise for gay and lesbian AUDs.

One such treatment is Behavioral Couples Therapy (BCT; O'Farrell & Fals-Stewart, 2006), which treats the alcoholic or drug-abusing patient together with a spouse or live-in partner to build support for abstinence and to improve relationship functioning. Findings from several investigations conducted during the last 3 decades indicate that participation in BCT is associated with robust positive outcomes for heterosexual couples in which a partner has a psychoactive substance use disorder. More specifically, the results of multiple randomized clinical trials have demonstrated consistently that, among substance-abusing patients and their partners, those who received BCT reported significantly (a) fewer days of alcohol and drug use; (b) longer periods of abstinence; (c) fewer arrests; (d) fewer alcohol- or drug-related hospitalizations; (e) lower levels of intimate partner violence; and (f) higher relationship satisfaction at posttreatment and through 12-month follow-up than substance-abusing patients receiving treatment-as-usual or those receiving a partner-involved attention control intervention (for a review, see Fals-Stewart, O'Farrell, Birchler, Cordova, & Kelley, 2005). A recent meta-analysis of 12 controlled studies showed a medium effect size favoring BCT over individual treatment (Powers, Vedel, & Emmelkamp, 2008). Despite the substantial evidence base for BCT, controlled studies of BCT with gay and lesbian AUD patients have not appeared in the literature.

The purpose of the present study was to test the efficacy of BCT with gay male and lesbian female AUD patients and their nonsubstance-abusing same-sex relationship partners in a randomized, controlled trial (RCT). Outcomes were compared for behavioral couples therapy (BCT) versus individual-based treatment (IBT) from before to after treatment and over a 12-month posttreatment follow-up period. Based on findings with heterosexual couples, it was predicted that BCT would produce more abstinent days and better relationship adjustment than IBT. This study reports findings from two separate trials (each with a modest sample size), one trial conducted with gay male participants and one conducted with lesbian female participants.

2. Method

2.1. Participants

Participants were same-sex couples in which one member of the couple entered outpatient treatment for AUD at a health center serving the gay and lesbian community. AUD patients were eligible for the study if they (a) met current alcohol abuse or dependence criteria according to the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994); (b) had alcohol as their primary drug of abuse¹; (c) were living with a same-sex romantic partner in a stable relationship for at least a year; (d) were at least 18 years of age; (e) agreed to refrain from drinking alcohol or using other psychoactive substances during treatment; and (f) agreed to refrain from seeking additional substance abuse treatment except self-help meetings (e.g., Alcoholics Anonymous) for the duration of treatment, unless otherwise recommended by their primary individual counselor. Patients entering the treatment program were not eligible if their partner met *DSM-IV* criteria for any current psychoactive substance use disorder (except nicotine) or if either the patient entering the program or his or her partner displayed evidence of schizophrenia, delusional (paranoid) disorder, or other psychotic disorders (based on the results of a brief initial screening interview). All eligible couples were given an overview of the project and signed a consent form indicating their understanding of the study and their willingness to participate.

Based on a very brief initial screening questionnaire, self-identified gay and lesbian patients entering the treatment program for treatment of an AUD and reported they living with a same-sex romantic partner in a stable relationship for at least a year were asked, along with their intimate male partners, to participate in an extensive interview to determine study eligibility. Sixty-nine lesbian patients were identified using information from the initial screening questionnaire; of these 7 (10%) patients or their partners declined to participate. Of the remaining lesbian couples who agreed to be interviewed ($n = 62$), 14 (23%) were excluded because patients had partners who met abuse or dependence criteria on alcohol or an illicit drug ($n = 7$, 11%) or the patients were found, upon collection of additional information, to have a substance other than alcohol as the primary drug of abuse ($n = 7$, 11%). Thus, 48 lesbian couples were included in the final sample.

Seventy-four gay patients were approach based on the initial screening; of these, 13 (18%) patients or their partners declined to participate. Of the remaining gay couples who agreed to be interviewed ($n = 61$), 9 (15%) were excluded because patients had partners who met abuse or dependence criteria on alcohol or an illicit drug ($n = 5$, 8%) or the patients were found, upon collection of additional information, to have a substance other than alcohol as the primary drug of abuse ($n = 4$, 7%). Thus, 52 gay couples were included in the final sample. The sociodemographic and background characteristics of participants from the gay and lesbian couples are shown in Table 1.

¹We used a decision tree algorithm to determine primary substance of abuse, which combines diagnostic and substance use frequency information. The method has strong psychometric properties, including temporal stability and convergent and discriminant validity (Fals-Stewart, Stappenbeck, & Hoebbel, 2004).

2.2. Measures

Substance use—The Timeline Followback Interview (TLFB; Sobell & Sobell, 1996) uses a calendar and other memory aids to determine an individual's drinking and other drug use over a specified time period. The substance use index derived from the TLFB used in the present investigation was *percent days of heavy drinking (PDHD)*. PDHD was operationally defined as the percentage of days in the measurement interval that the alcoholic patient engaged in heavy drinking (i.e., six or more standard drinks for men and four or more standard drinks for women). PDHD has been recommended as the best measure of outcome success in alcohol treatment studies (Sobell, Sobell, Connors, & Agrawal, 2003). The TLFB has been shown to have excellent reliability and validity for collection of alcohol and other substance use frequency information (Fals-Stewart, O'Farrell, Freitas, McFarlin, & Rutigliano, 2000)².

Each partner was interviewed separately with substance use modules of the *Structured Clinical Interview for DSM-IV (SCID)*; First, Spitzer, Gibbon, & Williams, 1995), administered by one of two trained master's-level interviewers. Interrater reliability was assessed using a paired-rater design. Audio taped interviews of 30 randomly selected patients entering this study were independently coded by both primary interviewers and by the first author. Agreement among the evaluators was excellent, with kappas ranging from .0.9 to 1.0 for the substance use disorders.

Relationship adjustment—The *Dyadic Adjustment Scale (DAS)*; Spanier, 1976) is the most widely used measure of global relationship satisfaction in couples therapy research. Scores can range from 0 to 151, with higher scores indicating higher levels of adjustment. Previous studies have revealed the DAS to have high reliability, with alpha coefficients typically exceeding .90 and stability coefficients exceeding .85; it also reliably discriminates between distressed and nondistressed couples.

The *Client Satisfaction Questionnaire (CSQ-8)*; Larsen, Attkisson, Hargreaves, & Nguyen, 1979) is an 8-item measure designed to assess client satisfaction with services. Scores range from 0 to 32, with higher scores indicating greater satisfaction. *Number of sessions attended* was culled from clinical charts, supervision records, and accounting ledgers.

2.3. Procedure

Participants were randomly assigned to BCT or IBT; they were not informed of their assignment until they arrived at the first treatment session. Detailed manuals for each treatment condition were followed as closely as possible, but remained flexible enough to address unique clinical issues and emergencies. Each of the treatment conditions consisted of 32 scheduled 60-minute sessions.

2.4. Description of Treatments

Overview of treatment phases—Each treatment condition consisted of 32 scheduled 60-minute sessions conducted over a 20-week period. During the first 4 weeks, patients in each condition participated in an *orientation phase*, during which background and medical information was collected and individual counseling sessions began (once weekly). During the following 12-week *primary treatment phase*, patients attended 24 twice weekly sessions -- for those in the IBT condition, all 24 primary treatment phase sessions were IBT sessions; while

²We also collected information on percent days abstinent (PDA), which incorporates use of other drugs in addition to alcohol. Because the study was primarily a treatment outcome evaluation of an intervention for drinking problems with patients whose primary drug of abuse was alcohol, PDHD was chosen as the primary substance use frequency measure. However, some of the patients used other drugs as well as alcohol. Results of analyses using PDA versus PDHD were not substantively different for gay or lesbian patients; these are available from William Fals-Stewart upon request.

those in BCT received 12 BCT sessions and 12 IBT sessions. For the final 4 weeks, or the *discharge phase*, all patients were scheduled to meet with their individual therapists for one 60-minute session each week.

Individual-Based Treatment (IBT) condition—For the 32 sessions conducted as part of this condition, the nonsubstance-abusing partner did not participate. Patients attended all 32 sessions by themselves, and the treatment was carried out as individual, 12-step facilitation sessions for the treatment of alcoholism. The individual sessions were drawn from the Individual Drug Counseling manual (IDC; Mercer & Woody, 1999), which was slightly modified to focus on alcohol dependence; as noted in the manual, such modification is acceptable due to the generic nature of the intervention itself. The treatment is founded on the concept that alcoholism is a spiritual and medical disease, consistent with the philosophy espoused by Alcoholics Anonymous (AA). Patients are encouraged not only to achieve and maintain abstinence from alcohol and other psychoactive substances, but also to attend AA self-help support groups.

Behavioral Couples Therapy (BCT) condition—For the 32 sessions conducted as part of this condition, both the patient and partner attended 12 BCT treatment sessions together. In these 12 sessions, the partner was an active participant in the intervention. The BCT sessions had two main components. *Substance-focused interventions* to directly build support for abstinence included (a) a Recovery Contract with a calendar to record AA meetings attended, drug urine screen results, and completion of a daily “trust discussion” in which the patient states an intent to stay abstinent that day and the spouse expresses support for the patient’s efforts; (b) teaching partners to decrease behaviors that may trigger or enable substance use; and (c) helping the couple decrease the patient’s exposure to alcohol and drugs by removing alcohol from the home and avoiding or managing alcohol-related family and social gatherings. *Relationship-focused interventions* sought to increase positive feelings, shared activities, and constructive communication. O’Farrell and Fals-Stewart (2006) give more details on BCT. It is important to note that the content of the BCT sessions were not substantively altered from that used with heterosexual alcoholic and drug-abusing couples. The fundamental adjustment in the approach was the use of self-identified gay and lesbian treatment providers (see below).

In the remaining 20 sessions, patients participated in individual, 12-step facilitation IBT sessions for the treatment of alcoholism, which the nonsubstance-abusing partners did not attend. The individual sessions were drawn from the Individual Drug Counseling manual (IDC; Mercer & Woody, 1999) as described above in the IBT condition.

Treatment Providers—Four self-identified gay male counselors and four self-identified lesbian female counselors provided treatment. Six of the providers (three male and three female) had master’s-level education; the others had bachelor-level education. Male counselors treated male patients and female counselors treated female patients. In addition, the study used a nested design. Four counselors (i.e., two gay male counselors and two lesbian female counselors) provided BCT and did not provide IBT; the other four counselors only provided IBT and not BCT. All had participated in extensive pre-study didactic and experiential training for delivery of all of the interventions. During the course of the treatment phase of the study, counselors received weekly supervision from one of two master’s-level therapist who had extensive supervisory experience with counselors delivering BCT and IBT.

2.5. Baseline and Posttreatment Follow-up Data Collection

Upon entering the study, at the completion of the 20-week treatment period, and every 3 months thereafter for 1 year, patients and their partners were contacted and interviewed by a research assistant. During each of these assessments, participants were interviewed with the TLFB about

the patient's substance use and completed the DAS. Patients provided urine and alcohol breath samples before each assessment. At the posttreatment interview, patients completed the Client Satisfaction Questionnaire.

2.6. Statistical Methods

Comparison of treatment conditions on primary outcomes—Growth curve modeling was the primary analytic tool used for these analyses, which were estimated within a multilevel regression (MLR) framework analyzed in MLwiN 2.0 (Rasbash, Steele, Browne, & Prosser, 2005). In analyses examining temporal changes in couples (e.g., growth in DAS scores), we followed the MLR approach that has been used in other longitudinal studies of couples (e.g., Barnett, Raudenbush, Brennan, Pleck, & Marshall, 1995). The within-subjects model for couple-level data included parameter estimates for (a) initial status on the outcome of interest for the couple during the assessment period, (b) linear rates of change in the outcome for the couple, (c) mean differences between the male and female partners on the outcome, and (d) differences in linear rates of outcome change during the assessment period. Tests of certain hypotheses involved comparisons of participants in the respective treatment conditions that spanned two distinct time periods—the intervention interval and the 12-month posttreatment follow-up interval. To test such hypotheses, piecewise MLR models were used, with the intercept for these models set at the posttreatment assessment point. For the purpose of the analyses, partners within the couple were distinguished by whether or not the partner had an alcohol use disorder.

Scores generated from the DAS were treated as continuous and thus the MLR models used a normal sampling model. However, PDHD was very positively skewed, marked by a high proportion of zeros, which is best modeled assuming a nonnormal distribution of errors. Thus, these data were analyzed using a multilevel negative binomial regression, which is often appropriate with data marked by overdispersion.

As part of follow-up analyses to the piecewise MLR models, we made pairwise comparisons of IBT and BCT at each time point. This was done by changing the identified intercept point to each of the assessment periods (i.e., pretreatment, posttreatment, 3-, 6-, 9-, and 12-month follow-up) in different models and evaluating the BCT-IBT contrast for significance.

Missing data—As with nearly all large-scale longitudinal studies, some data were missing. Missing data resulted from refusals to engage in certain follow-up interviews by participants, missed appointments, and so forth. All participants provided complete data at the pretreatment interview and most gay couples ($n = 40$, 77%) and lesbian couples ($n = 37$, 77%) provided complete data at all assessment points. At the posttreatment and quarterly follow-up interviews, gay couples providing complete data ranged from 94% (posttreatment) to 77% (9-month follow-up). Six gay couples (12%) were lost to contact at some point in the assessment phase (i.e., stopped participating in assessments at a given point in time and were either unable or unwilling to participate in subsequent follow-up interviews). For lesbian couples, complete data ranged from 92% (posttreatment) to 81% (at 6-month follow-up); four of these couples (8%) were lost to follow-up. Data from all participants randomly assigned to conditions were used (i.e., “intention-to-treat” analyses). For gay and lesbian patients, all completed the CSQ-8. Full-information maximum likelihood was used to address data missingness in the multilevel growth models (Goldstein, 2003).

3. Results

3.1. Sample Characteristics

The pretreatment characteristics of participants in the two treatment conditions are presented in Table 1. Random assignment was effective; comparisons of background characteristics of participants assigned to BCT versus IBT for both gay and lesbian couples revealed no significant differences (i.e., all $ps > .25$).

Amount of Therapy Received and Satisfaction with Treatment Services

Provided Treatment dose—For gay couples, the number of sessions attended by the partners with AUDs randomly assigned to BCT ($M = 24.29$, $SD = 3.62$) or IBT ($M = 23.00$, $SD = 3.04$) was not significantly different during the 20-week intervention phase of the investigation, $t(50) = 1.39$, ns . Similarly, for lesbian couples, the number of sessions attended by the partners with AUDs randomly assigned to BCT ($M = 22.66$, $SD = 4.89$) or IBT ($M = 24.93$, $SD = 5.11$) was not significantly different during the 20-week intervention phase of the investigation, $t(46) = 1.57$, ns .

Satisfaction with study treatments—For gay couples, CSQ scores for AUD patients assigned to BCT ($M = 23.74$, $SD = 3.91$) and IBT ($M = 24.00$, $SD = 4.12$) were high and were not significantly different, $t(50) = 0.23$, ns . For lesbian couples, CSQ scores for AUD patients assigned to BCT ($M = 22.86$, $SD = 4.46$) and IBT ($M = 24.00$, $SD = 4.91$) were also high and not significantly different, $t(46) = 0.84$, ns . Thus, the BCT and IBT treatments appeared to be equally satisfying interventions.

3.2. Alcohol Use and Dyadic Adjustment at Pretreatment, Posttreatment, and During 12-Month Follow-Up

PDHD—Observed mean (SD) gay and lesbian patients' PDHD at pretreatment, posttreatment, and the quarterly follow-up assessment interviews are shown at the top of Table 2. The results of the piecewise MLR analyses for PDHD are shown at the top of Table 3.

The results for the gay and lesbian AUD patients were substantively the same. For the AUD patients in the gay couples and the female AUD patients in the lesbian couples, the significant effect for BCT (which was used as the reference category) indicates that PDHD at posttreatment, rate of linear change during treatment, and rate of linear change during 12-month follow-up, were significantly different than zero. There was no difference between patients receiving BCT or IBT in terms of PDHD at posttreatment or linear rate of change in PDHD during treatment. However, during the 12-month follow-up, patients in BCT increased their days of heaving drinking at a significantly slower rate (i.e., the slope for PDHD during the follow-up period was significantly less positive) than patients in IBT.

As shown at the top of Table 2, pairwise comparisons of gay and lesbian patients in BCT and IBT on PDHD yielded the same pattern of results. More specifically, the differences between BCT and IBT at pretreatment and posttreatment were not significantly different, but were significantly different at 3-, 6-, 9-, and 12-month follow-up.

Dyadic adjustment—Observed mean (SD) gay and lesbian patients' and partners' DAS scores at pretreatment, posttreatment, and the quarterly follow-up assessment interviews are shown at the bottom of Table 2. For both the gay and lesbian couples, we observed a significant relationship between partners' DAS scores during and after treatment. The correlations between partners' DAS scores at termination (i.e., estimated $r = .42$ for gay couples, $.48$ for lesbian couples), rate of change during treatment (i.e., estimated $r = .60$ for gay couples, $.66$ for lesbian couples), and the rate of change during the 12-month posttreatment follow-up period

(i.e., estimated $r = .52$ for gay couples, $.49$ for lesbian couples) were significant (all $ps < .05$). These significant correlations between partners' scores indicate that their relationship adjustment is intertwined and thus should be analyzed jointly. The results of the piecewise MLR analyses for DAS scores are shown at the bottom of Table 3.

For gay couples, those dyads who received BCT had higher DAS scores at posttreatment (the BCT coefficient) and had a faster rate of linear improvement during treatment than those who received IBT (i.e., the BCT vs IBT contrast). During the 12-month follow-up period, DAS scores of couples who received BCT declined at a significantly slower rate than those who received IBT. For lesbian couples, results were slightly different. As with gay couples, lesbian couples who received BCT had DAS scores at posttreatment (the BCT coefficient) and had a faster rate of linear improvement during treatment than those who received IBT (i.e., the BCT-PACT contrast). However, in contrast to gay couples, the rate of decline in DAS scores during the 12-month follow-up period was not significantly different. Thus, the comparative difference in DAS scores observed at posttreatment (i.e., where those who received BCT had higher DAS scores than those who participated in IBT) did not increase or decrease significantly during the 12-month follow-up period.

Pairwise comparisons between those who received IBT and BCT yielded the same substantive findings for gay and for lesbian couples. DAS scores were not different at pretreatment, but were significantly higher for both gay and lesbian couples at posttreatment and at each of the subsequent follow-up assessment points.

4. Discussion

As predicted, the response of gay and lesbian couples to BCT was consistent with what has been observed with heterosexual couples. For both gay couples and lesbian couples, those who received BCT reported significantly lower proportions of days of heavy drinking in the year after treatment than couples in which the AUD patient received IBT only. In addition, couples who received BCT reported higher levels of relationship adjustment at the end of treatment and in the year after treatment than those who received IBT. That posttreatment follow-up effects were maintained through one year offers new evidence for long-term sustained effects of treatment in an RCT for both gay and lesbian substance abusers. Moreover, this RCT currently appears to be the only available evidence of substance abuse treatment with a lesbian sample.

This study did not include direct comparison samples of heterosexual couples entering treatment. However, relative to other published BCT studies with heterosexual couples (Fals-Stewart, Kelley, & Birchler, 2006; Fals-Stewart & Lam, in press), present data suggest that gay and lesbian couples entering treatment may not present with more severe levels of substance use issues at pretreatment. This is in contrast to recent findings reported by Cochran and Cauce (2006), which found that self-identified homosexual clients reported significantly higher levels of substance abuse problems and psychopathology than heterosexual clients.

The present results follow the same pattern observed in the Powers et al. (2008) meta-analysis of 12 RCTs comparing BCT with IBT for heterosexual couples. BCT was superior to IBT on relationship adjustment at the end of treatment and at each time point thereafter during the follow-up period. On drinking outcomes, BCT and IBT did not differ at the end of treatment (with both treatments showing substantial improvement), but BCT did have more days abstinent at time points thereafter during the follow-up period. Powers et al concluded that "BCT appears to improve relationship satisfaction first that later leads to reduced drinking and drug use" (p. 961), thus explicating a potential theoretical mechanism of action of BCT, namely improved relationship functioning. By reducing relationship distress (which is viewed as a

primary contributor to substance use and relapse) and promoting relationship behaviors conducive to abstinence (e.g., daily trust discussion), BCT builds relationship support for substance use reduction (see O'Farrell & Fals-Stewart, 2006). Consistent with existing evidence relevant the homosexual couples (e.g., Kurdek, 1988), relationship factors such as distress and support appear to be similarly important for gay and lesbian partners as with other heterosexual couples. The present findings suggest further the importance of such relationship factors in contributing to substance use and relapse among same-sex partner couples, and moreover, the role such factors may have in the recovery process. Although the present results are consistent with this proposed mechanism for superior BCT outcomes, the modest sample size of this initial study of BCT with gay and lesbian couples precludes formal tests of mechanism of action for BCT.

Distinct patterns emerged between lesbian and gay couples with regard to relationship adjustment. For both gay and lesbian couples, those who were assigned to BCT reported significantly greater improvements in relationship adjustment during treatment. Yet, different result patterns emerged for gay and lesbian couples during the 12-month follow-up period. For gay couples, the decline in relationship satisfaction was significantly slower for those in BCT versus those assigned to IBT. Conversely, for lesbian couples, rates of decline in relationship satisfaction were not significantly different for those who received BCT versus IBT conditions. Thus, for lesbian couples, erosion of relationship satisfaction was the same for BCT and for IBT after treatment ceased. Nonetheless, it is important to note that, for both gay and lesbian couples, differences in relationship satisfaction between those couples who received BCT versus IBT were significant (and favored those who received BCT) at each assessment point during the posttreatment period.

The present study had many strengths, including the following: (a) completion of two parallel randomized clinical trials of BCT done separately with gay and lesbian AUD patients; (b) use of well-established measures of BCT primary outcome domains (abstinence and relationship adjustment); (c) completion of assessment at four points across a 1-year follow-up period; and (d) high feasibility of and client satisfaction with BCT conducted by gay and lesbian counselors in a gay and lesbian health center setting. That client satisfaction ratings for BCT were high is noteworthy given reported dissatisfaction and delayed help-seeking among this population (see Bonvicini & Perlin, 2003). However, several important limitations also should be noted: (a) modest sample sizes used in each trial; (b) lack of secondary outcome measures (e.g., substance related problems, cost-benefit analysis, partner violence) often included in studies of BCT with heterosexual patients; and (c) exclusive use of primary alcohol problem patients and their non-substance abusing partners (thus, it is unclear if results observed here would generalize to patients with primary drug abuse problems or couples in which both members have a current substance problem).

Additionally, this investigation is also limited by its lack of treatment fidelity ratings. In BCT trials, fidelity is evaluated by use of rated videotaped recordings of sessions (Fals-Stewart & Gorman, 2003). With these couples, refusal rates for video taping was extremely high (>80%) making such fidelity evaluation untenable. Anecdotally, couples were uncomfortable with videotaping, expressing concerns about the security of the tapes and confidentiality of the contents (despite written and verbal assurances that they would only be used for supervision purposes and destroyed). This unanticipated consequence of the typical fidelity evaluation used in BCT trials suggests other methods that are less intrusive need to be developed. Indeed, many of the couples in the trial noted they would have been willing to participate in a fidelity assessment using audiotape or paper-and-pencil measures.

The trial also used a nested design (i.e., counselors provided one condition-specific form of treatment; as such, participants were 'nested' within counselors) versus a cross-over design

(i.e., counselors provide all forms of treatment in the study, thereby serving to reduce therapist effects on treatment response and outcome). Although there are strengths and limitations with both approaches, it is not possible in nested designs to ascertain the magnitude of therapist effects, which have been found in some trials to be significant (e.g., Critis-Christophe & Mintz, 1991). It is possible that therapists' effects played an important role in the positive outcomes observed in this trial, but this design (and the lack of fidelity assessment) does not allow for such an evaluation.

It is also worthy of note that the overarching design of the investigation (i.e., an intensive treatment phase followed by a planned, no treatment posttreatment follow-up assessment) inherently assumes what is often referred to as an acute care model for the treatment of addiction. This stands in contrast to a chronic care model in which treatment (of various types and intensities) lasts for very extended periods in recognition of the chronic, waxing and waning nature of alcoholism and substance abuse. Indeed, in the present trial, it is instructive that participants in both conditions had low level of drinking during the treatment phase and were not different on this dimension during that period. It is possible that BCT could be a component of a chronic care model of intervention, although BCT trials to date with any substance-abusing population have not been designed in this fashion; it is important direction for future research.

With these issues notwithstanding, the study forges important new ground in establishing empirically-based effective substance abuse treatments for gay and lesbian clients. Although the study did not collect data on HIV risk behaviors, evidence suggests that substance abuse treatment, in and of itself, serves as an important HIV prevention strategy for men who have sex with men (Colfax et al., 2004; Shoptaw & Frosch, 2000). The present results indicate great promise for the use of BCT with gay and lesbian couples in which one member of the couple enters treatment for an AUD. As marriage among same-sex partners becomes increasingly legal and slowly accepted in states across the U.S., it is possible that more of these couples will be comfortable seeking professional help for relationship problems. Future large scale trials are needed to address the limitations noted herein; however, for those couples who have a partner with a substance use disorder, BCT may be an attractive, effective option.

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References

- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Vol. 4. Washington, DC: Author; 1994.
- Barnett RC, Brennan RT, Raudenbush SW, Pleck JH, Marshall NL. Change in job and marital experiences and change in psychological distress: A longitudinal study of dual-earner couples. *Journal of Personality and Social Psychology* 1995;69:839–850. [PubMed: 7473034]
- Bonvicini KA, Perlin MJ. The same but different: Clinician-patient communication with gay and lesbian patients. *Patient Education and Counseling* 2003;51:115–122. [PubMed: 14572940]
- Bux DA. The epidemiology of problem drinking in gay men and lesbians: A critical review. *Clinical Psychology Review* 1996;16:277–298.
- Cochran SD, Ackerman D, Mays VM, Ross MW. Prevalence of non-medical drug use and dependence among homosexually active men and women in the U.S. population. *Addiction* 2004;99:989–998. [PubMed: 15265096]

- Cochran BN, Cauce AM. Characteristics of lesbian, gay, bisexual, and transgender individuals entering substance abuse treatment. *Journal of Substance Abuse Treatment* 2006;30:135–146. [PubMed: 16490677]
- Colfax G, Vittinghoff E, Husnik MJ, McKirnan D, Buchbinder S, Koblin B, et al. Substance use and sexual risk: A participant and episode-level analysis among a cohort of men who have sex with men. *American Journal of Epidemiology* 2004;159:1002–1012. [PubMed: 15128613]
- Crits-Christoph P, Mintz J. Implications of therapist effects for the design and analysis of comparative studies of psychotherapies. *Journal of Consulting and Clinical Psychology* 1991;59:20–26. [PubMed: 2002139]
- Driscoll R. A gay-identified alcohol treatment program: A follow-up study. *Journal of Homosexuality* 1982;4:123–142.
- Fals-Stewart W, Birchler GR, Kelley ML. Learning Sobriety Together: A randomized clinical trial examining behavioral couples therapy with alcoholic female patients. *Journal of Consulting and Clinical Psychology* 2006;74:579–591. [PubMed: 16822114]
- Fals-Stewart W, Lam W, Kelley ML. Behavioral couples therapy for alcoholism and drug abuse. *Journal of Family Therapy*. in press
- Fals-Stewart W, O'Farrell TJ, Birchler GR, Cordova J, Kelley ML. Behavioral couples therapy for alcoholism and drug abuse: Where we've been, where we are, and where we're going. *Journal of Cognitive Psychotherapy* 2005;19:229–246.
- Fals-Stewart W, O'Farrell TJ, Freitas T, McFarlin SK, Rutigliano P. The Timeline Followback reports of psychoactive substance use: Psychometric properties. *Journal of Consulting and Clinical Psychology* 2000;68:134–144. [PubMed: 10710848]
- Fals-Stewart, W.; Stappenbeck, C.; Hoebbel, C. A decision tree for determining primary drug of abuse. Poster presented at the 66th Annual Scientific Meeting of the College of Problems on Drug Dependence; San Juan, Puerto Rico. 2004 Jun.
- First, M.; Spitzer, L.; Gibbon, M.; Williams, J. Structured clinical interview for Axis I DSM-IV disorders (SCID). Washington, DC: American Psychiatric Association; 1995.
- Goldstein, H. Multilevel statistical models. Arnold; London: 2003.
- Gorman, C.; Fals-Stewart, W. Brief adherence and competence scales for BCT trials: Reliability and validity; Poster presented at the Annual Convention of the American Psychological Association; Toronto, Canada. 2003 Aug.
- Hughes TL, Eliason M. Substance use and abuse in lesbian, gay, bisexual, and transgender populations. *The Journal of Primary Prevention* 2002;22:263–298.
- Kurdek LA. Perceived social support in gays and lesbians in cohabitating relationships. *Journal of Personality and Social Psychology* 1988;54:504–509. [PubMed: 3361422]
- Larsen DL, Attkisson CC, Hargreaves WA, Nguyen TD. Assessment of client/patient satisfaction: Development of a general scale. *Evaluation and Program Planning* 1979;2:197–207. [PubMed: 10245370]
- Mercer, D.; Woody, GE. *Therapy Manuals for Drug Addiction. Manual 3*. Rockville, MD: National Institute on Drug Abuse; 1999. An Individual Drug Counseling Approach to Treat Cocaine Addiction: The Cocaine Collaborative Model.
- Miller WR, Wilbourne PL. Mesa Grande: A methodological analysis of clinical trials of treatment for alcohol use disorders. *Addiction* 2002;97:265–277. [PubMed: 11964100]
- Morgenstern J, Irwin TW, Wainberg ML, Parsons JT, Muench F, Bux DA, Kahler CW, Marcus S, Schulz-Heik J. A randomized controlled trial of goal choice interventions for alcohol use disorders among men who have sex with men. *Journal of Consulting and Clinical Psychology* 2007;75:72–84. [PubMed: 17295566]
- National Institute on Alcohol Abuse and Alcoholism. Module 10G: Sexual orientation and alcohol use disorders. 2004. Retrieved October 6, 2008, from <http://www.niaaa.nih.gov/publications/social/Module10GSexualOrientation/Module10G-text.html>
- O'Farrell, TJ.; Fals-Stewart, W. *Behavioral couples therapy for alcoholism and drug abuse*. New York: Guilford Press; 2006.
- Otis MD, Rostosky SS, Riggle EDB, Hamrin R. Stress and relationship quality in same-sex couples. *Journal of Social and Personal Relationships* 2006;23:81–99.

- Paul JP, Barrett DC, Crosby GM, Stall RD. Longitudinal changes in alcohol and drug use among men seen at a gay-specific substance abuse treatment agency. *Journal of Studies on Alcohol* 1996;57:475–485. [PubMed: 8858545]
- Powers MB, Vedel E, Emmelkamp PMG. Behavioral couples therapy (BCT) for alcohol and drug use disorders: A meta-analysis. *Clinical Psychology Review* 2008;28:952–962. [PubMed: 18374464]
- Rasbash, J.; Steele, F.; Browne, W.; Prosser, B. A user's guide to MLwiN, version 2.0, Center for Multilevel Modeling. University of Bristol; Bristol: 2005.
- Schatz, B.; O'Hanlan, KA. Antigay discrimination in medicine: Results of a national survey of lesbian, gay, and bisexual physicians. Meeting of the Gay and Lesbian Medical Association; San Francisco. 1994.
- Shoptaw S, Frosch D. Substance abuse treatment as HIV prevention for men who have sex with men. *AIDS and Behavior* 2000;4:193–203.
- Sobell, LC.; Sobell, MB. Timeline Follow Back: A calendar method for assessing alcohol and drug use (User's Guide). Toronto: Addiction Research Foundation; 1996.
- Sobell LC, Sobell MB, Connors G, Agrawal S. Assessing drinking outcomes in alcohol treatment efficacy studies: Selecting a yardstick of success. *Alcoholism: Clinical & Experimental Research* 2003;27:1661–1666.
- Spanier G. Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family* 1976;38:15–30.
- Weinberg, TS. Gay men, drinking, and alcoholism. Carbondale, IL: Southern Illinois University Press; 1994.
- White JC, Dull VT. Health risk factors and health seeking behavior in lesbians. *Journal of Women's Health* 1998;6:103–112.

Table 1

Pretreatment Characteristics for Gay and Lesbian Patients and their Nonsubstance-Abusing Partners within Treatment Groups

Characteristic	Gay Couples	Couple Type	Lesbian Couples
<i>n</i>	52 couples		48 couples
<i>Mean (and Standard Deviation)</i>			
Patients' age	31.31 (5.46)		27.72 (4.36)
Patients' years education	14.94 (1.21)		13.28 (1.26)
Partners' age	30.00 (4.09)		29.43 (4.28)
Partners' education	14.24 (1.30)		14.21 (1.18)
Length of relationship	4.22 (3.06)		3.94 (4.02)
Annual household income (in thousand \$)	39.21 (15.67)		42.41 (19.04)
Years of problematic alcohol use	6.81 (5.96)		4.92 (5.27)
Number of <i>DSM-IV</i> alcohol dependence criteria met (last 12 months)	4.25 (1.91)		4.51 (1.97)
<i>No. (%)</i>			
Patients whose racial/ethnic composition was:			
White	40 (77)		37 (77)
African-American	8 (15)		5 (10)
Hispanic	2 (4)		3 (6)
'Other'	2 (4)		3 (6)
Partners whose racial/ethnic composition was:			
White	40 (77)		36 (75)
African-American	7 (13)		8 (17)
Hispanic	3 (6)		2 (4)
'Other'	2 (4)		2 (4)
Patients who met <i>DSM-IV</i> criteria for:			
Alcohol Dependence	45 (87)		40 (83)
Alcohol Abuse	7 (13)		8 (17)
Other substance use disorder	10 (19)		8 (17)

Note. BCT = behavioral couples therapy treatment condition; IBT = individual-based treatment condition. *DSM-IV* = *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition*.

Table 2

Observed Mean (and Standard Deviation) Percent Days Heavy Drinking (PDHD) for Patients and Dyadic Adjustment Scale (DAS) Scores for Partners at Pretreatment and Follow-up Assessment Points

Treatment Condition	Pretreatment	Posttreatment	Assessment Point			
			3-month	6-month	9-month	12-month
<i>Gay Couples</i>						
PDHD						
BCT	41.94 (18.73)	5.99 (13.62)	8.10 (13.14) ^a	13.65 (18.95) ^a	17.21 (21.04) ^a	18.00 (20.48) ^a
IBT	43.84 (21.63)	5.30 (14.91)	15.38 (14.03)	25.42 (21.06)	29.42 (22.61)	32.16 (23.47)
DAS						
BCT						
Patient	88.23 (22.91)	119.37 (12.66) ^a	113.60 (14.93) ^a	109.53 (16.21) ^a	106.28 (19.32) ^a	106.00 (22.83) ^a
Partner	80.20 (24.31)	109.03 (15.91)	104.68 (15.84)	103.87 (18.43)	106.12 (20.49)	100.42 (21.94)
IBT						
Patient	86.84 (23.11)	110.41 (14.25)	100.74 (16.39)	95.4 (18.21)	93.82 (19.27)	92.04 (20.31)
Partner	79.36 (22.81)	101.39 (13.62)	91.46 (17.02)	90.63 (19.28)	86.58 (21.64)	86.16 (22.04)
<i>Lesbian Couples</i>						
PDHD						
BCT	38.62 (16.44)	5.07 (14.12)	7.38 (16.28) ^a	11.91 (15.83) ^a	13.77 (22.13) ^a	15.71 (20.42) ^a
IBT	39.80 (19.74)	5.27 (14.09)	13.62 (15.93)	20.62 (18.26)	26.19 (24.10)	27.92 (20.65)
DAS						
BCT						
Patient	92.73 (20.41)	111.37 (12.66) ^a	107.29 (14.27) ^a	104.93 (17.50) ^a	102.34 (20.66) ^a	101.42 (22.83) ^a
Partner	86.27 (23.63)	106.03 (15.91)	99.12 (15.13)	98.87 (16.30)	98.66 (20.49)	100.20 (23.71)
IBT						
Patient	93.20 (23.11)	103.22 (15.23)	97.71 (17.85)	95.38 (19.47)	93.09 (20.27)	92.00 (22.65)
Partner	87.24 (22.81)	99.98 (16.52)	90.89 (18.46)	91.02 (20.80)	91.91 (23.64)	87.68 (22.73)

Note. BCT = behavioral couples therapy treatment condition; IBT = individual-based treatment condition.

^aIndicated BCT had significantly different scores than those in IBT at the assessment period, based on pairwise contrasts (all $ps < .05$).

Table 3

Results of the Multilevel Growth Models for Percent Days Heavy Drinking (PDHD) and Dyadic Adjustment Scale (DAS) Scores for Gay Couples

Fixed Effect	<i>B</i>	<i>SE</i>	<i>z</i>
<i>Gay Couples</i>			
PDHD			
Status at termination			
BCT	1.79	0.92	1.94
BCT-IBT contrast	-0.13	0.12	-1.07
Linear rate of change during treatment			
BCT	-1.95	0.36	-5.42**
BCT-IBT contrast	0.15	0.11	1.36
Linear rate of change after treatment			
BCT	1.12	0.47	2.38*
BCT-IBT contrast	-0.80	0.38	-2.11*
DAS			
Status at termination			
BCT	114.21	8.64	13.22**
BCT-IBT contrast	-8.61	3.04	-2.83**
Linear rate of change during treatment			
BCT	27.36	4.46	6.13**
BCT-IBT contrast	-8.94	3.76	2.37*
Linear rate of change after treatment			
BCT	-10.21	4.06	2.51*
BCT-IBT contrast	-5.26	2.61	2.01*
<i>Lesbian Couples</i>			
PDHD			
Status at termination			
BCT	1.62	0.94	1.06
BCT-IBT contrast	0.04	0.10	0.41
Linear rate of change during treatment			
BCT	-2.03	0.49	-4.41**
BCT-IBT contrast	-0.01	0.09	-0.11
Linear rate of change after treatment			
BCT	1.13	0.31	3.64**
BCT-IBT contrast	0.54	0.22	2.45*
DAS			
Status at termination			
BCT	106.43	9.24	11.52**
BCT-IBT contrast	-6.16	2.91	2.12*
Linear rate of change during treatment			
BCT	16.68	4.32	3.68**
BCT-IBT contrast	-6.59	3.21	2.05*
Linear rate of change after treatment			
BCT	-6.92	3.27	2.11*
BCT-IBT contrast	-2.69	1.87	1.43

Note. BCT = behavioral couples therapy treatment condition; IBT = individual based treatment condition.

* $p < .05$;

* $p < .01$.