SPOUSE INVOLVEMENT IN A RESIDENTIAL TREATMENT PROGRAM FOR ALCOHOLICS

by

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ABSTRACT

This study compared the treatment outcomes of three groups of alcoholic clients which varied in the extent to which their spouses were involved in a 26-day residential treatment program. The three groups consisted of 24 clients whose treatment included a one-day conjoint spouse involvement program, 35 clients whose treatment included a five-day conjoint spouse involvement program, and 22 clients whose spouses did not participate in the treatment program. Self-report measures at 9.3 months follow-up indicated that significantly more of the clients who participated in the five-day spouse involvement program were controlling their drinking than clients in either of the other two groups. It was suggested that longer, more intensive spouse involvement may be the preferred alternative for alcohol programs with a controlled drinking goal. In comparing the present findings with the existing literature, it was also suggested that spouse involvement may be most beneficial for those programs with modest success rates, but of less benefit to those programs with high success rates.
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INTRODUCTION AND LITERATURE REVIEW

Rationale for Spouse Involvement in Alcohol Treatment

In surveying the alcohol treatment literature published between the years 1951 to 1973, Costello (1975) found for the 58 studies that had a follow-up of one year that an average of 25% of the alcoholics were successful in moderating or terminating their drinking, 53% were still drinking with an associated problem, 10% were dead, and 21% were lost to follow-up. Such discouraging success rates have prompted many clinicians and researchers in the field to experiment with alternate treatment approaches. One such approach that has gained increasing support in recent years is that of involving the spouse of the alcoholic in treatment.

Much of the interaction between the spouse and the alcoholic is thought to contribute to or exacerbate the drinking problem. Marital conflict, poor communication patterns, and the spouse's inappropriate coping behaviour are frequently cited as factors contributing to the alcoholic's drinking (cf., Preston, 1960; Westfield, 1972; Cataranzo, Pisani, Fox, & Kennedy, 1973; Estes, 1974; Ewing & Fox, 1968). By involving the spouse in therapy it is hoped that marital conflict can be reduced, communication patterns improved, and appropriate coping behaviours learned, with a resulting improvement in the drinking problem. The spouse (particularly the wife) is also thought to gain directly from her own involvement in that a spouse group offers her a place where she can gain support and understanding -- as well as express her feelings (Westfield, 1972; Sands & Hanson, 1971).
Although it has been frequently contended that the spouse of the alcoholic plays some role in the alcoholic's drinking, the exact nature of that role has been open to conjecture. In the 1940's when social caseworkers first began working with alcoholics and their families, they noticed certain common behaviour patterns characteristic of the wives of alcoholics. These behaviours were thought to be the result of some underlying personality structure common to wives of alcoholics and there was further speculation that women with this particular personality chose a husband who was alcoholic or prealcoholic, in order to satisfy their unconscious needs. If her husband's drinking discontinued, the woman's personality needs would no longer be met and she would "decompensate" or show a marked deterioration in her personality and behaviour (Futterman, 1953). Thus it was to her advantage that her husband maintain his drinking. Evidence for this "disturbed-personality" theory was largely based on clinical impressions (cf. Boggs, 1944; Kalashian, 1959; Price, 1945; Whalen, 1953). However, research in the area has failed to support the theory.

Not only have wives of alcoholics failed to show any characteristic personality profile (Ballard, 1959; Kogan, Fordyce, & Jackson, 1963; Tarter, 1976), but the profiles that they have shown on various psychometric tests have largely scored within the normal range (Ballard, 1959; Corder, Hendricks, & Corder, 1964; Paolino, McCrady, Diamond, & Longabaugh, 1976; Rae & Forbes, 1966; Tarter, 1976). It has been shown, however, that wives of alcoholics show more disturbed personality profiles and report more psychophysiological symptoms when they are living with drinking as opposed to abstinent alcoholics.
(Kogan & Jackson, 1965; Bailey, Haberman, & Alksne, 1962; Haberman, 1964). These studies suggest that the characteristic behaviour of the alcoholic's wife may be more a reaction to the stress of living with a drinking husband rather than the result of a disturbed personality.

Researchers have begun to examine the ways in which wives cope with the stress of living with an alcoholic and the effects this has on the alcoholic's subsequent drinking. Jackson (1954) identified seven successive stages that she believed most wives went through in their attempts to cope with their husband's alcoholism, while Orford and Guthrie (1968) isolated five different coping styles in wives of alcoholics. In a later study, Orford, Guthrie, Nicholls, Oppenheimer, Egert, & Hensman (1975) found that certain coping behaviours of wives of alcoholics were associated with poor prognosis for the alcoholic while other coping behaviours were associated with good prognosis. The results of this latter study suggest that the coping behaviour of wives may be a good target for intervention in therapy.

Studies have also shown that the interaction between the alcoholic and his spouse is an important variable in the maintenance of drinking. Burton and Kaplan (1968) hypothesized that the alleviation of marital problems would lead to decreased drinking in the alcoholic. In order to test this hypothesis, they followed-up 47 alcoholics and their spouses who had participated in conjoint group marital counseling, the focus of which was to reduce marital discord rather than to alleviate the drinking problem. They found that a reduction in family pathology (as measured by the number of areas in which alcoholics and
their spouses reported considerable disagreement) was moderately associated ($r = .45$) with a reduction in drinking, thus providing support for the idea that marital conflict may be a contributor to abusive drinking. Bromet and Moos (1977) arrived at similar conclusions when they examined the importance of environmental resources for the treatment outcome of alcoholics and found that alcoholics with stable marital or work situations before entering treatment had significantly better outcomes in terms of drinking, social, and psychological criteria, than alcoholics without these resources. Using the Family Environment Scale (Moos, 1974), they found that families with high levels of conflict were associated with significantly poorer outcome (on all the outcome variables). Families with high levels of cohesion, a moral-religious emphasis, or lower levels of control were associated with better than expected outcome. (Expected outcome scores were calculated using regression analyses based on sociodemographic information, measures of psychosocial functioning, and drinking variables at intake.)

Orford, Oppenheimer, Egert, Hensman, and Guthrie (1976) also found that high levels of marital cohesion at intake were predictive of favourable outcome. Their measure of marital cohesion was based upon husbands' and wives' reports of mutual affection, husband involvement in family tasks, favourable spouse perceptions and expected perceptions, and optimism about the future of the marriage. At one year follow-up relatively cohesive couples were more than twice as likely to find themselves in the favourable rather than the unfavourable outcome group. The relatively non-cohesive couples were more
than three times as likely to find themselves in the unfavourable outcome group.

The results of these studies make a strong case for involvement of the spouse in treatment. It would seem that spouse-involved treatment which focuses on reducing conflict and increasing cohesion within the marital dyad should facilitate improvement in the alcoholic.

Other researchers have attempted to identify specific patterns of dysfunctional interaction characteristic of couples in which one member is an alcoholic. It is hoped that by intervening and teaching more appropriate patterns of interaction, conflict can be lessened and marital cohesion enhanced with the result of a better outcome for the alcoholic. Becker and Miller (1976) compared the interactions of alcoholic couples to psychiatric couples and found that the alcoholic couples interrupted each other significantly more often than did the psychiatric couples. Although normal couples might have been a better comparison group, their data suggest that faulty communication patterns and, more specifically, excessive interruptions may be relevant behaviours for intervention in marital therapy. Steinglass, Davis, and Berenson (1977) observed the interaction between alcoholics and their spouses while they were sober and while either one or both were intoxicated. They found their interaction in both states to be rigid and lacking in variability. Kennedy (1976) concurred with both these reports when he compared alcoholic couples to normal and psychiatric couples on their interaction patterns while playing a tax game. He found that while alcoholic couples did not show any homogeneous style of interaction, they did show more ineffective or
distorted communication, rigidity, and extremeness in their interaction relative to the other groups. By examining the types of statements alcoholics and their spouses made during their initial session of group therapy, Kotis (1968) found that only 17% of the husbands' and 15% of the wives' statements expressed approval, whereas 42% of the husbands' and 52% of the wives' statements expressed blame or defensiveness (the rest were miscellaneous statements). These results suggest that patterns of interaction characterized by rigidness, extremeness, and excessive interruptions may be a good focus for intervention in marital therapy. If couples could learn to be more flexible and moderate and express approval rather than blame in their interactions, conflict may be more successfully averted. This in turn may have some impact on decreasing the alcoholic's drinking.

To summarize then, the arguments for involvement of the spouse of the alcoholic in treatment seem fairly cogent. From very early in the studies of treatment of alcoholism it was noticed that spouses of alcoholics show common behavior patterns. Subsequent research has suggested that these patterns may be attributed more to the stressful situation of living with an alcoholic than to a pre-existing disturbed personality common among spouses. In addition, these behavior patterns or modes of coping may play a role in the maintenance of drinking. Recent research has shown that the interaction between the spouse and the alcoholic may also be important in outcome. Interaction patterns characterized by rigidness, extremeness, ineffectual communication, and lack of expressions of approval can bring about conflict and a lack of cohesion in a relationship. These conditions are
associated with a poor treatment outcome for the alcoholic.

Research Relating to Spouse Involvement

Early case studies assessing the effects of spouse involvement in therapy found that spouse involvement had therapeutic effects on the spouses themselves. Cork (1956) and Igersheimer (1959), for example, reported increased self-understanding, release of tension, and a feeling of greater psychological support in the spouses involved in group therapy. Similarly, Pattison, Courlas, Patti, Mann, and Mullen (1965) found that those wives suffering from acute situational anxiety received support and relief from involvement in a spouse group.

Clinical trials (non-experimental studies that lack control groups) have suggested that either concurrent or conjoint spouse involvement in therapy seems to be beneficial in decreasing drinking (Gallant, Rich, Bey, & Terranova, 1970; Gliedman, Rosenthal, Frank, & Nash, 1956; Loescher, 1970; Meeks & Kelly, 1970; Pixley & Steifel, 1963; Scott, 1959). In addition, there have been reports of decreased depression and irritability in alcoholics (Gleidman et al., 1956), and improved communication between spouses and alcoholics (Meeks & Kelly, 1970; Cheek, Franks, Laucius, & Burtle, 1971; Strayer, 1959) following spouse-involvement in therapy. Greater family cohesion has also been noted in clinical trials that have involved both the spouse and the family (Esser, 1971; Pattison, 1965).

Quasi-experimental studies assessing spouse involvement in therapy have also generally shown favourable outcomes. Ewing, Long, and Wenzel (1961) compared 16 alcoholics and their spouses who
attended concurrent group therapy to 16 alcoholics whose wives did not wish to attend. Three years after the start of group therapy, it was found that more of the spouse-attending alcoholics were abstinent or very much improved (50% as compared to 19% of the no-spouse attending group), fewer showed slight or no improvement in drinking (19% as compared to 44% of the no-spouse attending group), and fewer were lost to follow-up (31% as compared to 37% of the no-spouse involvement group). However, it was also found that alcoholics with attending spouses stayed in treatment significantly longer. This makes it unclear whether it was spouse involvement, the longer duration of treatment, or an interaction between the two that was responsible for the better outcome.

Thomas, Gilliam and Walker (1960) studied 80 problem drinkers who were referred by the Court for counseling. Of these, 63 had a relative who volunteered to participate in five sessions of concurrent counseling. Follow-up (time unspecified) revealed that more of the relative involvement group were abstinent (18% as compared to 12% of the no-relative involvement group), more showed improved drinking (68% as compared to 23% of the no-relative involvement group), and fewer were unchanged or worse (14% as compared to 65% of the no-relative involvement group). In addition 69% of the relative-involved group showed improvement in family and social adjustment as compared to 35% of the no-relative involved group. Although these results do favour involvement of a relative, it should be noted that a greater percentage of the clients in the no-relative involvement group refused treatment, suggesting that the groups may have differed in
terms of their motivation for treatment.

Smith (1969) also compared alcoholics whose wives volunteered to receive concurrent group therapy to alcoholics whose wives did not volunteer. The 15 wives who participated received concurrent group therapy weekly for six months. Follow-up conducted 16 months after discharge indicated that 40% of the spouse involved group were abstinent, 20% were improved, 33% showed no change, none were dead, and 7% were lost to follow-up. This group showed significantly better outcome than the eight alcoholics whose wives didn't participate. Of that group, 12% were abstinent, 38% were improved, 25% showed no change, and 25% were dead.

In evaluating a ten-session educationally-oriented program for alcoholics and their spouses, Madden and Kenyon (1975) found at follow-up (ranging from six to 36 months) that abstinence was significantly related to greater social stability, absence of convictions, and a drinking history of less than 16 years, but not significantly correlated with the attendance of the spouse. This is the only study found in an extensive literature review that has shown that spouse involvement was unrelated to outcome. A possible explanation for this result is that the program emphasized an educational approach rather than a therapeutic one. The literature suggests that it is the interaction between the alcoholic and the spouse — and the spouse's coping behaviour — that is critical in maintaining abusive drinking. It seems likely that an educational approach would have little impact on interaction patterns; thus, spouse involvement in this type of program may be irrelevant.
Spouse involvement has also been evaluated in comparison with no treatment control and with alternate therapies. Cadogan (1973) compared 20 alcoholics and their spouses who received conjoint group therapy weekly for three to six months to 20 waiting list controls. At follow-up (ranging from zero to three months after discharge), it was found that significantly more of the spouse-involved group were abstinent (45% as compared to 10% of the control group), fewer were drinking occasionally (20% as compared to 25% of the control group), and fewer had relapsed completely (35% as compared to 65% of the control group). Thus, spouse involvement is significantly better than no treatment.

Hedberg and Campbell (1974) compared clients randomly assigned to behavioural family counseling with clients assigned to three other types of behavioural therapy (systematic desensitization, covert sensitization, and electrical aversion therapy). Each type of therapy was given in standardized sessions over one year and clients had the choice of either abstinence or controlled drinking as a treatment goal. Halfway through the program it was found that behavioural family counseling showed the best outcome with 74% of the clients attaining their goal and 13% showing much improvement. Of the ten clients in this group who chose abstinence as a goal, eight attained the goal, one showed much improvement, and one showed no improvement. Of the five clients who chose controlled drinking as a goal, three attained their goal, one showed some improvement, and one showed no improvement. (It is interesting to note that controlled drinking, at least with spouse involvement, seems to be a possible alternative to abstinence.)
One study has compared the effectiveness of the same treatment program with and without spouse involvement: Corder, Corder, and Laidlaw (1972) set up an experimental spouse involvement program in which clients followed the regular inpatient program for three weeks and spouses were invited to participate in conjoint therapy for the last four days. Twenty alcoholics who participated in this experimental program were compared to 20 alcoholics who had gone through the regular four-week program during the month prior to the study. A six-month follow-up revealed that significantly fewer of the clients from the spouse-involved group had resumed drinking (42% as compared to 85% of the no-spouse involvement group), fewer were unemployed (5% as compared to 50% of the no-spouse involvement group), and more were involved in recreational activities (31% as compared to 5% of the no-spouse involvement group). This study indicates that spouse involvement may be a useful addition to an existing program.

An additional finding of the Corder et al. (1972) study was that spouse-involved clients were more frequently involved in follow-up treatment. This finding together with the report by Burton, Kaplan, and Hudd (1968) that follow-up rate increased when spouses were involved, seems to indicate the usefulness of spouse involvement for maintaining continued contact with the alcoholic.

To summarize the spouse involvement literature: early case reports and clinical trials have suggested that spouse involvement can offer support for the spouse, decrease drinking in the alcoholic, facilitate better communication within the marital dyad, and increase family cohesion. Studies that compared alcoholics whose spouses
volunteered to attend treatment with those who did not, have generally shown favourable results —although in some cases it is not clear whether it is the spouse involvement per se that accounts for the better outcome. Spouse involvement has also been shown to be more effective than no therapy, other behavioural therapies, and a similar therapy program without spouse involvement.

One issue that has not been touched upon in the literature is that of the most efficient duration of spouse involvement. From a cost-benefit point of view, the briefest spouse involvement for a given therapeutic effect would seem to be best, because spouse involvement is more expensive (especially on an inpatient basis) and it is often inconvenient for the spouse to attend. Yet if involvement is too brief, there may be insufficient time to teach new styles of interaction, resolve marital conflict, and to offer support for the spouse.

Therefore, the present study was designed to replicate and extend previous research on the effect of spouse involvement in treatment programs for alcoholics. Specifically, the study compared the efficacy of two different durations of spouse involvement to that of no-spouse involvement in an inpatient treatment program for alcoholics. Three groups were compared: a no-spouse involvement group, a one-day conjoint spouse involvement group, and a five-day conjoint spouse involvement group.
METHOD

Subjects

The 81 alcoholics studied consisted of all those married clients who completed the 26-day residential treatment program operated by the Victoria Life Enrichment Society between the months of February and November, 1977. RCMP officers were excluded from the sample because of their involvement in another research project. Clients who attended the program between the months of February and April and who wished to have their spouses attend, participated in the one-day spouse involvement group (N=24). Those clients attending the program between the months of May and November who wished to have their spouses attend, participated in the five-day spouse involvement group (N=35). Although all married clients were encouraged to have their spouses participate there were some whose spouses did not attend. These clients formed the no-spouse involvement group (N=22).

Time and expense were the two most often cited reasons for the nonparticipation of the spouse. Some spouses who were employed full-time could not get the time off work and others with families were unable to find babysitters to take care of the children while they attended the program. The spouse involvement programs were also an added expense for the client since the one-day program cost an additional $20, and the five-day program an additional $100. Because the majority (approximately 75%) of clients at the agency resided outside of Victoria, transportation costs were a further expense.

The three groups did not differ significantly with respect to
age, sex, income, education, duration of marriage, or length of depending on alcohol. Of the total client sample, 85% were males, 15% females; the mean age was 45.8 (range, 24 to 60 years); mean duration of marriage, 19 years (range, 1 to 37 years); and mean length of dependency on alcohol, 13 years (range, 2 to 40 years). Average income was between $12,000 and $15,000 per year and a majority of the sample had completed secondary school.

Because of the inability to randomly assign clients to groups within this agency program, the three groups were also compared on the following measures which were obtained on the first day of the treatment program: clients' ratings (on five point scales) of their degree of satisfaction with their marital life, work life, social life, and home life; the number of abstinent days they had had in the 90 days prior to admission to the program; and the amount of alcohol consumed on a typical drinking day during that time. Clients also completed the Personal Orientation Inventory (Shostrum, 1962) on the first and last day of the treatment program.

Program

The treatment program focuses on life-style change through a humanistic (primarily gestalt) therapy approach. Although clients are free to choose either abstinence or controlled drinking as their drinking goal, the program is oriented towards abstinence. Clients without spouses or those with spouses who did not attend the spouse program followed the regular 26-day program, which included daily three-hour group therapy sessions, didactic lectures and discussion groups, films, communication exercises, yoga and physical fitness,
Alcoholics Anonymous meetings, and recreational activities.

Clients who participated in the **one-day spouse involvement** group followed the regular program with the exception of one Friday in the third week. Spouses arrived the evening before and were joined by the clients for a brief lecture concerning the goals and philosophy of the program. The spouse program was presented as an opportunity for partners to honestly assess their feelings for one another and to evaluate their relationship; it was emphasized that the program would not, however, be a place where marital difficulties would be resolved. Following the lecture, couples participated in small group exercises designed to facilitate communication and provide an opportunity for couples to meet each other. They were also given a series of questionnaires to be completed for the following day. The questionnaires were designed to explore four main themes: the extent to which partners were familiar with each others' behaviours and personality; positive and negative feelings partners had toward each other; an assessment of the strengths and weaknesses of their relationship; and the plans couples had for their relationship. The following day was spent sharing this information in small groups of couples as well as engaging in various communication and trust exercises. The spouse program ended on the Friday evening, and typically alcoholics and their spouses spent the weekend together with clients returning to the regular program for the fourth week.

Clients who participated in the **five-day spouse involvement** program followed the regular program until the last week. At the beginning of the last week, spouses moved into the treatment agency.
During the week clients and their spouses attended daily three hour conjoint group therapy sessions, didactic lectures and discussion groups, communication and trust exercises, AA and Al-Anon meetings, and a meeting with representatives from follow-up treatment agencies. The themes for the five-day spouse involvement program were similar to the one-day spouse involvement program, but because of the extended time, were dealt with more intensively. Again, with the aid of the questionnaires used in the one-day program (as well as one additional questionnaire), couples were encouraged to assess their feelings for one another, the strengths and weaknesses of the relationship, and the kind of commitments they were willing to make to each other. Group therapy sessions also focused on areas of conflict between partners and appropriate ways that the conflict could be resolved.

All activities in both spouse programs were supervised by two of the staff members. Staff included two psychologists, a social worker, two trained lay counselors, and a physician.

Follow-Up

As part of an ongoing program evaluation, the agency had arranged to contact clients for follow-up between the months of February and May, 1978. Because clients had attended the program at different times (from February through November, 1977) but had to be followed-up during the interval from February through May, 1978, follow-up periods ranged between six and 14 months. The mean follow-up period was 9.26 months. Most of the clients were contacted by telephone, some by mail, and one was interviewed personally. All of the interviews were conducted by clinical psychology graduate students with the exception
of one conducted by an agency staff member.

In addition to the measures used in the pretreatment assessment, follow-up information included the following additional outcome measures: drinking indices -- including the occurrence of any drinking episodes and any change reported in alcohol consumption since leaving the program; any change in financial, marital, or employment status and the nature of that change; number of days absent from work during the last three months; extent of involvement in AA and counseling services since leaving the program; duration of time that Antabuse was taken; a rating of overall life satisfaction; and ratings of the degree of help the spouse program provided to the client and the client's spouse (see Appendix 1 for complete questionnaire).

Clients Lost to Follow-Up

Every effort was made to contact all of the clients. Those who were not at home or out of town when the initial follow-up attempt was made were repeatedly called until contact was made. For those clients who had moved and left no forwarding address, spouses and apartment managers were consulted for forwarding addresses, telephone directories were checked, and staff at the treatment agency were contacted for information concerning them.

Of the 81 clients who participated in the program, 70 completed the follow-up interview. Two of the clients in the five-day spouse involvement group refused to participate in the follow-up and one client in the no-spouse involvement group only partially completed it. In addition, five clients in the five-day spouse involvement group, two in the one-day spouse involvement group, and one in the no-spouse
involvement group could not be located. Thus, complete follow-up information was available for 28 clients in the five-day spouse involvement group, 22 in the one-day spouse involvement group, and 20 in the no-spouse involvement group. However, some relevant information was available for two of the eight clients who could not be contacted (one from the five-day spouse involvement group and one from the no-spouse involvement group). In one case, this information was obtained from the client's spouse and in the second case from a staff member of the treatment agency who had previously contacted the client. This information, though incomplete, was of sufficient value to be included in the analyses.

Moos and Bliss (1978) have found that the treatment outcome of clients who were more difficult to locate was generally worse than that of clients who were easy to locate, but this poorer outcome was accounted for by sociodemographic variables at intake. Clients who were difficult to locate tended to be younger, single or separated, have less education, less income, and less residential stability. To determine whether clients who could not be located in this study might be expected to have poorer outcomes than clients who were contacted, the two groups were compared on the demographic variables of age, educational level, and income.
RESULTS

Although clients who were not able to be contacted did have significantly less education, $F(1,73) = 4.91$, $p < .03$, they tended to be older (nonsignificant difference) and have more income (nonsignificant difference) than those who were contacted. Furthermore, all of those not contacted were married. This would suggest that by Moos and Bliss' criteria (1978), there would be little reason to expect that group to have poorer outcome than those who were contacted.

Clients from the five-day, one-day, and no-spouse involvement groups were compared on the measures that were obtained on the first day of treatment. A MANOVA showed no significant differences among the groups on their scores on the 12 scales of the Personal Orientation Inventory (see Appendix 2). One-way univariate analyses of variance revealed no significant differences among the groups on their ratings of marital, work, social, and home life satisfaction, the number of abstinent days in the 90 days prior to treatment, and the average amount of alcohol consumed on a drinking day during that time (see Appendix 3). However, two trends were noted on the measures of marital satisfaction and alcohol consumption. Clients in the no-spouse involvement group showed less marital satisfaction ($p < .06$) and greater alcohol consumption ($p < .07$) than the other two groups.

Using the prescores as covariates, analyses of covariance were performed on the 12 Personal Orientation Inventory scores obtained on the last day of treatment (see Appendix 2). Only scale eight which measures the ability to accept self weaknesses, showed significant
differences among the groups, $F(2,64) = 3.34, p < .04$, with the one-day spouse involvement group showing lower scores than the five-day spouse involvement group ($p < .03$) and the no-spouse involvement group ($p < .02$) (single degree of freedom contrasts). Since this was but one of 12 statistical tests performed on correlated measures, it is possible that this comparison could have reached statistical significance by chance alone. Accordingly, caution should be exercised in interpreting this finding.

When both prescores and follow-up scores were available, gain scores were calculated and analyzed using univariate analyses of variance. The gain scores reflected changes from before treatment to follow-up in: the degree of satisfaction with marital, work, social, and home life, the number of abstinent days in the last 90 days, and the average amount of alcohol consumed on a drinking day during that time. Although the probability of a type one error is increased when univariate analyses are performed on correlated measures, univariate rather than multivariate analyses were chosen because the agency was specifically interested in the effects of spouse involvement on each of these indices. There were no significant group effects on any of the variables. A trend ($p < .06$) was noted for gains in number of days abstinent in the last 90 days with the one-day spouse involvement group showing more abstinent days than either the five-day or the no-spouse involvement groups (see Appendix 3).

A principal component analysis was performed on the follow-up ratings of marital, work, social, and home life satisfaction and an ANOVA was done on the first principal component scores. No significant
differences were found (see Appendix 4).

Analyses of variance of proportions revealed no significant differences among the groups on any of the following dependent variables: percentage currently unemployed; percentage who had separated or divorced; percentage who had attended AA since the program; percentage who had consumed alcohol since the program; and the percentage who had been abstinent in the last 90 days prior to follow-up. There was a significant difference, however, in the percentage of clients who had been practising controlled drinking, defined as four ounces or less of alcohol (40% by volume) per day, in the 90 days prior to follow-up ($\chi^2 = 9.06, df = 2, p < .01$). The five-day spouse involvement group showed more controlled drinking than either the one-day spouse involvement group ($p < .05$) or the no-spouse involvement group ($p < .01$) (Mariscuilo's large sample chi square analogue of Scheffé type multiple comparisons).

A MANOVA revealed no significant differences among the groups on the following outcome measures: change in financial situation since completion of the program; change in alcohol consumption since the program; number of days absent from work in the last three months; length of time on Antabuse; and number of contacts with a counselor since the program (see Appendix 6).

Clients from both spouse involvement groups rated the degree of helpfulness they thought the spouse program had been for themselves and for their spouses. A Hotelling's $T^2$ test was performed on the ratings and no significant differences were found between the groups. On a five-point scale ranging from very unhelpful to very helpful,
clients from both groups rated the spouse programs as being both helpful for themselves ($\bar{X} = 4.13$, $SD = 1.26$) and helpful for their spouses ($\bar{X} = 3.98$, $SD = 1.36$) (see Appendix 7).

As mentioned previously, it was necessary to follow-up clients in all groups during the same four-month interval in spite of the fact that the programs were conducted sequentially. The follow-up intervals, therefore, varied significantly among the groups. The five-day spouse involvement group was followed-up after a mean of 7.67 months, the one-day spouse involvement group after 11.11 months, and the no-spouse involvement group after 9.45 months. In order to determine whether follow-up time was a confounding factor, data from the clients who had been followed-up at the shortest and longest time intervals were excluded and the data were reanalyzed. When the 13 clients with the shortest follow-up time were excluded from the five-day spouse involvement group, and the eight clients with the longest follow-up time were excluded from the one-day spouse involvement group, mean follow-up times for the groups were not significantly different. Reanalysis of the data with the smaller sample was consistent with the results obtained with the larger sample with one exception. Although, in terms of the number of days abstinent during the preceding three month interval, the one-day spouse involvement group still showed larger gains than the five-day and no-spouse involvement groups, the nonsignificant trend shown with the larger sample was no longer present. It seems likely that the reduction in sample size and the corresponding reduction in power is the most likely explanation for this occurrence. Since this was the only discrepancy in results for
the large and small samples, the results for the former will be dis-
cussed.
DISCUSSION

Despite the fact that the groups were not randomly assigned, there were no significant pretreatment differences among the groups in terms of demographic variables, Personal Orientation Inventory scores, measures of marital, work, social, and home life satisfaction, or frequency and amount of drinking. Only two differences even approached significance. Clients in the no-spouse involvement group tended to have lower marital satisfaction scores and to consume more alcohol on an average drinking day than either of the other groups. It should be noted, however, that these trends were found when multiple ANOVA's were performed on correlated measures, a procedure that increases the probability of a type one error. Thus, although the possibility exists that the groups may have differed significantly prior to treatment, there is no compelling evidence to suggest that this is the case.

Although clients in the two spouse involvement groups indicated that the spouse programs were helpful both to themselves and to their spouses, the results showed that spouse involvement in treatment had very little effect. Indeed, it had no significant effect on the client's marital life, home life, social life, work life, or his perception of the degree of satisfaction he felt with his life in general. Moreover, it had no significant influence on his involvement in AA or in follow-up treatment, nor on the duration of time that the client took Antabuse. Clients whose spouses were involved were no more self-actualized (as measured by the Personal Orientation
Inventory) nor did they show any greater change in their daily consumption of alcohol than clients without spouse involvement. There was but one variable that succeeded in differentiating the three groups. Significantly more clients in the five-day spouse involvement group practiced controlled drinking during the 90 days prior to follow-up than either the one-day or the no-spouse involvement groups.

Only 5% of the no-spouse involvement group and 9% of the one-day spouse involvement group practiced controlled drinking during the 90 days prior to follow-up as compared to 36% of the five-day spouse involvement group. These data would suggest that intensive spouse involvement (i.e., five days) may facilitate the goal of controlled drinking for the alcoholic.

It could be argued that the pretreatment differences in alcohol consumption for the three groups may account for this controlled drinking difference. Clients in the no-spouse involvement group drank an average of 19.70 ounces of alcohol per day prior to treatment, as compared to 13.64 ounces for the one-day spouse involvement group and 14.20 ounces for the five-day spouse involvement group. If post-treatment alcohol consumption were simply a function of pretreatment consumption rates, the no-spouse involvement group would be expected to have the lowest posttreatment proportion of controlled drinkers. If this were the case, however, then the one-day and the five-day spouse involvement groups would be expected to have similar posttreatment proportions of controlled drinkers because of the comparability of their pretreatment rates of consumption. In fact, the one-day spouse involvement group showed a significantly lower proportion of controlled drinkers than the five-day spouse involvement
group. Thus, it would appear that pretreatment alcohol consumption rates do not account for controlled drinking.

At this point one can only speculate as to why intensive spouse involvement may facilitate controlled drinking. There is evidence to suggest that the interaction between alcoholics and their spouses tends to be rigid, extreme, and lacking in variability (Steinglass et al., 1977; Kennedy, 1976). One goal of the five-day spouse involvement program was to make clients and their spouses more aware of their style of interaction and to provide couples with an opportunity to experiment with alternate interaction patterns. Couples were encouraged to try compromise and negotiation in the marital interaction. Hopefully, this intervention strategy would enable couples to become more adept at problem solving and more flexible in their demands of each other. Moreover, this kind of training may have had some effect on the clients' personal treatment goals. During the program, clients frequently commented that they would like to be able to resume drinking whereas spouses typically professed that they would not tolerate any drinking. A possible compromise for these two extreme positions would be that of controlled drinking: clients could resume drinking providing that their drinking was moderate and did not create problems within the relationship. If the client was successful in his attempts at controlled drinking, then this would be a more mutually acceptable goal for the client and the spouse. Future research examining the spouse's attitudes towards the alcoholic's drinking, following intensive spouse involvement in therapy may provide further evidence for the hypothesis that it is the greater flexibility and willingness to
compromise that accounts for the significantly greater increase in controlled drinking following intensive spouse involvement in therapy.

Clients in the one-day spouse involvement group showed somewhat greater (although nonsignificant) gains in number of abstinent days from pretreatment to follow-up than did clients from either of the other two groups. This trend suggests that brief spouse involvement (i.e., one day) may facilitate the goal of abstinence for the alcoholic. The one-day spouse involvement program differed from the five-day spouse involvement program in that it did not offer the same opportunity for partners to experiment with new interaction patterns. Compromise and negotiation, especially with respect to the client's drinking goal, would then be less likely to have occurred in the one-day spouse involvement group with the result that many more of the clients may have chosen abstinence as their goal.

Both spouse involvement programs did, however, provide an occasion for partners to share their feelings, assess the strengths and weaknesses of the relationship, and to make plans for the future. Many clients (from both spouse groups) commented both during therapy and at follow-up that they felt greater support and understanding from their spouse when they left the program, feelings that may increase the likelihood that the client's personal drinking goal will be maintained. In the case of the one-day spouse involvement group, the more likely drinking goal might have been abstinence, whereas in the five-day spouse involvement group either abstinence or controlled drinking may have been chosen.

If this trend of greater gains in abstinence
following brief spouse involvement in therapy is replicated, it would suggest that brief spouse involvement furthers the goal of abstinence. Clients from this study will be followed-up again at twelve months, thereby providing a second opportunity to assess this apparent relationship.

Although 62% of the clients in the no-spouse involvement group were abstinent in the 90 days prior to follow-up, this group did not show as much gain in abstinence as the one-day spouse involvement group and showed significantly less controlled drinking than the five-day spouse involvement group. The follow-up data (see Appendix 8) indicated that there was greater variability in outcome for the no-spouse involvement group than the other two groups: clients without spouse involvement seemed either to be abstinent or drinking excessively. Having the spouse involved in this treatment program may serve as a moderating influence; that is, if the client experiences a slip, the spouse may be more likely to offer the support necessary for the client to either stop or to control his drinking. Without that support, he may relapse and return to his old patterns of excessive drinking.

Although spouse involvement did have a significant impact on controlled drinking and may have had some effect on gains in abstinence, no differences were found on most criterion measures between clients whose spouses attended and those who did not. The results in this study seem rather discrepant with other studies that have evaluated spouse involvement in the treatment of alcohol abuse. One explanation for this discrepancy may be the high success rate of the
program regardless of spouse involvement; that is, the no-spouse involvement treatment program may have had such a high success rate already, that a ceiling effect occurred whereby spouse involvement did not add substantially to the program's success.

In reviewing the 15 most successful outcome studies in the alcoholism treatment literature, Costello (1975) found, at one year follow-up, that 45% of the alcoholics in those studies were successful in moderating or terminating their drinking, 44% were still drinking with an associated problem, 1% were dead, and 10% were lost to follow-up. The present evaluation of the no-spouse involvement group for this program showed that at an average of 9.26 months follow-up, 63.5% were successful in moderating or terminating their drinking (59% abstinent, 4.5% controlled drinking), 32% were still drinking with an associated problem, and 4.5% were lost to follow-up. While it might be argued that the better outcome for this agency may be due to shorter follow-up time, this is unlikely in view of Hunt and General's review (1973) of alcohol relapse rates, which showed almost no change in relapse rates between nine and 12 months follow-up. Thus, it would appear that the outcome for the regular treatment program in this agency surpasses (the average of) the most favourable outcome cited in the literature.

It is widely known that certain client characteristics are good prognostic indicators of success in alcohol treatment programs (see review by Baekeland, 1977). In particular, occupational and marital stability and high socioeconomic status have been repeatedly shown to be positively related to successful outcome. It is possible that
the better outcome at the Victoria program may simply be a function of more favourable client characteristics. Clients included in this study were indeed a select group: all were married, the majority could be classified as middle class (mean income above $13,000), most of the sample had completed high school, and only 7% were unemployed. Furthermore, clients who showed any overt psychoses or neurological disabilities were excluded from the program. An examination of the 15 studies showing the best outcome in Costello's review, however, reveals an equally select group. Most of these studies indicated that they excluded high risk clients such as vagrants, transients, and clients with serious physical or mental disease, and all but one of the studies reporting on socioeconomic status of the clients indicated that they were of middle or upper class status. Studies reporting on marital status indicated that 70-100% of their clients were married, and three other studies specified that clients had to have contact with relatives or be able to demonstrate good interpersonal relationships in order to qualify for the program. Thus, it would seem unlikely that client characteristics adequately account for the better outcome at the Victoria program.

The type of outcome measures utilized were also comparable to those reviewed by Costello (1975). The measures in the present study were based upon the client's self-report. Outcome measures in the studies reviewed by Costello were also based on self-reports of the client, a collateral, or both. Moreover, the literature suggests that alcoholics' self-reports are both highly reliable and valid (Sobell, 1976; Sobell, Sobell, & Samuels, 1974; Sobell & Sobell, 1975)
and that alcoholics' and collaterals' self-reports usually concur (Maisto, Sobell, & Sobell, 1977).

In comparing the abstinence rate of the no-spouse involvement group at the Victoria program to those of other no-spouse involvement groups reported in the literature, further differences are found. Compared to the 59% abstinence rate at the Victoria program, Corder et al. (1972) found 15% of their clients abstinent in their no-spouse involvement group; Ewing et al. (1961) found 19% abstinent; Smith (1969), 12% abstinent; and Thomas et al. (1960), 12% abstinent. These differences cannot be readily explained by the methods of obtaining outcome measures or by differences in client characteristics. All of the studies used either the client's or the client's and collateral's self-reports. Client characteristics were also comparable. All of the clients in the studies by Corder et al., Ewing et al., and Smith were married and in the study by Thomas et al., 75% were married and only those clients who gave evidence of stability and family support were included. In terms of occupational stability, Corder et al. and Thomas et al. reported that 90% and 94% of their clients were employed and Ewing et al. noted that the majority of their clients were employed and consisted primarily of business and professional men.

Indeed, the 59% abstinence rate for the no-spouse involvement group at the Victoria program can be favourably compared to spouse-involvement groups in other studies. Corder et al. found 55% abstinent in his spouse involvement group; Ewing et al. found 50% abstinent; Smith, 40% abstinent; Thomas et al., 18% abstinent; and
Cadogan (1973), 45% abstinent. These treatment programs having relatively modest abstinence rates initially, have been able to show substantial improvement with the addition of spouse involvement. The regular program at the Victoria agency, however, already has a success rate exceeding that of spouse-involvement programs reported in the literature. This would suggest that the program may have such an impact that spouse involvement does not add substantially to it. There are at least two possible explanations for this occurrence. Perhaps there is a ceiling effect operating, that is, the abstinence rate is already so high that adding different components to the program (e.g., spouse involvement) will only produce small increments. Alternatively, it is possible that much of what was offered in the spouse programs was already a part of the intensive regular program. For example, in the spouse programs clients received feedback pertaining to their interaction style and communication skills with their spouses. However, clients in the regular program were given similar feedback about their interaction with other clients and with staff. It seems likely that changes that the client makes in his interaction style during the regular program would affect the client's marital interaction. This would suggest that in treatment programs where intervention is focused on problems in interpersonal interaction spouse involvement may not result in substantial gains for the clients.

Length of follow-up time may also have had some influence on the apparent effectiveness of spouse involvement. Most of the studies in the literature conducted follow-up immediately after treatment (e.g., Cheek et al., 1971; Esser, 1971; Gliedman et al., 1956; Hedberg &
Campbell, 1974; Meeks & Kelly, 1970; Pattison et al., 1965; Pixley & Steifel, 1963). Few studies reported a follow-up of six months or more (Corder et al., 1972; Burton & Kaplan, 1968; Ewing et al., 1961; Smith, 1969). In reviewing relapse rates from alcohol programs, Hunt, Barnett, and Branch (1971) and Hunt and General (1973) noted that about two-thirds of alcoholics relapse within three months of treatment while one-third seem to maintain abstinence for a year. Emrick (1975) has further commented that many researchers report a high drinking relapse rate during the first six months after treatment. In that most of the previously reported evaluations of spouse involvement have been conducted immediately following treatment, the extent to which its effects are maintained is largely unknown. Perhaps the absence of any substantial effect with spouse involvement in the Victoria program can be further explained by the relatively long follow-up period of 9.26 months. Further research examining the relationship between follow-up time and outcome for spouse involvement is needed to clarify this issue.

In conclusion, many studies in the literature have found that involving the spouse in treatment appears to have a powerful impact on the treatment outcome for the alcoholic when compared to no-spouse involvement. In this study, two durations of spouse involvement were compared to the regular treatment program of no spouse involvement. Unlike other studies in the field, the no-spouse involvement group did not differ from the spouse involvement group on most of the criterion measures, a finding that may be at least partially accounted for by the high success rate of all the groups. The longer follow-up
time for this study may also partly explain the lack of striking differences between the groups. The one-day spouse group did show a trend for greater gains in abstinence than either of the other groups, suggesting that brief spouse involvement may further the goal of abstinence. In contrast, the five-day spouse group showed significantly more controlled drinking than the other two groups, suggesting that longer, more intensive spouse involvement make controlled drinking a more plausible goal for the alcoholic.

In terms of cost-effectiveness, the one-day spouse program which involves little of the spouse's time and minimal additional expense may be desirable for programs such as this one emphasizing abstinence. However, programs that have a controlled drinking goal might consider the present findings as suggestive of increased benefit with longer or more intense spouse involvement. Further research on this possibility would be desirable.

Finally, it might be suggested from the comparison of these findings to the existing literature, that adding spouse involvement may be most beneficial in those programs that have modest success rates (below 25%) but of less benefit to programs whose success rate without spouse involvement is already substantial (above 50%).
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APPENDIX 1
Follow-Up Questionnaire

1. Has there been any change in your employment status since leaving VLES? CHECK EITHER YES OR NO. 1. ____ YES 2. ____ NO
   (a) If yes, what was the nature of the change? CHECK THE APPROPRIATE ALTERNATIVE BELOW:
   1. ____ secured full-time employment
   2. ____ secured part-time employment
   3. ____ promoted
   4. ____ demoted
   5. ____ changed to a different job
   6. ____ unemployed (lost or quit job)
   7. ____ retired
   8. ____ other (specify) 

2. Has there been any change in your financial situation since leaving VLES? CIRCLE ONE ALTERNATIVE BELOW
   much better about the same worse much worse
   IF YOU ARE CURRENTLY UNEMPLOYED PROCEED TO QUESTION 6. IF YOU ARE CURRENTLY EMPLOYED ANSWER THE FOLLOWING:

3. Rate your performance at work during the last 3 months. CIRCLE ONE ALTERNATIVE
   very good good fair poor very poor

4. In the last 3 months have you missed any days of work? 1. ____ YES 2. ____ NO
   (a) If yes, how many days? _______ days

5. In the last 3 months have you ever been late for work? 1. ____ YES 2. ____ NO
   (a) If yes, how many hours? _______ hours

6. IF YOU ARE CURRENTLY UNEMPLOYED, how long have you been unemployed? 1. ____ one week or less
2. ___ 1-2 weeks
3. ___ 2 weeks - 1 month
4. ___ 1-2 months
5. ___ 2-6 months
6. ___ 6 months - 1 year
7. ___ more than 1 year

7. Has there been any change in your marital status since leaving VLES?
   1. ___ Yes
   2. ___ No

   If yes, what was the nature of the change?
   1. ___ reconciled with spouse
   2. ___ married
   3. ___ separated
   4. ___ divorced
   5. ___ other (specify) _____________________________

8. We would like to know how satisfied you are with a number of life situations. INDICATE HOW SATISFACTORY EACH SITUATION IS BY CHECKING ONE BOX PER SITUATION.

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9. Have you attended A.A. since leaving VLES?
   1. ____ Yes
   2. ____ No

   (a) If yes, how often on the average do you attend?
   1. ____ once per month
   2. ____ twice per month
   3. ____ once per week
   4. ____ twice per week
   5. ____ more than twice per week

10. Have you seen a counsellor since leaving VLES?
    1. ____ Yes
    2. ____ No

    (a) If yes, approximately how many times? ______ times

11. Was Antabuse part of your going home plan? CIRCLE ONE.
    1. ____ Yes
    2. ____ No

    (a) If yes, how long did you take it?
    1. ____ one week or less
    2. ____ 1-2 weeks
    3. ____ 2 weeks-1 month
    4. ____ 1-3 months
    5. ____ 4-6 months
    6. ____ 6 months-1 year
    7. ____ 2 years or more.

    (b) Are you still taking Antabuse?
    1. ____ Yes
    2. ____ No
    3. ____ Off and One

12. Have you consumed any alcohol since leaving VLES?
    1. ____ Yes
    2. ____ No

13. How many of the last 90 days have you been totally dry?
    ____________ # of days.
14. During the last 3 months how much alcohol did you usually consume on an average drinking day? INDICATE BOTH THE AMOUNT AND TYPE OF BEVERAGE.

15. Compared to when you first came to VLES, do you now drink ...

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16. Since leaving VLES has your use of alcohol been:

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<th>a very severe problem</th>
<th>a major problem</th>
<th>somewhat of a problem</th>
<th>a slight problem</th>
<th>no problem at all</th>
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</table>
17. When at VLES, did your husband/wife attend the spouse program?

1. ___ Yes
2. ___ No

18. (a) If yes, how helpful to you personally was the fact that he/she attended?

very unhelpful partly unhelpful/ partly helpful helpful very helpful

18. (b) If yes, how helpful do you think the spouse program was to your wife/husband?

very unhelpful partly unhelpful/ partly helpful helpful very helpful
## APPENDIX 2

**Pretest and Adjusted Posttest Group Means: Multivariate Analysis of Variance and Analyses of Covariance**

<table>
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<th>Variable</th>
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APPENDIX 2 continued

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</tr>
<tr>
<td>Pretest</td>
<td>5.19</td>
<td>6.22</td>
<td>6.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest</td>
<td>6.74</td>
<td>7.14</td>
<td>7.04</td>
<td>.71</td>
<td>.42</td>
</tr>
<tr>
<td>Scale 11</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>13.44</td>
<td>14.78</td>
<td>13.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest</td>
<td>17.89</td>
<td>16.80</td>
<td>17.86</td>
<td>7.29</td>
<td>.89</td>
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<td>Scale 12</td>
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</tr>
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<td>15.31</td>
<td>15.39</td>
<td>15.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest</td>
<td>20.30</td>
<td>18.69</td>
<td>20.25</td>
<td>16.50</td>
<td>1.81</td>
</tr>
</tbody>
</table>

*p < .05

Note. F value for MANOVA on pretest scores is .88
## APPENDIX 3

Pretest, Follow-Up, and Change Score: Group Means and Standard Deviations: Analyses of Variance

<table>
<thead>
<tr>
<th>Variable</th>
<th>No Spouse</th>
<th>1 Day</th>
<th>5 Day</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marital Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>3.35</td>
<td>2.59</td>
<td>3.10</td>
<td>3.22</td>
<td>2.97*</td>
</tr>
<tr>
<td></td>
<td>(1.14)</td>
<td>(0.91)</td>
<td>(1.06)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-Up</td>
<td>2.65</td>
<td>2.27</td>
<td>2.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>-0.70</td>
<td>-0.32</td>
<td>-0.93</td>
<td>2.31</td>
<td>1.14</td>
</tr>
<tr>
<td></td>
<td>(1.49)</td>
<td>(1.46)</td>
<td>(1.33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Work Life Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>2.00</td>
<td>2.09</td>
<td>2.32</td>
<td>0.67</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>(0.86)</td>
<td>(0.61)</td>
<td>(0.86)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-Up</td>
<td>2.10</td>
<td>2.09</td>
<td>1.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>0.10</td>
<td>0.00</td>
<td>-0.36</td>
<td>1.43</td>
<td>0.47</td>
</tr>
<tr>
<td></td>
<td>(1.55)</td>
<td>(1.57)</td>
<td>(0.99)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Life Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>3.70</td>
<td>3.27</td>
<td>3.60</td>
<td>1.10</td>
<td>1.03</td>
</tr>
<tr>
<td></td>
<td>(1.08)</td>
<td>(1.03)</td>
<td>(0.99)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-Up</td>
<td>2.25</td>
<td>2.05</td>
<td>2.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>-1.45</td>
<td>-1.22</td>
<td>-1.43</td>
<td>0.34</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>(1.19)</td>
<td>(1.34)</td>
<td>(1.28)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Home Life Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>3.05</td>
<td>2.72</td>
<td>3.10</td>
<td>0.97</td>
<td>0.96</td>
</tr>
<tr>
<td></td>
<td>(1.05)</td>
<td>(0.93)</td>
<td>(1.03)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-Up</td>
<td>2.45</td>
<td>1.81</td>
<td>2.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>-0.60</td>
<td>-0.91</td>
<td>-1.03</td>
<td>1.13</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>(1.27)</td>
<td>(1.44)</td>
<td>(1.26)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number Days Abstinent in Last 90 Days</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>41.05</td>
<td>31.23</td>
<td>38.76</td>
<td>657.88</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>(31.02)</td>
<td>(28.90)</td>
<td>(20.62)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-Up</td>
<td>77.85</td>
<td>85.18</td>
<td>74.07</td>
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</tr>
<tr>
<td>Change</td>
<td>36.80</td>
<td>53.95</td>
<td>35.31</td>
<td>2347.20</td>
<td>2.93*</td>
</tr>
<tr>
<td></td>
<td>(34.92)</td>
<td>(28.57)</td>
<td>(21.74)</td>
<td></td>
<td></td>
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</tbody>
</table>

... continued
APPENDIX 3 continued

<table>
<thead>
<tr>
<th>Variable</th>
<th>No Spouse</th>
<th>1 Day</th>
<th>5 Day</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of Alcohol Consumed on Drinking Day</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>19.70</td>
<td>13.65</td>
<td>14.20</td>
<td>223.48</td>
<td>2.81*</td>
</tr>
<tr>
<td></td>
<td>(6.89)</td>
<td>(12.01)</td>
<td>(7.85)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-Up</td>
<td>5.10</td>
<td>3.30</td>
<td>3.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>-14.60</td>
<td>-10.35</td>
<td>-10.40</td>
<td>120.59</td>
<td>0.87</td>
</tr>
<tr>
<td></td>
<td>(11.72)</td>
<td>(13.79)</td>
<td>(10.33)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .10

**Note:** Scores on satisfaction ratings range from 1 (very satisfactory) to 5 (very unsatisfactory)

**Note:** Standard deviations are shown in parentheses on this and subsequent tables.
APPENDIX 4

Group Means and Standard Deviations for First Principal Component Scores on Marital, Work, Social, Home, and Life Satisfaction Ratings: Analysis of Variance

<table>
<thead>
<tr>
<th>Variable</th>
<th>No Spouse</th>
<th>1 Day</th>
<th>5 Day</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>51.85</td>
<td>48.68</td>
<td>49.59</td>
<td>55.97</td>
<td>.54</td>
</tr>
<tr>
<td></td>
<td>(10.07)</td>
<td>(10.63)</td>
<td>(9.78)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Higher scores indicate greater satisfaction.*
APPENDIX 5

Analyses of Variance of Proportions:
Frequency Data of Persons Unemployed, Separated or Divorced,
Attended AA, Consumed Alcohol since Treatment,
Abstinent in Last 90 Days, and Controlled
Drinking in Last 90 Days as a
Function of Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>No Spouse</th>
<th>1 Day</th>
<th>5 Day</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Unemployed</td>
<td>14.3</td>
<td>13.6</td>
<td>0.0</td>
<td>4.273</td>
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<tr>
<td>Separated or Divorced</td>
<td>14.3</td>
<td>17.4</td>
<td>7.4</td>
<td>1.343</td>
</tr>
<tr>
<td>Attended AA since Treatment</td>
<td>55.0</td>
<td>68.2</td>
<td>69.2</td>
<td>1.129</td>
</tr>
<tr>
<td>Consumed Alcohol since Treatment</td>
<td>71.4</td>
<td>52.2</td>
<td>79.3</td>
<td>4.476</td>
</tr>
<tr>
<td>Abstinent in Last 90 Days</td>
<td>61.9</td>
<td>59.1</td>
<td>35.7</td>
<td>4.496</td>
</tr>
<tr>
<td>Controlled Drinking in Last 90 Days</td>
<td>5.0</td>
<td>9.1</td>
<td>35.7</td>
<td>9.062*</td>
</tr>
</tbody>
</table>

*p < .01

Note. Percentages are based on those clients that were contacted or for which factual information was available (not the total sample for each group).
APPENDIX 6

Follow-Up Group Means and Standard Deviations:

Multivariate Analysis of Variance

<table>
<thead>
<tr>
<th>Variable</th>
<th>No Spouse</th>
<th>1 Day</th>
<th>5 Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Financial Status</td>
<td>2.70</td>
<td>2.54</td>
<td>2.68</td>
</tr>
<tr>
<td></td>
<td>(0.92)</td>
<td>(1.06)</td>
<td>(0.61)</td>
</tr>
<tr>
<td>Number of Days Absent from Work in Last 90 Days</td>
<td>1.20</td>
<td>0.55</td>
<td>1.96</td>
</tr>
<tr>
<td></td>
<td>(2.12)</td>
<td>(1.26)</td>
<td>(6.20)</td>
</tr>
<tr>
<td>Rating of Satisfaction with Life in General</td>
<td>2.25</td>
<td>2.09</td>
<td>2.25</td>
</tr>
<tr>
<td></td>
<td>(1.20)</td>
<td>(1.11)</td>
<td>(0.93)</td>
</tr>
<tr>
<td>Number of Times Seen a Counselor</td>
<td>4.25</td>
<td>6.04</td>
<td>7.32</td>
</tr>
<tr>
<td></td>
<td>(8.75)</td>
<td>(9.49)</td>
<td>(10.42)</td>
</tr>
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<td>Length of Time on Antabuse</td>
<td>3.50</td>
<td>2.73</td>
<td>2.78</td>
</tr>
<tr>
<td></td>
<td>(2.44)</td>
<td>(2.45)</td>
<td>(2.28)</td>
</tr>
<tr>
<td>Now Drink More or Less</td>
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<td>4.86</td>
<td>4.86</td>
</tr>
<tr>
<td></td>
<td>(0.73)</td>
<td>(0.64)</td>
<td>(0.59)</td>
</tr>
</tbody>
</table>

Note. F value for MANOVA is .41
APPENDIX 7

Follow-Up Group Means and Standard Deviations:

Hotellings $T^2$

<table>
<thead>
<tr>
<th>Variable</th>
<th>1 Day</th>
<th>5 Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating of How Helpful Spouse Program was to Client</td>
<td>4.10 (1.05)</td>
<td>4.14 (1.41)</td>
</tr>
<tr>
<td>Rating of How Helpful Spouse Program was to Spouse</td>
<td>3.73 (1.24)</td>
<td>4.14 (1.43)</td>
</tr>
</tbody>
</table>

Note. Scores range from 1 (very unhelpful) to 5 (very helpful).

$F$ value for Hotellings $T^2$ is 1.14
APPENDIX 8

Drinking Index: Number of Abstinent Days in the 90 Days Prior to Follow-Up/Amount of Alcohol Consumed on an Average Drinking Day

No Spouse Involvement Group N = 20

... continued
APPENDIX 8 continued

One-Day Spouse Involvement Group N = 22

*continued*
APPENDIX 8 continued

Five-Day Spouse Involvement Group N = 28