Marital Interactions of Drug-Abusing Patients and Their Partners: Comparisons With Distressed Couples and Relationship to Drug-Using Behavior

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Couples with a drug-abusing husband \((n = 17)\) and non-substance-abusing, distressed couples \((n = 17)\) completed several self-report measures of relationship adjustment and participated in videotaped marital conflict-resolution discussions that were coded with the Clinician Rating of Adult Communication (CRAC). Although no differences were found between the couple types on the self-report inventories, drug-abusing couples had higher scores (indicating more frequent use of dysfunctional communication behaviors) on 3 of the 5 CRAC subscales (i.e., Abusiveness, Problem-Solving Skills, and Attribution of Blame) and a higher CRAC total score (a global measure of communication skill) than distressed couples. In addition, the CRAC total score for drug-abusing couples was negatively related to husbands' percentage of days abstinent during the year before entering substance abuse treatment.

Although several controlled investigations have examined the marital relationships of alcoholic couples (for a review, see McCrady & Epstein, 1995), nearly all of the family studies of individuals who primarily abuse psychoactive substances other than alcohol have largely ignored the spousal system and have instead focused primarily on the family of origin (e.g., parents, siblings, and grandparents; Kaufman, 1992). Consequently, knowledge of the dyadic adjustment of drug-abusing couples\(^1\) is based mostly on descriptive case studies or investigations with small samples. In general, however, the available reports have described these dyads as significantly distressed in multiple domains of marital functioning (e.g., Anglin, Kao, Harlow, Peters, & Booth, 1987; Kosten, Jalali, Steidl, & Kleber, 1987).

In the first large-scale investigation of drug-abusing patients and their partners, we (Fals-Stewart, Birchler, & O’Farrell, in press) compared the dyadic adjustment of four different types of couples: (a) 94 couples in which only husbands abused drugs, (b) 36 couples in which only wives abused drugs, (c) 87 couples in which both partners abused drugs, and (d) 70 couples seeking conjoint therapy for marital distress in which there was no evidence of substance abuse by either partner. In general, the

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\(^1\) Throughout this article, the term drug-abusing couple refers to dyads in which one or both partners primarily abuse a psychoactive substance other than alcohol. In addition, individuals who are described as "abusing drugs" primarily abuse drugs other than alcohol.
partners in these couples were significantly dissatisfied with their relationships, desired marked change from each other in multiple areas of functioning that influenced relationship quality, used maladaptive methods to address conflict in the relationship, and had taken several steps toward relationship dissolution. On many of the self-report measures administered, couples in which one or both partners abused drugs obtained scores similar to those of non-substance-abusing, distressed couples. In addition, among couples with one drug-abusing partner, dyadic adjustment was negatively related to frequency of drug use during the year before the assessment. This relationship was curvilinear when both partners abused drugs (i.e., couples who were very dissatisfied and those who were very satisfied used drugs more frequently during the year before the assessment than couples who were only moderately dissatisfied). Also, relationship adjustment measured at treatment entry was modestly related to frequency of substance use during the year after treatment for those patients who relapsed during that interval (Fals-Stewart & Birchler, 1996). However, a limitation of these studies was their exclusive reliance on data from paper-and-pencil measures to describe couples' dyadic adjustment.

Although labor intensive to collect and to score relative to self-report inventories, many investigators have argued that coded observations of couples engaging in communication tasks, such as partners' discussions of relationship conflict areas, more accurately reflect relationship functioning than self-report instruments (e.g., Christensen & Nies, 1980). Indeed, in the field of marital research, couple conflict-resolution interaction behaviors have proven to be better predictors of future relationship quality and stability than have adjustment indicators obtained solely from self-report instruments (e.g., Christensen & Nies, 1980). Indeed, in the field of marital research, couple conflict-resolution interaction behaviors have proven to be better predictors of future relationship quality and stability than have adjustment indicators obtained solely from self-report instruments (Gottman, 1994; Heavey, Christensen, & Malmuth, 1995). Widely used paper-and-pencil measures tend to provide content-related information about specific types and the relative intensity of relationship strengths and problems. In contrast, observed dyadic problem-solving interactions provide process-related information, such as the specific communication and problem-solving skills couples have acquired and choose to use to discuss and manage their relationship conflicts. Marital research and practice have been advanced significantly by the technology associated with the observed problem-solving communication of distressed and nondistressed couples (e.g., Markman & Notarius, 1987).

Although no such studies have been reported with drug-abusing couples, coded observations of videotaped communication samples have provided important insights into the marital interactions of alcoholic dyads. For example, several studies using interaction data have shown that, in comparison with nondistressed couples, alcoholic couples have more marital complaints and expressed hostility, have less ability to work together cooperatively to their mutual benefit, and engage more frequently in responsibility-avoiding communication (e.g., Billings, Kessler, Gomberg, & Weiner, 1979; Jacob & Krahn, 1988; Jacob & Leonard, 1992). On an interaction measure, O'Farrell and Birchler (1987) found that alcoholic and maritally conflicted couples were not significantly different in terms of percentage of positive behavior, husbands' responsibility-avoiding communication, and extent of interruptions, although both groups performed poorly relative to nondistressed, nonalcoholic couples.

A qualitative examination of three drug-abusing couples (i.e., one or both partners were being treated for substance abuse) engaged in videotaped discussions about areas of conflict in their relationship revealed that these couples had marked deficits in communication skills and problem-solving ability (Birchler, 1995). Unfortunately, this study and the few other available studies of drug-abusing couples have not examined the partners' videotaped communication samples quantitatively (i.e., coded the interactions using a standardized observational rating system). In the present investigation, we collected and coded the videotaped communication behavior of drug-abusing couples engaging in conflict-resolution discussions of relationship problem areas. Because our prior research indicated that drug-abusing and maritally conflicted couples obtained similar scores on self-report relationship adjustment measures, we sought to determine whether the observed marital interactions of drug-abusing couples also were similar to or significantly different...
from those of a demographically matched group of non-substance-abusing, conflicted couples.

In addition, we examined the relationship between the coded marital interactions and drug-using behavior of the drug-abusing partners before and after treatment for substance abuse. As noted earlier, evidence suggests that relationship adjustment, as measured by self-report instruments, is related to frequency of drug use before treatment for married or cohabiting patients and after substance abuse treatment for those patients who ultimately relapse. An important question dealt with in this investigation is whether interactional data, derived from observed marital conflict-resolution discussions, can provide critical predictive information about drug-using behavior above and beyond that which can be derived from self-report measures of relationship adjustment. If it can be established that process-related communication and problem-solving skills are associated with substance-using behavior before or after drug abuse treatment, then perhaps clinical interventions designed to improve dyadic communication, as well as confront specific relationship problem areas, will result in improved treatment outcomes for drug-abusing patients and their partners who engage in conjoint therapy as a component of substance abuse treatment.

Method

Participants

Drug-abusing patients and their relationship partners. The sample consisted of 17 couples in which husbands were entering substance abuse treatment at one of two community-based outpatient clinics, both located in the northeastern United States. Inclusion criteria for participation in this investigation were as follows: (a) Partners had to be married or living together in a stable common-law relationship for at least 1 year, (b) partners had to be at least 18 years of age, and (c) husbands had to meet abuse or dependence criteria for at least one psychoactive substance use disorder, as outlined in the revised third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R; American Psychiatric Association, 1987), with the primary drug of abuse in this class of disorders not being alcohol. Couples were excluded if (a) wives met DSM-III-R criteria for a psychoactive substance use disorder in the previous 6 months; (b) husbands or wives met DSM-III-R criteria for an organic mental disorder, schizophrenia, a delusional (paranoid) disorder, or other psychotic disorders; or (c) husbands' primary drug of abuse was alcohol. Twenty-four consecutively admitted married or cohabiting male patients and their partners met criteria for the investigation and were approached to participate; 7 of these patients refused. Comparisons between patients who entered the study and those who chose not to participate revealed no significant differences (p < .05) on any sociodemographic or substance abuse measures.

Conflicted couples without substance abuse problems. We also collected self-report dyadic adjustment and coded videotaped communication data from 53 couples seeking treatment for relationship problems at the Veterans Affairs Marital and Family Treatment Program in San Diego, California. For comparison purposes, we selected a subsample of couples from these dyads that was demographically similar to the drug-abusing couples. The matching variables chosen were husbands' and wives' ages, husbands' and wives' years of education, and years married or cohabiting. We established variable ranges of acceptable values for these couples that (a) were within two standard deviations of the mean for each of the variables among the drug-abusing couples and (b) did not exceed the inclusion values established for the drug-abusing couples. Of the 53 non-substance-abusing, conflicted couples, 17 dyads remained after use of this algorithm.

Sample characteristics. Table 1 presents the baseline characteristics of the participants in the two groups. The matching procedure we used was effective; analysis of variance and chi-square tests indicated that the partners in the couple types did not differ significantly on any of the demographic characteristics shown. The couples in this study (a) were typically in their mid-30s to late 30s, (b) had high school
Table 1

Baseline Characteristics of Partners in the Drug-Abusing and Non-Substance-Abusing Conflicted Couples

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Drug abusing (n = 17)</th>
<th>Conflicted (n = 17)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>M</td>
</tr>
<tr>
<td>Husbands' age (years)</td>
<td></td>
<td>36.2</td>
</tr>
<tr>
<td>Wives' age (years)</td>
<td></td>
<td>34.2</td>
</tr>
<tr>
<td>Husbands' education (years)</td>
<td></td>
<td>11.9</td>
</tr>
<tr>
<td>Wives' education (years)</td>
<td></td>
<td>12.1</td>
</tr>
<tr>
<td>Years married or cohabiting</td>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td>Number of children</td>
<td></td>
<td>1.7</td>
</tr>
<tr>
<td>Racial-ethnic composition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husbands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>African American</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Wives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
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<td>15</td>
</tr>
<tr>
<td>African American</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Husbands' substance abuse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number years of problematic:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol use</td>
<td></td>
<td>13.9</td>
</tr>
<tr>
<td>Opiate use</td>
<td></td>
<td>5.5</td>
</tr>
<tr>
<td>Cocaine use</td>
<td></td>
<td>9.3</td>
</tr>
<tr>
<td>Cannabis use</td>
<td></td>
<td>5.4</td>
</tr>
<tr>
<td>Any psychoactive substance</td>
<td></td>
<td>16.4</td>
</tr>
<tr>
<td>Number meeting DSM-III-R substance dependence criteria for:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocaine</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Alcohol</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Cannabis</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Opiates</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Number whose primary drug of abuse was:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocaine</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Opiates</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Cannabis</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Percentage of days abstinent during previous year</td>
<td></td>
<td>29.2</td>
</tr>
</tbody>
</table>

Note. DSM-III-R = Diagnostic and Statistical Manual of Mental Disorders (revised third edition; American Psychiatric Association, 1987).

The substance abuse data for the husbands from the drug-abusing couples are also shown in Table 1. Husbands reported an average of 15 years of problematic substance use, with very frequent use of drugs during the year before the assessment. Most of the husbands met criteria for cocaine dependence, and most provided information indicating that cocaine was their primary drug of abuse. Although none of the husbands had alcohol as their primary drug of abuse, several (n = 11, 65%) did meet DSM-III-R criteria for current alcohol dependence.

Measures

Evaluation of couples' videotaped interactions. The Clinician Rating of Adult Communication (CRAC; Basco, Birchler, Kalal, Talbott, & Slater, 1991) was used to evaluate partners' communication behaviors during their videotaped discussions of relationship conflict areas. This instrument is composed of 14 scored items,
each of which is rated on a scale ranging from 1 to 3. It contains five subscales, all with different score ranges: Demonstrated Involvement (range: 2–6), General Communication Skill (range: 10–30), Problem-Solving Skill (range: 8–24), Abusiveness (range: 6–18), and Attribution of Blame (range: 4–12). Higher scores on each scale indicate greater maladaptive communication in the area assessed. The CRAC total score (range: 30–90), which is calculated by summing the scores of the five subscales, provides a global summary index of a couple's general communication skills.

As noted by Basco et al. (1991), the CRAC has high levels of internal consistency, test-retest agreement, and interrater reliability. CRAC subscale scores are significantly correlated with data from the Marital Interaction Coding System (Weiss, Hops, & Patterson, 1973). The CRAC also has acceptable discriminant and convergent validity.

Self-report relationship adjustment data. A battery of relationship adjustment measures referred to as the Mini-Marital Relationship Assessment Battery (Birchler & Fals-Stewart, 1996) was administered to all of the conflicted and drug-abusing couples. The four inventories that compose the battery (described subsequently) are among the most commonly used self-report dyadic adjustment measures in marital research and cover conceptually important areas of relationship functioning (Birchler, 1983).

The Locke-Wallace Marital Adjustment Test (MAT; Locke & Wallace, 1959) provides a measure of global relationship satisfaction. It consists of 15 items, 9 of which assess degree of disagreement on major relationship issues. The MAT is sensitive to changes occurring during the course of couple therapy (cf. O'Leary, 1987), and its convergent validity has been demonstrated (e.g., Spanier, 1976). Scores can range from 2 to 158, with higher scores indicating higher levels of satisfaction. A total score of 100 has been the traditional cutoff point for relationship distress.

On the Areas of Change Questionnaire (ACQ; Weiss et al., 1973), each spouse notes, on a 7-point scale, how much partner change is desired in terms of 34 common relationship behaviors (e.g., initiating sex, completing household tasks, and arguing). Weiss and Birchler (1975) described the most widely adopted scoring system for the ACQ; this system takes into account the degree of agreement and disagreement between spouses about the desirability of each person changing on each item. The ACQ reliably discriminates between distressed and nondistressed couples (Birchler, Weiss, & Vincent, 1975). The sum of agreements and disagreements, referred to as the total change score, was the index used in the present study. The total change score ranges from 0 to 68; the average score for distressed couples is 28, and the average score for nondistressed couples is 7 (Birchler & Webb, 1977).

The Response to Conflict Scale (RTC; Birchler & Fals-Stewart, 1994) is a 12-item scale designed to measure maladaptive methods partners use to address conflict. Partners are asked to endorse behaviors such as "yelling" and "leaving the scene" on an 8-point scale; higher scores indicate more frequent use of the behavior during conflict situations. RTC scores range from 0 to 192, with higher scores indicating more frequent use of maladaptive responses. The RTC has adequate validity and reliability (Birchler & Fals-Stewart, 1994).

Relationship commitment was measured with the Marital Status Inventory (Weiss & Cerreto, 1980), a 14-item scale of divorce potential that assesses thoughts, plans, and actions concerned with separation or divorce. Scores can range from 0 to 14, with higher scores indicating that the partners have taken more steps toward relationship dissolution.

Drug use measures. Each partner was interviewed separately with the substance use modules of the Structured Clinical Interview for DSM-III-R (Spitzer, Williams, Gibbon, & First, 1990), administered by one of two master's-level interviewers (both of whom were trained by a psychiatrist with extensive experience administering the interview). Interrater reliability was assessed via a paired-rater design. Videotaped interviews of 20 patients entering a drug abuse treatment center were independently observed by both primary interviewers and by the training psychiatrist. Kappas between the two primary interviewers for the substance use disorders ranged from .70 to 1.0. Kappas between the psychiatrist and the primary interviewers for the substance use disorders ranged from .80 to 1.0. These kappas reflect good to
excellent observer agreement (Landis & Koch, 1977).

The Time-Line Follow Back interview (Ehrman & Robins, 1994; Sobell, Maisto, Sobell, & Cooper, 1979) was used to measure estimated use of alcohol and other drugs in the 12 months before entering treatment and the 12 months after treatment completion. The drug use adjustment index derived from the interviews was the percentage of days abstinent, operationally defined as the percentage of days in the measurement interval during which there was (a) no alcohol or other drug use and (b) no time spent in jail or hospitals for reasons related to drug or alcohol use. Baseline and selected substance use information was collected from all of the drug-abusing husbands with the Addiction Severity Index (McLellan et al., 1985).

Procedure

Each of the drug-abusing and non-substance-abusing, conflicted couples completed the Mini-Marital Relationship Assessment Battery during the first 2 weeks of treatment. Between the 2nd and 3rd weeks of treatment, couples engaged in a problem-resolution interaction task. Partners in each couple selected an agreed-on problem in their relationship. Partners were then given the following instructions by their interviewer:

Now I am going to turn on the videotape recorder and leave the room for 10 minutes. I would like you to talk together about the problem we have chosen and try to come up with some sort of solution to the problem. Please try to talk as you typically would at home. Any questions?

The couples were videotaped while they discussed the problem. We coded the 10-min communication samples using the CRAC.3

At admission, husbands were interviewed concerning their drug use during the 12 months before treatment. At the completion of treatment, which was scheduled to last 6 months, and at 90-day intervals thereafter, husbands provided the same information concerning their substance use since the previous report. Wives were queried about their husbands' drug and alcohol use at these same intervals; however, only husbands' data are reported here.4 Husbands' and wives' reports showed substantial agreement, particularly at follow-up. The correlation \( (p < .001) \) between husbands' and wives' reports of percentage of days abstinent before treatment was .77; posttreatment correlations ranged from .71 to .90. We conducted an analysis of mean differences in reported abstinent days between husbands' and wives' reports. On average, husbands reported a few more days of abstinence than indicated by their wives, but this difference was not significant \( (p < .05) \).

Results

Comparisons of Drug-Abusing and Non-Substance-Abusing Conflicted Couples

Self-report relationship adjustment data. Couples' scores on the MAT, ACQ, RTC, and Marital Status Inventory are shown in Table 2. Using an omnibus one-way multivariate analysis of variance (MANOVA), we found no omnibus multivariate difference between the drug-abusing and conflicted couples on these measures, \( F(1, 32) = 1.81, ns, f^2 = .05 \).

Comparisons of couple types on CRAC subscales. The mean CRAC subscale scores of the drug-abusing and maritally conflicted couples are shown in Table 3. Using a one-way MANOVA, we found a significant between-groups effect, \( F(1, 32) = 14.20, p < .001, f^2 = .43 \).

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3 Because some videotapes were destroyed, not all of the communication samples were available for us to code. However, to examine our interrater reliability, we coded 6 of the drug-abusing couples' and 10 of the non-substance-abusing, distressed couples' taped communication samples with the CRAC. Intraclass correlations for the drug-abusing couples on the five CRAC subscales ranged from .84 to .94. For the distressed couples, these correlations ranged from .80 to .92. All intraclass correlations were significant at \( p < .01 \). For the drug-abusing couples, we used the CRAC ratings provided by William Fals-Stewart; for the non-substance-abusing, distressed couples, we used the CRAC scores of Gary R. Birchler.

4 Statistical comparisons using drug use information provided by wives about their husbands were also performed. Results of these analyses were not different from those using data provided by the husbands.
Table 2
Mean Scores and Standard Deviations of Drug-Abusing and Maritally Conflicted Couples on the Dyadic Adjustment Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Drug abusing</th>
<th>Conflicted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital Adjustment Test</td>
<td>M = 73.2, SD = 24.1</td>
<td>M = 76.1, SD = 22.9</td>
</tr>
<tr>
<td>Areas of Change Questionnaire</td>
<td>M = 31.3, SD = 6.5</td>
<td>M = 30.8, SD = 6.1</td>
</tr>
<tr>
<td>Response to Conflict Scale</td>
<td>M = 108.4, SD = 21.3</td>
<td>M = 105.3, SD = 22.8</td>
</tr>
<tr>
<td>Marital Status Inventory</td>
<td>M = 3.4, SD = 1.9</td>
<td>M = 3.0, SD = 2.1</td>
</tr>
</tbody>
</table>

Note. A multivariate analysis of variance revealed that the couple types were not significantly different on these measures, \( F(1, 32) = 1.84, n.s. \)

Using procedures described by Huberty and Morris (1989), we sought to determine the relative contribution of each of the CRAC subscales to the intergroup difference revealed by the significant omnibus MANOVA. We performed a stepwise discriminant function analysis in which group membership was the dependent variable and the CRAC subscales were the independent variables. \( F \)-to-remove values at the final step of the analysis were used to test the significance of the decrease in group separation for each variable if the variable were to be removed from the set; a Bonferroni-corrected alpha of \( p < .01 (0.05/5) \) was also used to evaluate the significance of the \( F \)-to-remove values. We found significant differences between the couple types on three CRAC subscales: Abusiveness, Problem-Solving Skill, and Attribution of Blame. Differences between the couple types on subscales measuring demonstrated involvement and communication skill were not significant. We also found that drug-abusing couples had higher CRAC total scores (\( M = 73.6, SD = 6.5 \)) than the non-substance-abusing, distressed couples (\( M = 60.9, SD = 5.1 \)), \( t(32) = 6.42, p < .001, R^2 = .56. \)

Relationship of CRAC Total Score and Substance Use Frequency

To determine whether the CRAC total score was related to husbands’ drug-using behavior before and after treatment after control for couples’ self-reported dyadic adjustment and selected baseline characteristics of the husbands (i.e., age and years of education), we conducted two hierarchical regressions. Because the sample of substance-abusing husbands who partici-

Table 3
Mean Scores and Standard Deviations of Drug-Abusing and Maritally Conflicted Couples on Clinician Rating of Adult Communication (CRAC) Scales

<table>
<thead>
<tr>
<th>CRAC scale</th>
<th>Drug abusing</th>
<th>Conflicted</th>
<th>F-to-remove</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrated Involvement</td>
<td>M = 4.0, SD = 1.3</td>
<td>M = 3.8, SD = 1.5</td>
<td>0.01</td>
</tr>
<tr>
<td>General Communication Skill</td>
<td>M = 21.8, SD = 3.7</td>
<td>M = 22.8, SD = 5.0</td>
<td>0.12</td>
</tr>
<tr>
<td>Abusiveness</td>
<td>M = 23.9, SD = 3.5</td>
<td>M = 17.1, SD = 4.9</td>
<td>36.94**</td>
</tr>
<tr>
<td>Problem-Solving Skill</td>
<td>M = 15.1, SD = 2.3</td>
<td>M = 10.6, SD = 4.2</td>
<td>16.78**</td>
</tr>
<tr>
<td>Attribution of Blame</td>
<td>M = 8.8, SD = 2.7</td>
<td>M = 6.6, SD = 2.3</td>
<td>8.23*</td>
</tr>
</tbody>
</table>

Note. CRAC scales have the following score ranges: Demonstrated Involvement, 1–3; General Communication Skill, 5–15; Abusiveness, 3–9; Problem-Solving Skill, 4–12; and Attribution of Blame, 2–6. \( F \)-to-remove values were derived from the final step of a stepwise discriminant function analysis.

*\( p < .05 \). **\( p < .01 \).
pated in this investigation was small, we sought to conserve degrees of freedom—and, thus, reduce our loss of statistical power—in these analyses. We decided to select a single measure of self-reported dyadic adjustment for these analyses by performing a maximal decomposition multiple group factor analysis (Gorsuch, 1991) on the four relationship measures. This procedure is a variable set reduction method that determines the amount of variance accounted for by each variable in a given set. This analysis indicated that the MAT accounted for the most variance (44%) in the set, followed by the Marital Status Inventory (26%), the ACQ (17%), and the RTC (13%). Thus, the MAT was chosen as the best single measure of dyadic adjustment from among the self-report relationship measures. For each model, we entered husbands' age, husbands' education, and couple MAT score in the first step; the CRAC total score was entered next. Percentage of days abstinent from the Time-Line Follow Back interview for the assessment periods being examined was used as the dependent variable in each of these equations. The semipartial correlation ($sr$) at the last step was used to test for the direction and significance of the relationship between the CRAC total score and percentage of days abstinent from psychoactive substances after baseline characteristics and self-reported dyadic adjustment had been controlled. 

The hierarchical regression revealed, in the last step, that the CRAC total score was significantly related to percentage of days abstinent during the year before the assessment, $sr = -.43$, $t(12) = 2.21$, $p < .05$, $f^2 = .95$. However, the semipartial relationship between the CRAC total score and percentage of days abstinent during the year after treatment was not significant, $sr = -.28$, $t(12) = 1.20$, $ns$, $f^2 = .12$. A subsequent analysis to determine the probability of rejecting the null hypothesis (i.e., that the semipartial relationship between the CRAC total score and percentage of days abstinent was zero) revealed that statistical power was only 23% for the latter analysis, which is considered very low (Cohen, 1973). However, the effect size for this analysis was medium sized (Cohen, 1977).

Discussion

In the present study, couples with a drug-abusing husband and non-substance-abusing couples seeking conjoint treatment for relationship problems obtained similar scores on several commonly used self-report dyadic adjustment measures. On all of these measures, couples in both groups scored, on average, in the distressed range. These findings replicate those reported in our prior research (Fals-Stewart & Birchler, 1996; Fals-Stewart et al., 1996b), which indicated that couples with a drug-abusing husband and maritally distressed couples have similar profiles on paper-and-pencil relationship inventories.

However, we found significant differences between these couple types in terms of coded observations of their communication behaviors during partners' discussions of conflict areas. Although the couples were not different on the CRAC subscales measuring demonstrated involvement and communication skill, the drug-abusing couples had significantly elevated CRACs, as well as significantly elevated scores on the CRAC subscales measuring abusiveness, problem-solving ability, and attribution of blame. Among most of the videotapes we coded, we found that the partners in drug-abusing couples would often (a) engage in very emotionally charged discussions about the agreed-on topic; (b) fail to remain focused on the identified disagreement area; (c) allow the interactions to escalate very quickly into yelling, "cross talking" (i.e., both partners talking at the same time without listening to each other), and name calling; (d) make verbally abusive and threaten-
ing comments, with frequent use of expletives to emphasize their points; and (e) fail to advance any solutions or suggestions to address identified problems. In contrast, the maritaly distressed, non-substance-abusing couples engaged in these behaviors less frequently.

Drug abuse per se was not chosen as a communication sample discussion topic for any of the drug-abusing couples; however, these partners would often begin addressing the husbands’ drug-using behavior early in the interaction. We found that this topic area was often very emotionally charged for these couples, and, as our postassessment interviews indicated, partners typically avoided this area of conflict at home but would take the opportunity provided by the videotaped communication task to broach the subject. In addition, the husband’s drug use was often a significant component of most major problems cited by the partners in these relationships (e.g., financial difficulties, lack of intimacy, and failure to complete household responsibilities). Thus, it is perhaps not surprising that the discussions sometimes quickly evolved into exchanges about husbands’ substance abuse.

Because of the time and effort needed to collect videotaped communication data, it was important to determine whether these data are uniquely related to drug-using behavior. After control for more easily obtained information, such as demographic characteristics and self-reported relationship adjustment, our findings indicate that there was a significant unique relationship between the marital interaction data and frequency of drug use during the year before program entry. It is likely that the self-report and observational measures were assessing two related but not entirely overlapping aspects of these couples’ relationship quality. As mentioned earlier, it was our impression that the self-report inventories measure the types and intensity of problems in the relationship; the interaction data reflect a couple’s ability to address effectively the conflicts that may arise from these difficulties. In turn, both of these factors appear to be related to drug-using behavior by husbands in these relationships. Of considerable interest, the unique relationship between the interaction data and frequency of substance use was not significant during the 1-year posttreatment assessment interval. However, although the relationship was not as strong as that found in the pretreatment period, the effect was nonetheless of medium size, and certainly the significance test was influenced by the very low power of the analysis, resulting in large part from the small sample size used. Unfortunately, communication samples were not obtained from the participants during or at the end of the year after substance abuse treatment. It will be important in future research to investigate the ongoing relationship between dyadic problem-solving communication patterns and patients’ substance-using behavior.

The findings of this study have clinical implications for treating married or cohabiting drug-abusing patients in a couples therapy format. These couples present with multiple relationship problems (e.g., financial difficulties, spousal violence, and lack of intimacy) that can often be effectively addressed in conjoint therapy. However, the long-lasting value of couples therapy for these dyads may be teaching the partners methods that improve their problem-solving skills to address difficulties effectively as they arise. Thus, couples therapy approaches that emphasize improving problem-solving ability, teaching negotiating strategies, and enhancing general communication skills usually have positive effects on treatment response and outcome for these dyads (e.g., Fals-Stewart, Birchler, & O’Farrell, 1996).

The present investigation is the first to provide quantitative data about the marital interactions of drug-abusing couples and examine the relationship of these data to drug-using behavior. However, the limitations of this study should be noted. The couples who participated consisted mostly of partners who were White; it is not clear whether these results would generalize to dyads with partners from other cultural and ethnic backgrounds. Although the interrater reliability of our coding of videotaped communication data was acceptable, we were aware of the group to which each couple belonged (i.e., drug-abusing or non-substance-abusing, conflicted couples) when coding the videotapes, which could have influenced the resulting scores. We used a very small sample of couples with a drug-abusing husband and non-substance-abusing, conflicted couples, which greatly reduced the statistical power for the analyses. In turn, this limited the number of variables that could be used in any models
examining the relationship between the coded observation data and pretreatment functioning and posttreatment outcome. Future studies should include many more participants to increase power for the statistical analyses and, along with the couple types used in the present study, compare different types of drug-abusing couples (e.g., couples in which only wives abuse drugs and couples in which both partners abuse drugs). As more is learned about disorder-specific couple interaction patterns, comparisons with other couple groups (e.g., alcoholic couples, depressed couples, and chronic pain couples) will be important. In addition, other measures of treatment outcome (e.g., measures of criminality, employment, and legal involvement) should be examined along with frequency of drug use.

If assessed at multiple points during treatment, videotaped communication data may also serve as a measure of response to various types of interventions, particularly couples therapy. It would also be interesting to determine whether videotaped communication data taken after treatment completion are more predictive of drug-using behavior during the year after treatment than coded observational data taken at baseline.

Supplementing data from self-report relationship adjustment measures with assessment information from drug-abusing couples' interactions may help identify not only the content of problems that these couples have in their relationships but also partners' maladaptive communication and problem-solving behaviors that may interfere with them effectively addressing these difficulties. In turn, the specific problems with which drug-abusing couples present and any deficits observed in their problem-solving and communication skills can then both become the foci of couples treatment.

References

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