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# FINAL REPORT

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**FINAL REPORT**

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# Alcohol Problems and Violence Against Women

William R. Downs, Ph.D.

## INTRODUCTION AND PROJECT DESCRIPTION

There is a need for improved definitional and conceptual clarity regarding partner abuse and substance abuse. Women's experiences of both physical violence and psychological abuse from men with whom they have relationships have recently been found predictive of negative consequences, including health problems, mental health problems and substance abuse (Miller and Downs, 2000). These associations have been found for women in marital as well as nonmarital relationships. Throughout this report I will adopt the definitions of Downs and Miller (in press): " 'partner violence' is [the inclusive term] used to refer to all acts of physical violence that women experience in their intimate relationships with partners" (Downs and Miller, in press: pp. ), and " 'partner abuse' is used to refer to both physical and nonphysical acts intended to threaten, induce fear, control, or reduce self-esteem of women" (Downs and Miller, in press: pp. ). Furthermore, for purposes of simplicity, throughout this report I will adopt the terminology of Downs and Miller (in press) in that "substance abuse" will be used "in a generic and inclusive sense to refer to alcoholism, alcohol dependence, alcohol abuse, drug dependence, and drug abuse" (Downs and Miller, in press: pp. ).

A large percentage of women experience partner violence on an annual basis. In a nationwide study using a large random sample (N = 6002 households), Straus and Gelles (1990) reported that 11.6% of women experienced at least one act of partner violence in the year prior to the survey. Estimates of partner abuse are more difficult, due to lack of agreement as to which behaviors constitute psychological abuse. Rates of substance abuse are lower than those of partner violence experiences for women. Based on the Ecological Catchment Area study, women's lifetime rates of 4.57% were found for alcoholism (Helzer,

Burnam, and McEvoy, 1991) and 4.78% for drug abuse or drug dependence (Anthony and Helzer, 1991).

### Women's Experiences of Partner Violence and Substance Abuse

The relationship between women's experiences of partner violence and substance abuse has been an important research question for the past twenty years. Hotelling and Sugarman (1986) reviewed six early studies on this issue and found that wife's use of alcohol was related to her experiences of partner violence in only one study. Conversely, controlling for demographic differences and presence of a partner with alcohol-related problems, Downs et al. (1993) and Miller et al. (1989) found that women in outpatient treatment for alcohol dependence reported higher levels of partner violence than did women selected at random from the community sample. Miller and Downs (1993) found that 41% of women in outpatient treatment for alcoholism had experienced severe partner violence in the year prior to treatment, a significantly higher percentage than for women in outpatient mental health treatment (23%) or the community comparison sample (9%). Other work by Miller and Downs has also shown that women's level of alcohol problems was associated with their experiences of partner violence (Miller et al., 1990a; Miller et al., 1990b; Downs and Miller, 1994).

More recent work has produced mixed results. In a sample of women in treatment for dependence on opiates, Brewer et al. (1998) found that women's heavy use of certain drugs (e.g. crack cocaine, cocaine, tranquilizers) was related to experiences of partner violence. Roberts et al. (1998) found women's lifetime experiences of partner abuse to be predictive of harmful alcohol use and drug dependence. In a meta-analytic review, Golding (1999) found weighted mean prevalences for alcohol abuse or dependence and drug use or dependence to be higher among battered women than women in the general population. However, Cunradi et al. (1999) found women's alcohol-related problems to be related to experiences of partner

violence for African American but not Caucasian or Hispanic women.

There are several potential explanations for a link between women's experiences of partner abuse and substance abuse problems. In a longitudinal study, Downs and Miller (1994) found that, for women with a diagnosis of alcohol dependence, time 1 partner abuse predicted higher levels of time 2 alcohol problems but time 1 alcohol problems did not predict time 2 partner abuse. Among women without a diagnosis, time 1 partner abuse was found to predict higher levels of time 2 alcohol problems and time 1 alcohol problems were found also to predict time 2 partner abuse (Downs and Miller, 1994). The authors suggested four possible explanations for these results.

First, women may use alcohol or drugs to cope with the immediate physical or psychological sequelae of partner violence (Downs and Miller, 1994). Individual episodes of partner violence are virtually always destructive in some manner and can be terrifying. Women's emotions following an episode of partner violence will likely be intensely negative. In addition, the dynamics of partner violence frequently include partners blaming women for the violence that they inflict on women, thus women's cognitive states may include negative self-appraisals based on these dynamics. Further, prior to violent episodes, women may experience the terror of impending violence. Women may use alcohol or certain drugs to cope with these negative feelings or cognitive states.

Second, cumulative long-term effects of partner abuse may develop (Downs and Miller, 1994; Herman, 1995; Herman, 1992). A number of studies and literature reviews have indicated a wide range of psychological problems, such as PTSD, depression, and anxiety that become psychological sequelae of partner abuse for women (Weaver and Crum, 1995; Sackett and Saunders, 1999; Arias and Pape, 1999). In a literature review, Najavits, Weiss, and Shaw (1997) found that post-traumatic stress disorder is often comorbid with substance abuse for

women, with both deriving from a history of child abuse and/or sexual assault. Helzer and Pryzbeck (1988) found that while for men alcohol dependence is antecedent to a diagnosis of depression in 78% of the cases of comorbidity for these two diagnoses, depression is antecedent to alcohol dependence in 66% of cases for women. These findings lead to the possibility that increases in psychological problems may contribute to the development of substance abuse over time for women and that psychological problems themselves may be derivative of experiences of partner abuse. If so, then partner abuse may contribute indirectly to women's development of substance abuse via intervening psychological problems such as PTSD, depression, or anxiety.

Third, there may be disagreements between partners and women regarding either partner's or women's use of alcohol or drugs. Women may be concerned with partner's heavy drinking or use of drugs such as methamphetamine, based on past experiences of violence associated with this use. Women may voice these concerns to the partner, and the partner may then respond with violence or threats of violence to silence these concerns. Also, partners may desire that women not use drugs, reduce alcohol use or, alternatively, use more alcohol or drugs and use violence and use these as reasons to attempt to control her level of alcohol or drug use. Women may be in treatment for substance abuse, thereby threatening partners own substance abuse. There are a number of ways in which disagreements over alcohol or drug use could lead to partner violence or abuse.

Finally, women's substance abuse may be part of a high-risk lifestyle which includes a higher likelihood of violent experiences including partner violence (Downs and Miller, 1994). For example, women who use cocaine or other drugs may use prostitution as a means to pay for those drugs, thereby being at higher risk for violence in general from men. Partners may develop strong feelings of jealousy at real or imagined attempts by women partners to use

sexual relationships as a means for acquiring sufficient money to purchase drugs. Alternatively, men may themselves use women partners as prostitutes to obtain funds for the acquisition of drugs, and may in fact force women to become drug dependent to be more easily controllable in this regard. In addition, women who drink heavily or use drugs may be more likely to use physical means of self-protection, for example in self-defense of partner's use of violence on her.

To the extent that there is overlap between women's experiences of partner abuse and the development of substance abuse, services to women are likely to be affected adversely. Women found with substances on premises at shelters or safe homes for women are at risk for discharge from the shelter or safe home for violation of standards precluding presence of illegal drugs or alcohol in the shelter residence. Women dependent on alcohol or other drugs are therefore placed in the position of either beginning withdrawal in the absence of a substance abuse treatment facility or continuing to use in violation of shelter standards. In addition, shelters or safe homes may face issues of safety deriving from women intoxicated on alcohol or drugs. Women in substance abuse treatment programs may encounter issues of safety deriving from their experiences of partner violence, or may need support or education groups to address partner abuse and issues deriving from partner abuse. If partner is still using, and wishes the woman to continue using, he may actively undermine her treatment. Continued experiences of partner abuse after treatment completion may increase likelihood of the woman's relapse.

Thus, there may be a need for shelters to address substance abuse problems for a certain percentage of women using these services. Also, there may be a need for substance abuse treatment programs to address issues of partner abuse for a certain percentage of women in treatment. However, as Collins and Spencer (1999) have pointed out "domestic

violence and substance abuse programs do not usually address the complementary problem” (Collins and Spencer, 1999: p. 1) for a number of reasons. According to Collins and Spencer (1999), philosophical differences between domestic violence and substance abuse treatment services can “make service integration difficult, or even inappropriate” (Collins and Spencer, 1999: p. 1). Also, both domestic violence and substance abuse are complex problems, and integrating services for both problems in the same agency “may exceed the programmatic and financial resources available to most programs” (Collins and Spencer, 1999: p. 1).

Also, for several reasons, shelters and other domestic violence programs for women may not address the substance abuse problems of their clients. Among these reasons are that the primary goals of shelters and other domestic violence programs for women are safety and shelter, domestic violence programs have limited resources, substance abuse expertise does not usually exist within domestic violence programs, and shelter staff may be concerned that focusing on client’s substance abuse can lead to “victim blaming” (Collins and Spencer, 1999). Furthermore, substance abuse treatment programs often do not address formally the family violence experienced by women clients (Collins and Spencer, 1999; Collins et al., 1997). Collins and Spencer (1999) found that 26.0% of domestic violence programs for women and 52.1% of substance abuse treatment programs provide the complementary service.

An alternative strategy is for shelters and other partner violence programs and substance abuse treatment programs to develop linkages to address joint partner violence and substance abuse problems for women. Accordingly the purposes of this project were to: (1) describe the association of substance abuse (primarily alcohol abuse) and partner abuse among two at-risk populations, women in substance abuse treatment programs and women receiving services for victimization by partner abuse, (2) determine if other problems (e.g., mental health issues) are greater for women with both substance abuse and experiences of



partner abuse as opposed to women with a single problem, (3) examine the current level of integration between the substance abuse and partner abuse service delivery systems as well as factors that impede or enhance this integration, and (4) determine the feasibility of developing and evaluating an innovative treatment program which addresses these problems - substance abuse and partner abuse - within standard treatment settings for substance abuse or for partner abuse.

#### Additional Treatment Needs

In addition to women's experiences of partner abuse, women's experiences of parental psychological abuse, parental physical abuse, and childhood sexual abuse were examined. Prior research has indicated that women's victimization experiences over the life cycle are likely to be important contributors to later substance abuse and mental health problems.

Women's Victimization Experiences and Substance Abuse. Various reviews have found that women's experiences of sexual abuse or physical abuse during childhood are predictive of alcohol problems in adulthood (e.g., Miller and Downs, 1995; Langeland and Hartgers, 1998). Downs et al. (1992) found that experiences of mother-to-daughter violence in childhood were better predictors of women's experiences of partner violence in adulthood while experiences of father-to-daughter violence in childhood were better predictors of women's development of alcohol problems in adulthood. In particular, in a multivariate study controlling for parental alcohol problems, family background and demographic variables, Miller, Downs, and Testa (1993) found women's experiences of childhood sexual abuse and father verbal aggression to be significantly greater for women in treatment and with alcohol problems than for women in treatment but without alcohol problems.

Women in outpatient treatment for alcoholism have reported high rates of childhood sexual abuse (70%) and either sexual abuse or severe parental abuse (88%) [Miller, Downs,

and Testa, 1993]. Furthermore, Kang et al. (1999) found that women victimized by physical or sexual abuse during childhood to have more problems with drug usage and psychiatric adjustment one year after substance abuse treatment than nonvictimized women, suggesting the need to address these issues during treatment. Also, Roberts et al. (1998) found that the combination of abuse during childhood and lifetime partner abuse to be more predictive of substance abuse than partner abuse experiences by themselves. This finding suggests the need to address victimization experiences for both childhood and adulthood during substance abuse treatment for women.

Women's Victimization Experiences and Mental Health. Various reviews have also found that women's experiences of parental violence during childhood (e.g., Downs and Miller, 1998a; Downs and Miller, 1998b) are predictive of the development of adulthood mental health problems for women. Several recent studies have found a link between experiences of childhood maltreatment and psychiatric problems in adulthood for women. In a large cotwin study, Kendler et al. (2000) found that women's experiences of childhood sexual abuse to be predictive of a number of psychopathological disorders in adulthood. These disorders included major depression, alcohol dependence, and bulimia nervosa (Kendler et al., 2000). However, childhood sexual abuse adjusted for agreement with cotwin report was not significant in predicting diagnosis of generalized anxiety disorder, panic disorder, or drug dependence (Kendler, et al., 2000). Knisely et al. (2000) found experiences of childhood sexual abuse to be predictive of psychopathology specifically for women in substance abuse treatment. Knisely et al. (2000) compared the MMPI-2 profiles for women in substance abuse treatment with and without histories of childhood sexual. Women with histories of childhood sexual abuse had higher scores on the Hypochondriasis, Depression, Psychopathic Deviate, Paranoia, Psychasthenia/anxiety, and Schizophrenia than women without histories of childhood sexual

abuse (Knisely et al, 2000). However, Fleming et al. (1998) found that the association between childhood sexual abuse and poor mental health outcomes is influenced by a number of additional family background variables, including social isolation, father being alcoholic, father having a parenting style of low-care and high-control, and mother's mental and physical health.

Experiences of both partner violence and partner abuse also contribute to mental health problems for women (Rollstin and Kern, 1998), with low severity violence also contributing to women's psychological problems (McCauley et al., 1998). In a meta-analytic review, Golding (1999) found that battered women had higher prevalences of depression, suicidality, and posttraumatic stress disorder than women in the general population. Roberts et al. (1998) found that women with lifetime experiences of partner abuse are more likely to have diagnoses of a wider range of disorders (e.g., depression, anxiety, phobias) than women without experiences of partner abuse. Scholle et al. (1998) found that women with recent experiences of partner abuse were more likely to have Axis II comorbidity.

Women's Use of Violence. Early studies of partner violence indicated that men and women in partner relationships committed approximately equal levels of both severe and less severe violence (e.g., Straus, Gelles, and Steinmetz, 1980). These early studies had the goal of examining the incidence of violence, and led to later research that examined questions regarding the context, motive, and consequences of violence (Saunders, 1986). This later research examined these issues largely for battered women and for male batterers. Saunders (1986) found that battered women most often reported self-defense as the motive for violence, essentially viewed "self-defense" and "fighting back" as identical, and rarely initiated either severe or nonsevere violence. Hamberger et al. (1997) examined court-ordered male and female perpetrators of violence, and found that female but not male perpetrators reported retaliation for previous violence, self-defense, and escape from aggression as reasons for

violence. Conversely, male but not female perpetrators reported punishment for unwanted behavior and professed ignorance as reasons for violence (Hamberger et al., 1997). Barnett, Lee, and Thelen (1997) compared batterers to battered women and found that batterers reported significantly greater use of physical abuse to frighten partners or "get own way" and significantly more motivation to use abuse to show who is boss. Conversely, women reported significantly more motivation to use verbal, psychological and threat abuses to protect self (Barnett, Lee, and Thelen, 1997).

These results indicate that battered women and court-ordered female perpetrators of partner violence typically have different motives than batterers concerning use of violence in a partner relationship. Specifically these women are more likely to use violence or threats to protect or try to defend themselves while men are more likely to use violence to try to control the behavior of women.

Summary Prior research has shown the following:

- high percentages of women in substance abuse treatment have prior victimization experiences consisting of partner abuse, childhood maltreatment from parents, and childhood sexual abuse
- there is a positive association between women's experiences of partner abuse and women's substance abuse problems
- there is a positive association between women's experiences of childhood maltreatment from parents and women's substance abuse problems in adulthood as well as experiences of partner abuse in adulthood
- there is a positive association between women's experiences of childhood sexual abuse and women's substance abuse problems in adulthood as well as experiences of partner abuse in adulthood

- there is a positive association between women's experiences of partner abuse and women's mental health problems
- there are positive associations between women's experiences of childhood maltreatment from parents as well as childhood sexual abuse and women's mental health problems
- battered women or court-order female perpetrators of violence tend to have different reasons from court-ordered male perpetrators of violence for using partner violence, specifically women tend to cite self-defense as a primary reason for use of violence in relationships

Much of the research on the association between women's victimization experiences and substance abuse problems has focused on victimization experiences during childhood. Other than prior work by Miller and Downs, there have been relatively few studies on the extent of adulthood victimization experiences for women in substance abuse treatment. There also have been relatively few studies on the extent of substance abuse problems among women receiving services for partner abuse. Many of these studies have been in larger urban areas; virtually none have examined these issues in less urban and more rural areas. There have been even fewer studies that have examined the association between experiences of partner abuse and substance abuse problems among women in substance abuse treatment or women receiving services for partner abuse. Earlier work, for example Downs et al. (1993) and Miller et al. (1989), examined this association by combining different samples of women, not by examining this association within specific samples of women. There have also been very few studies that have examined the combination of problems: women's experiences of childhood violence, women's experiences of partner abuse, women's substance abuse problems, and women's mental health problems.

An additional set of issues is the level of integration or collaboration between substance abuse treatment programs and partner abuse programs. Other than Collins and Spencer (1999) there have been very few studies that have examined collaboration between these two disparate fields of service, as well as barriers to such collaboration. The Principal Investigator was able to find no study that examined, simultaneously and within the same geographic region, the association between women's victimization experiences and substance abuse problems in addition to service collaboration issues. Major goals of the present study thus included: a) extending previous findings on women's victimization experiences from partner abuse and substance abuse to a rural population, b) examining the associations among victimization experiences, substance abuse problems, and mental health problems, c) investigating these associations in the same study and same geographic area as investigating the level of service collaboration between substance abuse treatment and partner abuse service agencies, and d) using this data to develop strategies for service integration and collaboration among substance abuse treatment and partner abuse service agencies.

## METHODOLOGY

Two primary data sources were used in this study. First, interview/questionnaire schedules were conducted with 447 women; 225 women were receiving treatment for alcohol or drug abuse or dependence from one of five substance abuse treatment programs in a midwestern state, and 222 women receiving services for partner abuse from one of seven shelter or safe home programs in the midwestern state. A second data source consisted of pilot study interviews with 39 staff from substance abuse treatment programs and 20 staff from shelters or safe homes for battered women.

### Interviews with Women Respondents

Training for Research Assistants and Interviewers. All interviewers were women. Prior

pilot studies by Miller and Downs have shown that, given the sensitive nature of questions on partner and childhood abuse, men interviewers would result in more conservative estimates of abuse. Also, women respondents experienced greater levels of stress with men interviewers questioning them about experiences of abuse than with women interviewers. Partner abuse and substance abuse training for the staff began with a basic introduction to various theories purporting to explain partner abuse (e.g., various feminist theories as well as classical family systems theory) and substance abuse (e.g., Twelve Step approach, cognitive-behavioral theory).

Second, there was a general discussion of various partner abuse situations, with specific examples to assist the interviewer in understanding the situations and contexts of partner abuse from the point of view of the respondent. In addition, various partner abuse situations were discussed and reframed to teach interviewers to avoid attributing responsibility to women for their victimization experiences, including examination of nonverbal behaviors. An example of reframing is the issue of "why didn't you just leave him". We anticipated that some respondents would describe extremely severe experiences of violence and abuse. Women interviewers who have not experienced violence or abuse in a relationship might evaluate these experiences from their own point of view, conclude that they would long since have left such an abusive partner, and consequently attribute negative characteristics to the battered woman being interviewed. We discussed reasons for women staying, including the dangers of leaving. We also discussed the negative aspects of imposing values derived from an abuse-free life on a woman who has experienced a lifetime of abuse.

Third, many women who have experienced childhood and partner abuse become hypervigilant to the behavior of others. We did not want the women respondents to interpret interviewer nonverbal behavior in a manner that would constrain their answers. Also, women

were asked to provide information about extremely sensitive and highly emotional issues, such as past and recent traumatic experiences of serious and frightening abuse. Our desires were to avoid re-victimization and insure that we were getting the woman's perceptions of partner abuse free of limitations as well as to create a comfortable climate in which women could feel safe in describing victimization experiences. Thus, interviewers were trained to avoid any behavior which could be interpreted as indicating attribution of responsibility, a difficult task with some of the respondent's descriptions of abusive experiences. Accordingly, special attention was given to developing sensitivity to victim's feelings and responding non-judgmentally but with empathy.

Fourth, interviewers were trained to allow the respondent to remain in control of whether she answered any given question. Informed consent procedures, for example, required that women be told they could decide not to answer any given question, stop the interview at any time, and decide at any time that they could end the interview, all without penalty. Interviewers were trained to remind women of these procedures at times throughout the interview, for example if it became apparent that the respondent was experiencing stress at any given time. Kleenex were provided, being placed near the woman so that she was not put in a position in which she had to ask for a kleenex should she begin crying. The interviewer was trained to be cognizant of the emotions of the respondent, and in handling the ebb and flow of question/response. For example, if the respondent was not responsive to the questions being asked, interviewers were trained to redirect her to the questions being asked, but to do in a gentle manner that would reaffirm the safe climate of the interview.

Fifth, to prepare the interviewers, role-plays were conducted to train them on the instrument, as well as how to respond to various answers given by respondents. Also, interviewers who were being interviewed during the role plays were placed in the role of the



respondent, thereby actually experiencing the ebb and flow of the interview as well as the impact of questions on sensitive topics. These interviews were taped and transcribed with the Principal Investigator providing constructive criticisms on alternate ways for interviewers to respond.

Recruitment of Women Respondents. Women were recruited for interviews primarily in group meetings. Women in shelters or safe homes had several meetings of all clients twice per week. At the end of one of these meetings, shelter or safe home staff would leave (to protect women's confidentiality). One of the interviewers would briefly describe the study to the women (e.g., types of questions, overview of the study, anticipated length of interview); report the informed consent procedures (e.g., confidentiality, who would and would not have access to information they would be asked to provide); inform the women that volunteering for the study does not mean they have to answer all questions, instead they could refuse to answer specific questions, or stop the interview without penalty; inform the women that those who volunteered to be interviewed would be paid \$20; answer questions the women might have; and ask women interested in being interviewed to sign up on a schedule sheet. Some shelters were reluctant to allow project interviewers into group meetings; flyers describing the study were posted in prominent places in the shelter with a toll-free number to call to have an interview scheduled. Given that most interviews were in cities or towns other than the site of the university, and given the difficulties in travel and parking at a university, the decision was made to conduct interviews in closed rooms in or near the shelter. In this manner, safety, convenience, and confidentiality could be maximized. Women in substance abuse treatment were in groups several times throughout the week. The same procedures were used, except that male clients in the group also were asked to leave during the time in which women were asked if they would agree to be interviewed.

Meeting women in the groups had the advantage of efficiency; however, women who were in the shelter only a few days missed the opportunity to be asked to be in the study. Thus, we eventually had flyers placed in all shelters and substance abuse treatment agencies. Nevertheless, the effect on recruitment was that women who stayed in the shelter longer had a greater chance of being in the sample. The likely effect on the findings is to have a conservative effect on estimates of substance abuse among this sample, since substance abuse is a likely predictor of shorter stays in a shelter. Further, women who stayed in substance abuse treatment for a shorter period of time, for example two weeks or less, were less likely to attend group meetings and volunteer for the study. The likely effect on the findings is to have a conservative effect on estimates of partner abuse among this sample, since partner abuse (we believe) is a likely predictor of shorter stays in a substance abuse treatment agency.

Informed Consent Procedures. Before the interview, interviewers reviewed the informed consent procedures with the potential respondents. Women were also asked if the interview could be tape-recorded for purposes of accuracy. All women agreed to the tape recording. Tape recorders were placed on the table in front of the women. Women were told that if they did choose not to answer any questions, or did terminate the interview, they would still receive the \$20. After the potential respondent had an opportunity to process this information and ask questions, she was again asked if she wanted to be interviewed. If she agreed, she was asked to sign the informed consent form. The interview could not proceed unless women signed the informed consent form. After the interview, women were paid the \$20 and signed receipts for this money. The interviewer then transported all materials directly back to the research office, where they were placed in locked file cabinets. The name-to-identification number sheet, hard copies of the interviews, and tapes were all kept in separate locked file cabinets.

Demographics of Samples. The demographics for the two samples of women are included in Tables 1-3. First, the distribution of respondents across different sample sites is included in Table 1. Almost half of the respondents in the substance abuse treatment sample (47.6%) and the shelter/safe home sample (44.1%) are from Site 4, with another 25.3% of respondents in the substance abuse treatment sample and 28.9% of respondents in the shelter/safe home sample from Site 3. The substance abuse treatment agencies and shelters in both of these sites are located near a major research university and have histories of collaboration with university research projects. They also were the first agencies contacted to begin the research project. The shelter for battered women in a third area ultimately refused participation in the research; two safe homes in rural areas connected to the substance abuse treatment agencies in this area did collaborate with the research project as did the substance abuse treatment agencies. The lower numbers for Sites 1 and 2, compared with Sites 3 and 4, reflect the lower number of women in the safe home programs, and that one of the substance abuse treatment agencies is a private agency also with lower numbers of respondents. Also the nearby university for sites 1 and 2 is not a major research university and consequently there is less of a history of research collaboration for these agencies. Sites 5 and 6 were added to the research project during the second year of the data collection for two reasons: (1) to increase the sample size for the project, and (2) to extend the collaboration among substance abuse treatment agencies, shelters for battered women, and the university. However, the publicly funded substance abuse treatment agency in Site 6 decided not to participate in the research.

The relationship demographics are included in Table 2. Only 18.3% of the women were currently married (12.1%) or cohabiting (6.2%). Instead most of the women in the study were separated (20.6%), divorced (25.6%), or single (33.9%). However, most of the women in the

study (77.4%) had been married at least once previously, with 32.9% married at least twice. For those who had married, most (74.0%) had been married at age 21 or younger. Additional demographics are included in Table 3. Most of the respondents (70.4%) were unemployed, and had either a high school or less education (61.4%). Most of the respondents are European American (77.6%), reflecting the population of the midwestern state in which the study was conducted. However, 22.3% are either African American (16.8%) or Mexican American or Native American (5.5% in these two groups combined). The median age of the sample is 33.54 years, with a large range. Most of the respondents (64.5%) were age 30 or older.

Summary. Based on these demographics, this sample can generally be characterized as older, experienced with relationships, low on educational resources, and currently unemployed.

#### Instrument Development for Women Respondents

The interview/questionnaire schedule was divided into three parts. The first part consisted of retrospective questions about the woman's family of origin up to when she was 18 years old or left her family of origin permanently, whichever event occurred first. The second part consisted of a series of questions about her adulthood, in particular her experiences of partner violence and abuse, as well as the use of a series of structured interview questions regarding her alcohol usage. The third part consisted of a series of self-administered questionnaire indices. On average, the overall interview lasted approximately three hours with breaks offered between each interview part. More detailed descriptions for many of the scales used in this study can be found in Appendix A.

Part One. A primary purpose of the first part of the interview was to assess experiences of violence during childhood. The Parent-Child Conflict Tactics Scales (CTSPC) were used to assess experiences of parental abuse during childhood (Straus, Hamby, Finkelhor, 1997). The

CTSPC has five subscales: Non-violent Discipline, Psychological Aggression, Minor Physical Assault (Corporal Punishment), Severe Physical Assault (Physical Abuse), and Very Severe Physical Assault (Severe Physical Abuse). The CTSPC is very flexible; numerous subscales can be created from the items. First, there are subscales for experiences of both mother and father abuse. Second, prevalence subscales can be created by dichotomizing each CTSPC subscale with a score of 1 if at least one item in the subscale occurred and 0 if none of the items occurred. Third chronicity subscales can be created by summing the midpoints for the response categories selected by the respondent for each item. Fourth, the number of dichotomized items can be summed to create a breadth subscale based on the number of items in each subscale that happened at least once. In addition, the Sexual Abuse subscale was used to assess retrospectively women's experiences of sexual abuse (Straus, Hamby, Boney-McCoy, and Sugarman, 1996).

In this study, women were asked retrospectively for their childhood (between the ages of 7 and 18) the question "how many times that your mother (or, separately, father) did these things during a typical year of your childhood" for each item. Based on the responses, all three sets of subscales (prevalence, chronicity, and breadth) were created for both the mother-daughter and father-daughter relationships. For the purposes of the chronicity subscales, the response category 7 (Not in the typical year, but it happened before) was counted as 1 (Once in the typical year), the alternative being to count this response as 0 (This has never happened). The Sexual Abuse subscale was dichotomized, with a score of 1 indicating that at least one act of sexual abuse occurred and 0 that no acts of sexual abuse occurred prior to the age of 18 years.

Internal consistency reliability coefficients for the chronicity subscales are included in Table 4 (Mother-daughter CTSPC) and Table 5 (Father-daughter CTSPC), with coefficients

calculated for the entire sample and separately for the substance abuse treatment and shelter/safe home samples. Three of the five substance abuse treatment coefficients for the Mother-daughter CTSPC ranged from .77 to .86, well above the .60 level recommended by Nunnally (1967); the other two were above .50. All shelter/safe home coefficients for the Mother-daughter CTSPC were at or above the .60 level recommended by Nunnally (1967), with three ranging from .77 to .87. One coefficient alpha for the shelter/safe home sample Father-daughter CTSPC scales was lower than .60 (Father Severe Physical Abuse at .56); the remainder ranged from .71 to .92. Of some concern was that coefficient alpha for Father Severe Physical Abuse for the substance abuse treatment sample is quite low (.29), possibly reflecting the brevity of this subscale (which consisted of four items) in combination with highly skewed distributions among some of the items. The remaining scales had coefficients ranging from .64 to .87.

Internal consistency reliability coefficients for the breadth subscales are included Table 6 (Mother-daughter CTSPC) and Table 7 (Father-daughter CTSPC). Given that the items were dichotomized, Kuder-Richardson Formula 20 was calculated. Two coefficients (Mother Nonviolent Reasoning, substance abuse treatment sample; and Father Severe Physical Abuse, substance abuse treatment sample) are lower than .60. However, the remaining coefficients are at or above the level of .60 recommended by Nunnally (1967), ranging from .60 to .75.

Pearson correlations among the chronicity subscales are included in Table 8 (Mother-daughter CTSPC) and Table 9 (Father-daughter CTSPC), with correlation coefficients among the shelter/safe home sample above the diagonal and correlation coefficients among the substance abuse treatment sample below the diagonal. Pearson correlations among the breadth subscales are included in Table 10 (Mother-daughter CTSPC) and Table 11 (Father-daughter CTSPC), also with correlation coefficients among the shelter/safe home sample

above the diagonal and correlation coefficients among the substance abuse treatment sample below the diagonal. With few exceptions, the intercorrelations among the Psychological Aggression, Corporal Punishment, Physical Abuse, and Severe Physical Abuse subscales range from moderate to strong. This collinearity suggests that some of these subscales could be combined, possibly mitigating the effects of those with low reliability coefficients. Conversely, correlations between these four subscales and the two subscales Nonviolent Discipline and Sexual Abuse ranged from nonsignificance to significant but below an absolute value of .30.

Part Two. Part two of the interview was intended to request information about women's adulthood experiences, with many of the questions open-ended. Four sets of questions about experiences of partner abuse were asked first. The first three had a time frame of the past twelve months and included in order the typical verbal conflict with partner, a conflict which resulted in violence, and the conflict that was most harmful to the woman. A fourth set of questions asked about violence from past partners back to the woman's first date or first relationship. Examples of questions asked in these sections included: 1) "Can you describe what happened?", 2) "Were you able to defend or protect yourself in some way?", "What did you do?", 3) "How did the argument begin?", 4) "Why did the conflict become violent?", 5) "What (if anything) do you think could have prevented the violence?", and 6) "Why did the violence end?".

We found that our systematic sets of questions did not fit the ways in which many women had structured their memories. Many women recalled partner abuse experiences outside the twelve month time frame as more important, and divulged those in the course of the first three sets of questions, only later recalling that these occurred outside the 12 month window. Also, many women first recalled and divulged the most traumatic and violent partner abuse experiences, followed by other violence, and then verbal abuse. Further, women did not

recall these events as conflicts; rather many women described a relationship in which partners were always at risk of perpetrating some form of abuse, and divulged those experiences foremost in their memories. Women did respond to the questions within these sets of questions, for example how the conflict became violent, how it ended, who was responsible for the violence, and whether alcohol or drugs were involved. However, the coding of this data has been difficult and time-consuming.

Another major set of questions was the Comprehensive International Diagnostic Interview (CIDI), used to obtain diagnoses of alcohol dependence and lifetime (World Health Organization, 1997). We used diagnoses based on the DSM-IV criteria. There were also sections on respondent's drug use, partner's alcohol and drug use, respondent's lifetime victimization, and demographics.

Part Three. The primary purpose of part three was to administer questionnaires to the women respondents. These questionnaires consisted of partner abuse scales, indices of alcohol and drug involvement, and mental health indices. Women were asked to respond to the partner abuse scales as follows: (1) respond with current partner, if there is a current partner, (2) if there is no current partner, but there was a partner during the past six months, then respond with that partner, and (3) if there were no partner in the past six months, then do not respond (this was coded as "no partner in the past six months"). Women without a partner in the past six months prior to treatment were counted as having no experiences of partner abuse in the past six months, a conservative estimate of partner abuse experiences. Respondents were instructed to respond to the partner abuse scales based on their own definition of whom they considered to be a partner.

Two partner abuse scales were selected to assess experiences of partner abuse specifically in the past six months: Abusive Behavior Inventory (ABI)-Physical and Abusive



Behavior Inventory-Psychological (Shepard and Campbell, 1992). The ABI scales specifically have a time frame of the past six months. Two other partner abuse subscales were selected to assess experiences of partner physical and nonphysical abuse that occurred inside the time frame of the past six months but could have also extended back in time depending on the length of the relationship with partner: Partner Abuse Scale (PAS)-Physical and Partner Abuse Scale (PAS)-Nonphysical (Hudson and Associates, 1996). The PAS scales have no specific time frame. In addition, the Physical Abuse of Partner Scale (PAPS) was used to assess women's self-reports of violence they committed to partners (Hudson and Associates, 1996). Finally, the Index of Marital Satisfaction (IMS) was used to assess women's satisfaction with their relationship with partners; the IMS was responded to with the same instructions as the Partner Abuse scales (Hudson and Associates, 1996).

To assess women's self-reports of alcohol and drug use, the Index of Alcohol Involvement (IAI) and Index of Drug Involvement (IDI) [Hudson and Associates, 1996] were used. Women in the substance abuse treatment sample were instructed to respond to the IAI and the IDI for the time period prior to treatment, based on the assumption that being in treatment would reduce alcohol and drug use thereby rendering scores on these scales artificially low.

To assess women's mental health problems, the Beck Anxiety Inventory (Beck and Steer, 1993a), Beck Depression Inventory (Beck and Steer, 1993b), Index of Self-Esteem (Hudson and Associates, 1996), and Trauma Symptom Checklist (TSC)-40 (Briere, 1996) were used. The TSC-40 has six subscales, assessing anxiety, depression, dissociation, sexual abuse trauma, sexual dysfunction, and sleep disturbance.

Coefficients alpha for the partner abuse scales and the Index of Marital Satisfaction are included in Table 12. The number of items for these scales range from thirteen (ABI-Physical)

to 25 (PAS-Physical, PAS-Nonphysical, Physical Abuse of Partner, and Index of Marital Satisfaction). As might be expected, coefficients alpha for these scales are very high, all above .90 with the exception of Physical Abuse of Partner Scale for the substance abuse treatment sample (alpha = .86). Coefficients alpha for the Index of Alcohol Involvement (IAI), Index of Drug Involvement (IDI), and the mental health scales are included in Table 13. The Beck Inventories have 21 items, the IAI and IDI 25 items, and the TSC-40 40 items. As expected, coefficients alpha for these longer scales are very high, above .90 with the exception of the Beck Depression Inventory for the substance abuse treatment sample (alpha = .88). The subscales of the Trauma Symptom Checklist have fewer items (ranging from six items for Sleep Disturbance and Dissociation to nine items for Anxiety) and somewhat lower reliability coefficients that range from .75 to .85. However, all coefficients indicate acceptable levels of internal consistency reliability.

Pearson correlations among the partner abuse scales and the Index of Marital Satisfaction are included in Table 14, with correlation coefficients among the shelter/safe home sample above the diagonal and correlation coefficients among the substance abuse treatment sample below the diagonal. The Index of Marital Satisfaction was recoded for this table so that higher scores indicate greater levels of satisfaction. Correlations among the scales indicating experiences of partner abuse (i.e., the PAS and ABI scales) and the Index of Marital Satisfaction range from moderate to strong. Correlations between these scales and the Physical Abuse of Partner Scale are either nonsignificant or low for the shelter/safe home sample; these correlations are somewhat higher for the substance abuse treatment sample.

Pearson correlations among the Index of Alcohol Involvement, Index of Drug Involvement, and the mental health scales are included in Table 15, with correlation coefficients among the shelter/safe home sample above the diagonal and correlation coefficients among

the substance abuse treatment sample below the diagonal. The Index of Self Esteem was recoded for this table so that high scores indicate higher levels of self esteem. Correlations among the Beck Anxiety Inventory, Beck Depression Inventory, Trauma Symptom Checklist, and the TSC-40 subscales are strong. For the most part, the correlations between these scales and the Index of Self Esteem are significant but of a lower magnitude. Among the shelter/safe home sample, correlations between the mental health scales and the Index of Alcohol Involvement (IAI) are significant but for the Index of Drug Involvement (IDI) are nonsignificant or low. Correlations between the mental health scales and the IAI and IDI among the substance abuse treatment sample are, for the most part, significant and ranging from .22 to .38. Finally, the IAI and IDI are positively correlated among the shelter/safe home sample (.41) but negatively correlated among the substance abuse treatment sample (-.17).

### Summary

The following conclusions can be made about the scales used in this study:

- some of the CTSPC scales have low reliability coefficients, especially father severe physical abuse; however most have acceptable reliability coefficients
- because of these reliability issues, presence/absence of abusive childhood experiences may have stronger predictive power than amount of abuse during childhood; thus later analyses are mostly based on presence/absence of abuse
- high intercorrelations among certain the CTSPC scales (Psychological Aggression, Corporal Punishment, Physical Abuse, and in some cases Severe Physical Abuse) may indicate that these scales can be combined to increase reliability
- all scales for adulthood variables have acceptable reliability coefficients
- there were high intercorrelations among the scales assessing experiences of

partner abuse; to control for correlated dependent variables as well as conceptual similarity the two physical abuse scales (ABI and PAS) were combined as dependent variables in multivariate analyses of variance (MANOVAs) in subsequent analyses as were the scales assessing psychological abuse

- correlations between scales assessing experiences of partner abuse and the Physical Abuse of Partner Scale are either nonsignificant or low for the shelter/safe home sample; these correlations are somewhat higher for the substance abuse treatment sample
- correlations among the Beck Anxiety Inventory, Beck Depression Inventory, Trauma Symptom Checklist, and the TSC-40 subscales are strong; thus these scales were also combined as dependent variables in MANOVAs
- among the shelter/safe home sample correlations between the mental health scales and the Index of Alcohol Involvement (IAI) are significant but for the Index of Drug Involvement (IDI) are nonsignificant or low;
- correlations between the mental health scales and the IAI and IDI among the substance abuse treatment sample are, for the most part, significant and ranging from .22 to .38.

## RESULTS AND DISCUSSION

**Goal 1: Describe the association of substance abuse and partner abuse among two at-risk populations, women in substance abuse treatment programs and women receiving services for victimization by partner abuse.**

Several analyses were performed to accomplish this goal. Because past research has shown that women's experiences of childhood abuse also are related to the development of

substance abuse problems as well as experiences of partner abuse in adulthood, women's reports of parental abuse during childhood and women's reports of childhood sexual abuse were also included in these analyses. First, the percentages of women in each sample who reported experiences of childhood and partner abuse are provided. Second, the percentages of women in each sample with lifetime and 12 month diagnoses of alcohol dependence based on the CIDI as well as the percentages of women classified as having alcohol or drug problems using the Index of Alcohol Involvement and Index of Drug Involvement are reported. Third, several analyses were performed to examine the association between experiences of partner abuse and substance abuse, including multivariate analyses of variance, analyses of variance, and examination of linear associations. These analyses were performed for both samples, and included examination of interaction effects across sample type. Fourth, multivariate and univariate analyses of variances of adulthood indices of alcohol involvement, drug involvement, and partner abuse by experiences of childhood abuse are reported. We treated the samples of women as samples from two separate populations and therefore most analyses were performed separately for each sample. Where feasible, for example in the ANOVAs and MANOVAs, interaction terms were used to examine whether associations differed significantly across sample type.

#### Percentage of Women Experiencing Abuse

Percentage of Women Experiencing Childhood Abuse. The percentage of women in each sample who reported at least one item on each of the mother-daughter Conflict Tactic Scales is included in Table 16, and each of the father-daughter Conflict Tactic Scales is included in Table 17. There were only two significant differences in the mother-daughter percentages across sample type, with slightly higher percentages of women in the substance abuse treatment sample reporting Psychological Aggression and Corporal Punishment.

However, a more important finding is the high percentage of women reporting physical abuse from mothers; approximately 60% in each sample reported at least one incident of physical abuse during childhood, while 21.0% (substance abuse treatment sample) and 24.9% (shelter/safe home sample) reported severe physical abuse during childhood from mothers. There were no significant differences across sample type for father-daughter percentages. Again a more important finding is the high percentage of women reporting physical abuse from fathers during childhood; approximately 44% in each sample reported at least one incident of physical abuse, and approximately 23% severe physical abuse from fathers. The higher percentage for mother physical abuse as compared with father physical abuse may be due to the greater childcare responsibilities for mothers as well as more time mothers spend with daughters (Miller, Downs, and Testa, 1993).

In the 1985 National Family Violence Resurvey, Straus and Gelles (1990) obtained data via telephone interviews for a national probability sample of 4032 households, stratified by region (East, South, Midwest and West) and community type (urban with greater than 100,000 population, suburban with less than 100,000 population, and rural with less than 2500 population). Oversamples were conducted for smaller states, and Black and Hispanic households (Straus and Gelles, 1990). Data reported on rates of physical child abuse can be generalized to the general population of households in the United States.

There were some methodological differences with the present study. Straus and Gelles (1990) used the original Conflict Tactics Scale, which has fewer items than the CTSPC used in the present study. Straus and Gelles (1990) collected data regarding abusive experiences in the previous year, while the present study used collected retrospective data regarding abusive experiences in a "typical year of your childhood". Straus and Gelles collected data from adults using violence to resolve conflicts with children while the present study collected data from

respondents victimized by parental violence during childhood. Nevertheless, comparing rates of violence to children reported by Straus and Gelles (1990) to rates of violence to children in the present study illustrates differences between childhood violence in the general population with that among women in treatment.

Straus and Gelles (1990) reported that 2.3% of children experienced very severe violence from parents, and 11.0% experienced severe violence from parents, in the year prior to the study (Straus and Gelles, 1990). These percentages are much lower than the percentages reported in the present study for Physical Abuse (severe violence, approximately 60% from mothers and 44% from fathers) and Severe Physical Abuse (very severe violence, approximately 20%-25% from mothers or fathers). The tentative conclusion is that women in substance abuse treatment and women in shelters for battered women are much more likely to have experienced physical abuse from parents than women in the general population.

The percentage of women in each sample who reported childhood sexual abuse is in Table 18. These percentages did not differ across sample type; with approximately 59% of women in the shelter/safe home sample and 66% in the substance abuse treatment sample reporting at least one incident of childhood sexual abuse. These percentages are nearly identical to those reported by Miller and Downs (1993) for a sample of women in outpatient alcoholism treatment (66%) and a sample of women from a shelter for battered women (65%), and are higher than the usual range of percentages for women in random or community samples that report childhood sexual abuse (25% to 35%) [Miller and Downs, 1993].

Percentage of Women Experiencing Partner Abuse. The percentage of women in each sample who reported partner abuse in the past six months is included in Table 19. These percentages are based on responses to the Abusive Behavior Inventory-Physical and Abusive Behavior Inventory-Psychological. Two different percentages were calculated. First, women

who did not have partners in the past six months were counted as having no partner abuse; these percentages are included in Table 19a. Next, these women were excluded from the analyses; these percentages are included in Table 19b. In each case, a significantly higher percentage of women in the shelter/safe home sample reported at least one incident of partner physical abuse in the past six months. However, the percentage of women in the substance abuse treatment sample reporting physical abuse (62.9%, 67.2%) is very high, in fact considerably higher than the percentage (11.6%) of women in the general population who reported experiencing at least one act of partner violence in the past year (Straus and Gelles, 1990). There were no differences across sample type in the percentage of women reporting psychological abuse in the past six months; virtually all women in both samples reported at least one incident of partner psychological abuse.

An additional analysis was performed to compare women's experiences of partner violence with women's use of violence on partners. Paired sample t-tests were performed for the Partner Abuse Scale-Physical (women's experiences of partner violence) and the Physical Abuse of Partner Scale. In the substance abuse treatment sample, the mean score for the PAS-Physical (7.38) was significantly higher than that for the PAPS (2.60) [ $t = 5.38, p < .001$ ]. Also, in the shelter/safe home sample, the mean score for the PAS-Physical (18.03) was significantly higher than that for the PAPS (2.82) [ $t = 10.19, p < .001$ ]. Thus, in both samples, women reported higher levels of violence from partners than violence to partners.

In part two of the interview women were asked questions such as: 1) "Can you describe what happened?", 2) "Were you able to defend or protect yourself in some way?", "What did you do?", 3) "Why did the violence end?", 4) "Why did the conflict become violent?". These questions were asked in four separate sections. As stated earlier, the first three had a time frame of the past twelve months and included in order the typical verbal conflict with partner, a



conflict which resulted in violence, and the conflict that was most harmful to the woman. A fourth set of questions asked about violence from past partners back to the woman's first date or first relationship. We examined women's responses using event as the unit of analysis (women could report on more than one event). In all, a total of 825 separate violent incidents were reported. Respondents reported using violence on partners in a total of 190 (23.0%) of these incidents; most of the violence used by women was minimal (e.g., pushed respondent out of the way) and was much less severe than violence partners used on women (e.g., rape, choking with a lamp cord, pouring acid on the woman, using a weapon to hold the woman hostage for several days, holding woman out of an upper floor window and threatening to drop her, suffocating or choking the woman for sport, playing Russian roulette with a gun held to the woman's head for several hours while she was handcuffed, and allowing the woman to be gang-raped to pay for drug bills).

In a majority of events, women reported that their use of physical force on partner was in self-defense (N = 167 out of the 190 cases in which women used violence, 87.9%). Most of the physical self-protection was pushing partner out of the way (N = 124). Other examples of women protecting themselves physically included: hitting, kicking, or threatening partner with a weapon. Women initiated violence in 16 cases out of the 190 cases in which women used violence (8.4%) and used violence in anticipation of his impending violence to her in 7 cases (3.7%). In most cases of woman initiating violence, she slapped partner. Of the women who initiated violence (N = 16), ten (62.5%) were using drugs (N = 6), alcohol (N = 2) or both (N = 2) at the time of the violence. Of the women who used physical means of self-defense (N = 167), 69 (41.3%) were using drugs (N = 20), alcohol (N = 28) or both (N = 21) at the time of the violence. A chi-square test for these figures, however, was not significant.

Summary. The following conclusions can be made about women's experiences of

violence and abuse in this study:

- high percentages of women in both the substance abuse treatment and shelter/safe home samples reported childhood experiences of physical abuse or severe physical abuse from parents
- high percentages of women in both the substance abuse treatment and shelter/safe home samples reported experiences of childhood sexual abuse
- these percentages are much higher than in the general population
- a majority of women in substance abuse treatment have experienced partner physical violence in the past six months, much higher than for women in the general population
- virtually all women in the substance abuse treatment sample have experienced psychological abuse from partner in the past six months
- women in both the substance abuse treatment and shelter/safe home samples reported higher levels of experiences of partner physical violence than use of physical violence on partners; this data was supplemented by women describing use of violence in 23.0% of incidents and that partner's violence was severe while her violence typically was pushing partner out of the way
- the primary reason for women's use of violence on partner, in 87.9% of cases in which women used violence, was self-defense

Percentage of Women with Alcohol or Drug Problems.

The percentages of women classifiable as having alcohol or drug problems by type of sample, based on the Index of Alcohol Involvement (IAI) and the Index of Drug Involvement (IDI), are included in Table 20. Hudson and Associates have not finalized cut scores for the IAI and IDI. However, tentative cut score ranges as follows: No Problem (less than 15), Possible

Problem (15-30), and Presence of a Problem (30-100) [Hudson and Associates, 1996]. As expected the substance abuse treatment sample has a much higher percentage of women classifiable as having alcohol or drug problems. However, large percentages of women in the shelter/safe home sample are classifiable as having possible alcohol (30.3%) or drug problems (19.9%), or as having alcohol (18.3%) or drug problems (13.6%). The IAI and IDI were combined into an index of women reporting presence of a problem on at least one index (i.e., a score of at least 30 on at least one index) or not reporting presence of a problem (i.e., a score of at less than 30 on both indices). As can be seen in Table 20, 26.3% of women in the shelter or safe home sample reported problems on at least one of these indices.

The percentages of women with lifetime and 12 month diagnoses of alcohol dependence based on the CIDI by type of sample are included in Table 21. A higher percentage of women in the substance abuse treatment sample had both a lifetime diagnosis as well as a diagnosis of alcohol dependence in the past 12 months than did women in the shelter sample. However, the percentage of women in the shelter sample with a lifetime diagnosis of alcohol dependence (26.2%) is much higher than the 4.57% of women found for alcoholism in the general population (Helzer, Burnam, and McEvoy, 1991).

Summary. The following conclusions can be made about the extent of alcohol or drug problems for women in shelters or safe homes for battered women in this study:

- approximately one in four (26%) of women in the shelter/safe home sample has a lifetime diagnosis of alcohol dependence
- approximately one in four (26%) of women in the shelter/safe home sample were classified as having alcohol or drug problems using the most conservative cut scores for the IAI and IDI (30 or higher as having problems)
- these percentages are much higher than those among the general population of

women; however, they are probably conservative estimates of the extent of alcohol or drug problems among women in shelters or safe homes due to women leaving these programs after only a few days in the shelter being less likely to be in the study

- about 12% of women in the shelter/safe home sample had a diagnosis of alcohol dependence for the past 12 months

#### Association between Substance Abuse and Partner Abuse.

Analyses of variance (ANOVA) were performed for the Index of Drug Involvement (IDI) and the Index of Alcohol Involvement (IAI) by the Abusive Behavior Inventory (ABI). The ANOVA for the IDI is included in Table 22; IDI scores were significantly higher for women who had experienced partner physical abuse or partner psychological abuse in the past six months. Scores on the IAI did not differ significantly for women who had or had not experienced partner physical abuse or partner psychological abuse in the past six months; thus the ANOVA for the IAI was not included in a table.

There have not been sufficient psychometric analyses for preliminary cut score ranges on the Hudson and Associates (1996) partner abuse scales. Thus, Pearson correlations were performed among these scales, the ABI scales, the IDI, and the IAI separately for the substance abuse treatment and shelter/safe homes samples. Among the substance abuse treatment sample, the IAI was positively correlated with the Partner Abuse Scale (PAS) Physical (Pearson  $r = .15$ ,  $p < .05$ ) and Physical Abuse of Partner (PAPS) [Pearson  $r = .18$ ,  $p < .05$ ]. Associations were stronger for the IDI, which was positively correlated with the PAS-Nonphysical (Pearson  $r = .19$ ,  $p < .01$ ), ABI-Physical (Pearson  $r = .22$ ,  $p < .01$ ), ABI-Psychological (Pearson  $r = .30$ ,  $p < .001$ ), and PAPS (Pearson  $r = .31$ ,  $p < .001$ ). Among the shelter/safe home sample, the IAI was correlated with the PAS-Physical (Pearson  $r = .23$ ,  $p <$

.001) and PAPS (Pearson  $r = .31$ ,  $p < .001$ ). The IDI was positively correlated with the ABI-Physical (Pearson  $r = .17$ ,  $p < .05$ ) and PAPS (Pearson  $r = .28$ ,  $p < .001$ ).

Because of high intercorrelations among partner abuse scales, multivariate analyses of variance were performed to control for correlated dependent variables. The two physical abuse scales (ABI-Physical and PAS-Physical) were included as dependent variables in one set of MANOVA's (Tables 23-24) while the two psychological scales (ABI-Psychological and PAS-Nonphysical) were included as dependent variables in a second set of MANOVA's (Tables 25-26). Independent variables were type of sample and 12 month diagnosis of alcohol dependence (Tables 23 and 25) or lifetime diagnosis of alcohol dependence (Tables 24 and 26).

In the MANOVA for the partner physical abuse scales by type of sample and 12 month alcohol dependence diagnosis, Wilks' lambda was significant for sample type ( $\lambda = .875$ ,  $p < .001$ ), alcohol dependence ( $\lambda = .969$ ,  $p < .01$ ) and the interaction between sample type and alcohol dependence ( $\lambda = .981$ ,  $p < .05$ ). Slightly different results appear in the ANOVA's reported in Table 23. The main effect of alcohol dependence was significant only for the PAS-Physical, while the interactions were significant for both the ABI-Physical and PAS-Physical. The associations for alcohol dependence with each dependent variable appear stronger for the shelter/safe home sample; among women in the shelter sample, those with a 12 month diagnosis of alcohol dependence had higher levels of partner physical abuse than those without a 12 month diagnosis of alcohol dependence. Conversely, for women in substance abuse treatment there were no significant differences for women with or without a 12 month diagnosis of alcohol dependence. Sample type also had a significant main effect; women in the shelter sample reported higher levels of partner physical abuse than women in the substance abuse treatment sample.

In the MANOVA for the partner physical abuse scales by type of sample and lifetime alcohol dependence diagnosis, Wilks' lambda was significant for both sample type ( $\lambda = .874, p < .001$ ) and alcohol dependence ( $\lambda = .980, p < .05$ ) but not the interaction between sample type and alcohol dependence ( $\lambda = .996, p = .51$ ). In the ANOVA's, reported in Table 24, the main effect of lifetime diagnosis of alcohol dependence was significant only for the PAS-Physical. Women with a lifetime diagnosis of alcohol dependence reported a higher level of partner physical abuse than women without a lifetime diagnosis. Furthermore, this result was obtained for women in both the shelter sample and the substance abuse treatment sample. Sample type also had a significant main effect; women in the shelter sample reported higher levels of partner physical abuse than women in the substance abuse treatment sample.

In the MANOVA for the partner psychological abuse scales by type of sample and 12 month alcohol dependence diagnosis, Wilks' lambda was significant only for sample type ( $\lambda = .883, p < .001$ ), and not for alcohol dependence ( $\lambda = .999, p = .84$ ) nor for the interaction between sample type and alcohol dependence ( $\lambda = .993, p = .27$ ). The same was true for the MANOVA for the partner psychological abuse scales by type of sample and lifetime alcohol dependence diagnosis. Wilks' lambda was significant only for sample type ( $\lambda = .846, p < .001$ ), and not for alcohol dependence ( $\lambda = .997, p = .57$ ) nor for the interaction between sample type and alcohol dependence ( $\lambda = .997, p = .57$ ).

Corresponding ANOVA results are reported in Tables 25 (12 month diagnosis) and 26 (lifetime diagnosis). There were no differences in levels of partner psychological abuse for women with or without a 12 month diagnosis of alcohol dependence, nor were there any differences in levels of partner psychological abuse for women with or without a lifetime diagnosis of alcohol dependence. However, sample type did have a significant main effect; women in the shelter

sample reported higher levels of partner psychological abuse than women in the substance abuse treatment sample.

ANOVA's were performed for the Index of Marital Satisfaction (IMS) and Physical Abuse of Partner Scale (PAPS), and reported in Tables 27 (12 month alcohol dependence diagnosis) and 28 (lifetime alcohol dependence diagnosis). There were no differences in scores on the IMS for women with and without a 12 month diagnosis of alcohol dependence diagnosis, and for women with and without a lifetime diagnosis of alcohol dependence. However, sample type did have a significant main effect; women in the shelter sample reported higher levels of problems with marital satisfaction than women in the substance abuse treatment sample.

For the PAPS, the main effect for 12 month alcohol dependence diagnosis and the interaction between alcohol dependence and sample type were significant. Women with a 12 month diagnosis of alcohol dependence reported a higher level of using physical violence on partners than women without a 12 month diagnosis of alcohol dependence. However, based on the significant interaction effect, the association between these two variables appeared to be significant only for the shelter/safe home sample. The main effect of lifetime alcohol dependence also was significant for the PAPS, but the interaction effect between sample type and lifetime diagnosis of alcohol dependence was not significant. In both samples, women with a lifetime diagnosis of alcohol dependence reported a higher level of using physical violence on partners than women without a lifetime diagnosis of alcohol dependence.

The results for sample type also were interesting. In the analysis for 12 month diagnosis of alcohol dependence, women in the shelter sample reported a higher level of using violence on partner. However, this finding was limited to women with a 12 month diagnosis of alcohol dependence; for women without a 12 month diagnosis of alcohol dependence there were no differences for women in the shelter and substance abuse treatment samples in using

violence on partners. In the analysis for lifetime diagnosis, sample type did not have a main effect. However, there was an interaction effect; in examining the data in Table 27, there did appear to be a difference limited to women with a lifetime diagnosis of alcohol dependence. For these women, the shelter sample reported a higher level of using violence on partners than did women in the substance abuse treatment sample.

Summary. The following conclusions can be made about the associations between experiences of partner abuse and substance abuse for women in substance abuse treatment and women in shelters or safe homes for battered women in this study:

First, among the substance abuse treatment sample:

- the association between experiences of partner abuse and alcohol problems was virtually nonexistent; the only significant associations (which were weak) were between the Partner Abuse Scale-Physical and alcohol problems
- on the other hand, there were several significant associations between experiences of partner abuse and drug problems for the substance abuse treatment sample
- there were also several significant associations between alcohol/drug problems and women's use of violence on partners for this sample

Second, among the shelter/safe home sample:

- there were also few associations between experiences of partner abuse and alcohol problems; these were limited to the Partner Abuse Scale-Physical
- half of the analyses using the IDI were significant for this sample; these all involved the ABI, a measure of recent partner abuse
- finally, all four of the analyses involving the Physical Abuse of Partner scale were significant for this sample



Finally, for both samples:

- although a majority of women in substance abuse treatment have experienced recent partner physical abuse, and a significant percentage of women in shelters or safe homes have alcohol or drug problems, the associations between experiences of partner abuse and alcohol problems are weak for both samples
- these associations are stronger for experiences of partner abuse and drug problems than for experiences of partner abuse and alcohol problems
- these associations are also stronger for women's use of violence than women's experiences of violence
- these associations are somewhat stronger for women in the shelter/safe home sample than women in the substance abuse treatment sample
- women's use of violence on partners was particularly high for women in the shelter sample who had a 12 month or lifetime diagnosis of alcohol dependence

#### Substance Abuse and Partner Abuse by Experiences of Child Abuse.

Substance Abuse by Experiences of Child Abuse. Analyses of variance (ANOVA's) were performed for the Index of Alcohol Involvement (IAI) and Index of Drug Involvement (IDI) as dependent variables by type of sample and indices of child abuse as independent variables. Separate ANOVA's were performed for the CTSPC scales of Father Severe Physical Abuse, Physical Abuse, and Corporal Punishment, Mother Severe Physical Abuse, Physical Abuse, and Corporal Punishment, and Childhood Sexual Abuse for a total of seven separate ANOVA's for each scale. Interaction effects for sample type and each CTSPC and Sexual Abuse subscale were also examined. For the IAI, three of the CTSPC scales had significant main effects; these are included in Table 29. Scores on the IAI were higher for women who experienced Father Severe Physical Abuse, Father Physical Abuse and Mother Physical Abuse.

None of the interaction effects were significant. None of the ANOVA's for the IDI were significant; therefore no tables were constructed for these ANOVA's..

Chi-square analyses of the alcohol dependence diagnoses by the CTSPC and Sexual Abuse scales were performed separately for the substance abuse treatment and shelter/safe home samples and reported in Table 30 (12 month diagnosis) and Table 31 (lifetime diagnosis). In examining this table, recall that the base percentages for a 12 month diagnosis of alcohol dependence were 41.9% (substance abuse treatment sample) and 12.4% (shelter/safe home sample). There were few significant differences. Among respondents in the shelter/safe home sample, a significantly higher percentage of women who reported at least one incident of Mother Physical Abuse (17.0%) or one incident of Mother Severe Physical Abuse (23.3%) had a diagnosis of alcohol dependence for the past 12 months as compared to the base percentage for the shelter/safe home sample (12.4%). There were no other significant differences for either the shelter/safe home or substance abuse treatment sample.

In examining Table 31, recall that the base percentage for a lifetime diagnosis of alcohol dependence was 58.6% (substance abuse treatment sample) and 26.2% (shelter/safe home sample). There were a few more significant differences for lifetime diagnosis of alcohol dependence. First, among respondents in the substance abuse treatment sample, a significantly higher percentage of women who reported at least one incident of childhood sexual abuse (64.2%) a lifetime diagnosis of alcohol dependence as compared to the base percentage for the substance abuse treatment sample (58.6%). Next, among respondents in the shelter/safe home sample, a significantly higher percentage of women who reported at least one incident of Mother Physical Abuse (36.3%) or one incident of Mother Severe Physical Abuse (43.5%) had lifetime diagnosis of alcohol dependence as compared to the base percentage for the shelter/safe home sample (26.2%).

Partner Abuse by Experiences of Child Abuse. Multivariate analyses of variance (MANOVA's) were performed for the partner abuse scales as dependent variables by type of sample and indices of child abuse as independent variables. First the ABI-Physical and PAS-Physical were included as dependent variables. Sample type was included as an independent variable in all MANOVA's. Separate MANOVA's were performed for the CTSPC scales of Father Severe Physical Abuse, Physical Abuse, and Corporal Punishment, Mother Severe Physical Abuse, Physical Abuse, and Corporal Punishment, and Childhood Sexual Abuse for a total of seven separate MANOVA's. Interaction effects for sample type and each CTSPC and Sexual Abuse subscale were also examined. Of these, the Wilks' lambda was significant only for Mother Severe Abuse ( $\lambda = .982, p < .05$ ). None of the interaction effects were significant. The ANOVA table for Mother Severe Physical Abuse is included as Table 32. The main effect of Mother Severe Abuse was significant only for the ABI-Physical; women who reported Mother Severe Abuse had higher scores on the ABI-Physical than women who did not report Mother Severe Abuse. Next, the same seven MANOVA's were performed for the two scales of partner psychological abuse, ABI-Psychological and PAS-Nonphysical. None of the main effects for any of the CTSPC or Childhood Sexual Abuse scales were significant in predicting partner psychological abuse nor were any of the interaction effects significant.

Analyses of variance (ANOVA's) were performed for the Physical Abuse of Partner Scale (PAPS) by type of sample and indices of child abuse. Sample type was included as an independent variable in all ANOVA's. Separate ANOVA's were performed for the CTSPC scales of Father Severe Physical Abuse, Physical Abuse, and Corporal Punishment, Mother Severe Physical Abuse, Physical Abuse, and Corporal Punishment, and Childhood Sexual Abuse for a total of seven separate MANOVA's. Interaction effects for sample type and each CTSPC and Sexual Abuse subscale were also examined. Four of the main effects for the child

abuse scales were significant; these are included in Table 33. Scores on the PAPS were higher for women who experienced Father Severe Physical Abuse, Father Physical Abuse, Mother Severe Physical Abuse, and Childhood Sexual Abuse. None of the interaction effects were significant.

Summary. The following conclusions can be made about the association between child abuse experiences and substance abuse and partner abuse for women in substance abuse treatment programs and shelters or safe homes for battered women in this study:

- the association between substance abuse and experiences of childhood abuse was found significant only for alcohol problems, not for drug problems, and even then depended to some extent on the measure used, type of analysis, and type of sample; where an association was found, level of alcohol problems or probability of an alcohol dependence diagnosis was higher for women who had experienced childhood abuse
- only Mother Severe Physical Abuse was associated with level of partner abuse; women who had experienced Mother Severe Physical Abuse had a higher level of partner abuse in adulthood
- experiences of childhood abuse were more strongly associated with her behavior toward partner (i.e., the PAPS) than her experiences of partner behavior; women who had experienced childhood abuse reported higher scores on the PAPS than women who had not experienced childhood abuse

Goal One Summary.

The major conclusions for Goal One are:

1. **A majority of women in substance abuse treatment have experienced child abuse or partner abuse and a significant percentage of women in shelters or safe homes**

**for battered women have substance abuse problems:**

- high percentages of women in both the substance abuse treatment and shelter/safe home samples reported childhood experiences of physical abuse or severe physical abuse from parents
- high percentages of women in both the substance abuse treatment and shelter/safe home samples reported experiences of childhood sexual abuse
- these percentages are much higher than in the general population
- a majority of women in substance abuse treatment have experienced partner physical violence in the past six months, a percentage much higher than that for women in the general population
- virtually all women in the substance abuse treatment sample have experienced psychological abuse from partner in the past six months
- women in both samples reported greater levels of experiences of partner violence than use of violence on partner; the primary reason for use of violence on partner was self-defense
- approximately one in four (26.2%) of women in the shelter/safe home sample has a lifetime diagnosis of alcohol dependence
- approximately one in four (26.3%) of women in the shelter/safe home sample is classifiable as having alcohol or drug problems

**2. Although a majority of women in substance abuse treatment have experienced recent partner physical abuse, and a significant percentage of women in shelters or safe homes have alcohol or drug problems, the associations between experiences of partner abuse and alcohol problems are relatively weak for both samples. Nevertheless, these associations are important. Among women in**

substance abuse treatment, those with partner abuse experiences have greater alcohol or drug problems. Among women in shelters or safe homes, those with alcohol or drug problems have greater levels of partner abuse.

3. The association between substance abuse and experiences of childhood abuse was found significant only for alcohol problems, not for drug problems, and even then depended to some extent on the measure used, type of analysis, and type of sample. Nevertheless these associations are also significant. Among women in treatment, greater levels of child abuse experiences are predictive of greater levels of alcohol problems.

**Goal 2: Determine if mental health issues are greater for women with both problems as opposed to women with a single problem.**

Several analyses were performed to accomplish this goal as well. First, the percentages of women with different levels of anxiety and depression, based on the Beck Anxiety and Depression Inventories, are provided for each sample. Also, analyses of variance (ANOVAs) for the mental health scales by sample type are provided. Second, the association between mental health issues and alcohol dependence was examined via multivariate analyses of variance (MANOVA's) and analyses of variance (ANOVA's). Third, as stated earlier, there have been insufficient psychometric analyses for the Hudson partner abuse scales to provide preliminary cut scores (Hudson and Associates, 1996); thus these scales may be more useful as indices to assess amount of partner physical and psychological abuse. Therefore, correlations among these indices, alcohol and drug indices, and mental health scales were examined. Also, mental health scales were regressed on partner abuse and alcohol and drug indices. Fourth, the associations for the mental health scales and experiences of childhood

abuse were examined via MANOVAs and ANOVAs.

#### Mental Health Issues by Type of Sample.

The classification of depression and anxiety problems by type of sample is included in Table 34. There were no differences across sample type for the Beck Anxiety Inventory (BAI). Of more interest than sample differences is that almost one half (49.1%) of women in the shelter/safe home sample were classified as having severe (24.3%) or moderate anxiety (24.8%). Lower but still substantial percentages of women in the substance abuse treatment sample were classified as having severe (17.4%) or moderate anxiety (21.0%).

The chi-square for the Beck Depression Inventory (BDI) was significant, although a bit difficult to interpret. Women in the shelter/safe home sample were more likely to have depression levels at the lower and upper end of the distribution than women in the substance abuse treatment sample. Again, of more interest than sample differences is that almost one half (48.4%) of women in the shelter/safe home sample were classified as having severe (17.0%) or moderate depression (31.4%). Lower but still substantial percentages of women in the substance abuse treatment sample were classified as having severe (7.6%) or moderate depression (38.1%).

The mean scores on the mental health scales are provided in Table 35. Unlike the sample differences in cut-off scores (Table 34), there were no differences in mean scores on the BDI across type of sample. Unlike the lack of sample differences in cut-off scores for the BAI, the mean BAI score was significantly higher in the shelter safe/home sample than in the substance abuse treatment sample. The only other significant difference in mean mental health scores was that the TSC-Sexual Abuse Trauma Index (SATI) was higher in the shelter/safe home sample. Mean scores on the Index of Alcohol Involvement and Index of Drug Involvement were significantly higher in the substance abuse treatment sample.

### Mental Health Issues by Alcohol Dependence Diagnosis and Type of Sample.

MANOVA's were used to examine the associations for the Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), and Trauma Symptom Checklist-40 (TSC-40) as dependent variables by type of sample and diagnosis of alcohol dependence as independent variables. The BAI, BDI, and TSC-40 are strongly intercorrelated in both samples (see Table 15) and MANOVA's were used to control for correlated dependent variables. The MANOVA for 12 month diagnosis of alcohol dependence was significant (Wilks' lambda = .968,  $p = .011$ ) as was the MANOVA for lifetime diagnosis of alcohol dependence (Wilks' lambda = .921,  $p < .001$ ). The ANOVA's for the BAI, BDI, and TSC-40 by 12 month diagnosis are included in Table 36 and lifetime diagnosis in Table 37. A diagnosis of alcohol dependence was associated with significantly higher scores on both the BAI and TSC-40. Stronger associations were found for lifetime diagnosis of alcohol dependence, and for all three mental health subscales. None of the interaction effects were significant indicating that these main effects were not significantly different across sample types; presence of alcohol dependence is associated with higher scores on the mental health subscales for both samples of women.

The Index of Self-Esteem (ISE) was not as highly correlated with the other mental health subscales, and thus separate ANOVAs were performed to examine the association between alcohol dependence and self-esteem. These ANOVAs are included in Table 38. In these ANOVAs the ISE was not recoded; thus, higher scores indicate greater problems with self-esteem. Women with a lifetime diagnosis of alcohol dependence had significantly greater problems with self-esteem than women without a diagnosis. The interaction effect was not significant, indicating that this finding held for both samples. The twelve month diagnosis of alcohol dependence was not significantly associated with scores on the ISE.

### Linear Associations Among Mental Health, Substance Abuse, and Partner Abuse.



Correlation Analyses. Pearson correlations among the mental health and partner abuse scales (as well as the Index of Marital Satisfaction, recoded so that higher scores mean greater levels of satisfaction) are provided for the shelter/safe home sample (Table 39) and substance abuse treatment sample (Table 40).

The TSC-40 and its subscales were developed specifically to examine trauma deriving from abusive experiences while the Beck inventories tap more general anxiety and depression. A two-tailed sign test was performed to test hypotheses that the patterns of correlations between the partner abuse scales and the TSC-40 and its subscales were different from the patterns of correlations between the BAI and BDI, and the partner abuse scales. For example, for the ABI-Physical, fourteen pairs of correlations were tested: BDI with the ABI-Physical versus the TSC-40 and each of its subscales with the ABI-Physical, and BAI with the ABI-Physical versus the TSC-40 and each of its subscales with the ABI-Physical. This sign test was repeated with each of the remaining four partner abuse scales, with tests performed separately for each sample.

For the shelter sample, the TSC-40 or its subscale had a pattern of higher correlation coefficients with the ABI-Physical (13 out of 14,  $p = .0018$ ), PAS-Physical (12 out of 14,  $p = .0013$ ), PAS-Nonphysical (12 out of 14,  $p = .0013$ ), and ABI-Psychological (11 out of 14, one tie,  $p = .0352$ ). For the substance abuse treatment sample, the TSC-40 or its subscale had a pattern of higher correlation coefficients with the ABI-Physical (14 out of 14,  $p < .0001$ ), ABI-Psychological (14 out of 14,  $p < .0001$ ), PAS-Nonphysical (14 out of 14,  $p < .0001$ ), and PAPS (13 out of 14,  $p = .0018$ ).

Regression Analyses. The BAI, BDI, and TSC-40 were regressed on the Index of Alcohol Involvement (IAI), Index of Drug Involvement (IDI), and each partner abuse scale. The partner abuse scales, Abusive Behavior Inventory-Physical (ABI-Physical), Abusive Behavior

Inventory-Psychological (ABI-Psychological), Partner Abuse Scale-Physical (PAS-Physical), and Partner Abuse Scale-Nonphysical (PAS-Nonphysical) were included in separate regressions due to high collinearity among these variables (see Table 14). The regressions for the shelter/safe home sample are in Tables 41-43 and the substance abuse treatment sample in Tables 44-46.

In the shelter/safe home sample, the IAI and the two ABI scales significantly predicted scores on all three mental health scales, with stronger associations for the TSC-40 than for the two Beck Inventories. The two PAS scales also significantly predicted the TSC-40, and the PAS-Nonphysical significantly predicted the BAI. In general, for the shelter sample, higher levels of abusive experiences predicted higher levels of mental health problems, controlling for levels of alcohol and drug problems. The associations between abusive experiences and mental health problems were stronger for the TSC-40, not a surprising finding since as stated earlier the TSC-40 was designed specifically to assess trauma deriving from prior abusive experiences while the Beck Inventories are more general indices of depression and anxiety.

Results were similar in the substance abuse treatment sample; the IAI and the two ABI scales significantly predicted scores on all three mental health scales, with stronger associations for the TSC-40 than for the two Beck Inventories. Also, the two PAS scales significantly predicted both the TSC-40 and the BAI. Two differences are that the IDI also predicted scores on the TSC-40, and that the  $R^2$  adjusted for sample size and number of independent variables in the equation are higher for the BAI and BDI in this sample. Among women in substance abuse treatment, higher levels of abusive experiences predicted higher levels of mental health problems, controlling for levels of alcohol and drug problems. The associations between abusive experiences and mental health problems were stronger for the TSC-40, and generally stronger for this sample than for women in shelters or safe homes.

### Mental Health Issues by Experiences of Child Abuse and Type of Sample.

MANOVAs were performed for the BAI, BDI, and TSC-40 as dependent variables by type of sample and the CTSPC scales of Father Severe Physical Abuse, Physical Abuse, and Corporal Punishment, Mother Severe Physical Abuse, Physical Abuse, and Corporal Punishment, and Childhood Sexual Abuse as independent variables for a total of seven separate MANOVA's for each scale. Interaction effects for sample type and each CTSPC and Sexual Abuse subscale were also examined. The MANOVAs were significant in predicting mental health issues for Mother Severe Physical Abuse (Wilks' lambda = .963,  $p < .01$ ), Mother Physical Abuse (lambda = .954,  $p < .001$ ), Father Severe Physical Abuse (lambda = .977,  $p < .05$ ), Father Physical Abuse (lambda = .961,  $p < .01$ ), and Childhood Sexual Abuse (lambda = .946,  $p < .001$ ). The ANOVA's for these CTSPC scales and the scale for Childhood Sexual Abuse are in Tables 47-51, respectively.

With one exception in these ANOVA's, the CTSPC or Childhood Sexual Abuse scale significantly predicted all three mental health scales. The exception was that Father Severe Physical Abuse did not significantly predict scores on the Beck Anxiety Scale. In each case, women who reported at least one experience of abuse had a higher level of mental health problems. One interaction term was significant, that for Father Severe Physical Abuse in predicting scores on the TSC-40. In examining the table (Table 48), Father Severe Physical Abuse appeared to predict significantly scores on the TSC-40 in the shelter/safe home sample, but not the substance abuse treatment sample.

ANOVAs were performed to examine the association between the Index of Self Esteem (ISE) and the CTSPC and Childhood Sexual Abuse scales and type of sample, and can be found in Table 51. Mother Physical Abuse and Father Physical Abuse were the only two scales that significantly predicted scores on the ISE. Women who had experienced Mother Physical

or Father Physical Abuse reported a higher level of problems with self-esteem.

### Goal Two Summary

The major conclusions for Goal Two are:

- almost half of women in the shelter/safe home sample had levels of depression or anxiety classified as moderate or severe
- a lower but still substantial percentage of women in the substance abuse treatment sample had levels of depression or anxiety classified as moderate or severe
- a diagnosis of alcohol dependence (both 12 month and lifetime) was associated with higher levels of mental health problems in both samples
- controlling for levels of alcohol and drug problems, higher levels of partner abuse were associated with higher levels of mental health problems in both samples of women; this conclusion was true both for experiences of partner physical violence and partner psychological abuse
- the associations between partner abuse and mental health problems were stronger for the substance abuse treatment sample, and stronger for the scale designed specifically to assess symptoms from traumatic (i.e., abusive) experiences
- experiences of childhood abuse (both sexual abuse and parental violence) were associated with higher levels of mental health problems in both samples

**Goal 3: Examine the current level of integration between the substance abuse and partner abuse service delivery systems as well as factors that impede or enhance this integration.**

To address this goal, a pilot study was conducted. Staff from both substance abuse

treatment agencies (N = 30 staff) and shelters or safe homes (N = 19 staff) were interviewed. The primary purpose of these pilot study interviews was to obtain data on the current level of integration of services between substance abuse treatment programs and shelters/safe homes for battered women. A standardized structured interview was administered to respondents; however, since this was a pilot study intended also to uncover reasons for integration or lack of integration of services, additional probe questions were also asked. Questions were asked regarding: 1) ways in which staff discover whether client has a problem with domestic violence (substance abuse treatment staff) or substance abuse (shelter/safe home staff), 2) presence of a linkage agreement between substance abuse treatment and domestic violence agencies, 3) whether staff from substance abuse treatment and domestic violence agencies meet, 4) programs in place for the cross-problem, 5) perceptions on the ideal collaboration between agencies, and 6) barriers and aids to collaboration. These interviews lasted approximately 30 minutes.

#### Recruitment Procedures

At the end of a staff meeting, one of the interviewers would briefly describe the study to the staff (e.g., types of questions, overview of the study, anticipated length of interview), report the informed consent procedures (e.g., confidentiality, who would and would not have access to information they would be asked to provide); inform staff that volunteering for the study does not mean they have to answer all questions, instead they could refuse to answer specific questions, or stop the interview without penalty); inform staff that they would be volunteering their time for the study without being paid by the study; and answer questions the staff might have. Staff volunteering to be interviewed signed up on a schedule sheet.

#### Informed Consent Procedures

These were similar to the informed consent procedures with women respondents,

except that staff were not paid. Instead, agencies were provided with a fee to reimburse partially the donation of staff time for the interview. Before the interview, interviewers reported the informed consent procedures to the staff person. Staff were also asked if the interview could be tape-recorded for purposes of accuracy; all staff agreed to tape recording. Staff were also told that they could refuse to answer any questions, or terminate the interview at any time. After the potential respondent had an opportunity to process this information and ask questions, potential staff respondents were again asked if they wanted to be interviewed. If the potential staff respondent agreed to be interviewed, s/he was asked to sign the informed consent form. The interview could not proceed unless the staff respondent signed the informed consent form. After the interview was completed, the interviewer transported all materials directly back to the research office, where they were placed in locked file cabinets. The name-to-identification number sheet, hard copies of the interviews, and tapes were all kept in separate locked file cabinets.

## RESULTS AND DISCUSSION

Results are provided with respondent rather than agency as the unit of analysis for several reasons. First, we were interested in staff perceptions, especially for such variables as barriers to collaboration. Second, we discovered that different staff at the same agency sometimes provided different answers to the same questions, based on their differing perceptions. The 39 substance abuse agency interviews were as follows: Site 2 (N = 6), Site 3 (N = 16), Site 6 (N = 8), and Site 12 (N = 9). The 20 shelter/safe home staff interviews were as follows: Site 5 (N = 6), Site 7 (N = 4), Site 8 (N = 3), Site 10 (N = 3), and Site 11 (N = 3).

### Demographics

Eleven staff respondents were agency directors (N = 4), program coordinators or directors (N = 5) or supervisors (N = 2). The remainder (N = 48) were direct service providers;

most of these were counselors (N = 35) or domestic violence advocates (N = 9). Respondent's age ranged from 20 to 63, with a median age of 38. Most had a baccalaureate (N = 37, 62.7%) or a master's (N = 13, 22.0%) degree. Years of experience ranged from 0.5 to 25.0, with a median of 7.0 years. Most respondents (N = 46, 78.0%) were women and Caucasian (N = 53, 94.6% of 56 valid responses). Three respondents were African-American.

#### Ways in Which the Cross-Problem is Discovered

A majority (N = 29, 74.4%) of substance abuse treatment agency staff reported that domestic violence was discovered during the intake with clients. Of these, a majority (N = 27, 69.2%) ask specific questions about the existence of domestic violence. Only one staff member (2.6%) reported that the substance abuse agency did not attempt to discover the cross-problem while one staff member reported that the substance abuse agency relied on client self-report, and one staff member reported reliance on observation. These results differed from those for the shelter/safe home sample, in which a minority of respondents (25.0%) reported that substance abuse was discovered during intake. A larger percentage (40.0%) of shelter/safe home respondents reported reliance on client self-disclosure while smaller percentages reported using an examination of client's behavior (10.0%), or using observation (5.0%).

This variable was recoded into discovery methods based on an attempt to question the client (e.g., during intake, subsequent interviews, counseling sessions, groups, or subsequent evaluations) or no attempt to question the client (e.g., use of self-report, observation, no standard method, or no attempt to discover). A significantly higher percentage of substance abuse agency staff (92.3%) reported an attempt to question than did shelter/safe home staff (40.0%) [chi-square = 19.08,  $p < .001$ ].

Further probe questioning led to two reasons for this difference. First, it is easier to

discover substance abuse by observing behavior of clients. For example such behaviors as returning to the shelter while obviously intoxicated can be used as indicators of substance abuse. Conversely, partner violence is more difficult to discover via observation. Bruises on the face or other visible of the body can be indicators of partner violence; however, there can also be violence to parts of the body covered by clothing or violence that does not leave a visible mark. Further, psychological abuse does not leave a visible mark. Second, some shelter/safe home staff reported concern that client's substance abuse, if discovered, would be used against them in a court proceeding. Thus, some shelter staff did not screen for substance abuse, since discovery could eventually lead to legal or civil problems in court. A third reason, based on results reported previously, is that a higher percentage of women in substance abuse treatment (approximately 67%) have experienced partner physical violence than women in shelters/safe homes have substance abuse problems (approximately 26%). Thus the cross-problem may be more prevalent in substance abuse agencies.

An additional datum is that, although a majority of substance abuse agency staff report asking specific questions about domestic violence during intake, an examination of the forms used indicate that in general the screening consisted of one or two questions. Miller and Downs (2000) among others have pointed out that multiple questions are a much more accurate way of discovering partner abuse. The American Medical Association (Flitcraft et al., 1992) has recommended a list of ten questions to screen for the existence of partner abuse among women. Since that time, several studies have shown that screening tools with the number of questions ranging from three to eight can effectively identify women who have experienced partner abuse (Sherin et al., 1998; Feldhaus et al., 1997; Brown et al., 1996; McFarlane et al., 1992). To screen effectively for experiences of partner abuse, screening tools must include specific questions (e.g., how often has partner yelled at you?) instead of more



general questions (e.g., has partner ever abused you?) and screening tools must be routinely administered to women in safe contexts (Miller and Downs, 2000).

#### Existence of a Linkage Agreement

Staff were questioned regarding whether there was a formal linkage agreement for referral of clients to the cross-problem agency (e.g., to the shelter/safe home in case domestic violence was discovered). A minority of substance abuse agency staff (N = 9, 23.1%) and shelter/safe home staff (N = 5, 25.0%) reported the existence of a linkage agreement for referrals regarding the cross-problem (chi-square = .006, p = 1.00). Six substance abuse agency staff (15.4%) and one shelter/safe home staff (5.0%) did not know if there was a linkage agreement. However, eighteen substance abuse agency staff (46.2%) and seven shelter/safe home staff (35.0%) reported existence of an informal linkage agreement. Informal linkage agreements typically meant that there were at least some referrals to or from the other agency, but not the existence of a formal policy.

#### Are There Meetings of Staff from Different Agencies

A majority of shelter/safe home staff (55.0%) reported meetings with staff from substance abuse programs while almost half (43.6%) of substance abuse agency staff reported meetings with shelter/safe home staff (chi square = .637, p = .425). Four substance abuse agency staff (10.3%) and two shelter/safe home staff (10.0%) did not know if there were such meetings. Staff respondents were also asked about the frequency of these meetings. For the most part, staff reported infrequent meetings with staff from the other agency. Two substance abuse treatment agency staff (12.5% of 16 valid responses) reported weekly meetings while no shelter/safe home staff reported weekly meetings. Three substance abuse agency staff (18.8% of 16 valid responses) and two (25.0%) shelter/safe home staff reported monthly meetings. Other responses were "as needed", 1-2 or several times per year, or "not on a regular basis".

### Types of Cross-Problem Programs

Staff were asked if there were a program in their agency for women with the cross-problem; for example staff in substance abuse treatment programs were asked if there were program for women with the problem of domestic violence. No shelter/safe home staff reported the existence of a program for women with substance abuse problems while 21 (53.8%) of substance abuse treatment staff reported the existence of a program for women with the problem of domestic violence (chi square = 13.79,  $p < .001$ ). Further probe questioning indicated several reasons for the lack of cross-problem programs in shelters or safe homes. Staff reported that shelters and safe homes typically are underfunded, have few or no resources to intervene with substance abuse problems, and in any case have the primary goals of providing a safe environment while providing advocacy services for their clients.

Further probe questions also led to descriptions of the programs for women with domestic violence problems. Four (19.0% of 21 valid codes) substance abuse agency staff described a domestic violence group, while eight staff (38.1%) reported either a women's program or a women's and children's program. Other programs described included a women's issues group (N = 2), one-to-one counseling (N = 2), and several different types of groups: gender specific, relationships, educational/support, women's and children's, and codependency (all N = 1). Thus, only four staff described a group specifically for domestic violence; these were all staff at Site 6. The other groups described by staff respondents are intended for more general issues, although partner abuse could be one of these issues.

### Ideal Extent of Collaboration

Very few staff were satisfied with the current level of collaboration. Two (5.3% of 38 valid codes) substance abuse agency staff reported that the "setup is good right now", while one (5.0%) shelter/safe home staff reported not feeling the need for this type of collaboration.

Most staff from both substance abuse treatment and shelter/safe home programs stated that the ideal extent of collaboration would involve more extensive work with the other agency (94.7% of substance abuse agency staff and 95.0% of shelter/safe home staff). While several staff reported that in general there was a need for more collaboration, other staff provided specific suggestions as to the types of collaboration they would like to see. A large number of staff reported the need for weekly meetings between staff of both agencies (N = 10 substance abuse, 26.3%; N = 5 shelter/safe home staff, 25.0%). Other specific suggestions (from either one or two staff) were as follows:

- Training from the cross agency
- Staff from other agency to be speakers on a regular basis
- Specific persons to refer to
- Mutually run group
- Domestic violence program in-house
- More education for staff (regarding the cross-problem)
- Have all agencies in one location
- Enough space in both agencies to move women to and from each agency
- Universal assessment tool and regular meetings

#### Barriers and Aids to Collaboration

Staff were asked the extent to which each of eight factors decreased coordination between their agency and the cross-problem agency: adherence to the disease model of addiction; adherence to the feminist model of domestic violence; twelve-step programs; need for self-control as compared with need to surrender control; competition for funding; qualifications, training, and experience of staff; attitudes and beliefs of staff; and program structure in a methodology similar to that of Bennett and Lawson (1994). Staff were also asked

the extent to which each of three additional factors decreased coordination between their agency and the cross-problem agency: adherence to the cognitive behavioral model of addiction; adherence to the bio-psycho-social model of addiction; and adherence to the rational recovery model of addiction. Responses were on a five point Likert scale from 1 = strongly disagree (that the issue is a barrier to collaboration) to 5 = strongly agree. These were recoded to 1 = strongly disagree-disagree, 2 = neutral, opinion, and 3 = agree, strongly agree to allow for chi-square analyses.

Some findings were as expected. For items in which there was a significant difference in percentage agreement across sample type, results are reported in Tables 53-56. Significantly higher percentages of shelter/safe home staff agreed that the disease model of addiction (Table 53), rational recovery model (Table 54), control vs. surrender issue (Table 55) were barriers to collaboration than did substance abuse treatment staff. A finding that was not expected is that a significantly higher percentage of shelter/safe home staff also agreed that the feminist model was a barrier to collaboration than did women in the shelter/safe home sample (Table 56).

A majority of the shelter/safe home staff perceived the feminist model, control vs. surrender issue, qualifications of staff, and attitudes/beliefs of staff as barriers to collaboration. A majority of both staffs (64.9% of substance abuse treatment, 86.7% of shelter/safe home) perceived the lack of resources as a barrier to collaboration. Staff were also asked which of these factors were aids to collaboration. There were no significant differences between substance abuse agency and shelter/safe home staff in perceptions of which factors were aids to collaboration. These findings are similar to those of Collins and Spencer (1999). Collins and Spencer (1999) found that a significantly higher percentage of shelter staff as compared with substance abuse treatment program staff reported that they expected or experienced problems

with difference in treatment philosophy (46.6% vs. 35.4%), and that a higher percentage of shelter staff reported that “philosophies of domestic violence programming and substance abuse treatment are inconsistent with each other” (40.2% vs. 18.8%).

### Goal Three Summary.

The major conclusions for Goal Three are:

1. **There are attempts by both substance abuse treatment and shelter/safe home agencies to address the cross-problem. In particular, there have been:**
  - screenings to discover the cross-problem; these screenings are more prevalent in substance abuse treatment agencies than in shelters or safe homes
  - development of formal linkages between some shelters/safe homes and substance abuse treatment agencies
  - meetings between staff at both substance abuse treatment agencies and shelters/safe homes
  - development of a domestic violence group for women in at least one substance abuse treatment agency
2. **However, these attempts to address the cross-problem can be improved. For example, the screenings typically consist of one or two questions whereas from three to eight specific questions that are systematically administered to all women are recommended. Also, meetings between staff are infrequent, and several staff believe such meetings need to be more frequent.**
3. **Virtually all staff at both substance abuse treatment agencies and shelters/safe homes would like to see more collaboration between these agencies.**
4. **Barriers to collaboration included philosophical issues:**

- the disease model of addiction
- the rational recovery model of addiction
- the issue of control vs. surrender
- the feminist model

**and a lack of resources to address the cross-problem.**

#### **IMPLICATIONS FOR THEORY DEVELOPMENT AND PRACTICE**

**Goal 4: Determine the feasibility of developing and evaluating an innovative treatment program which addresses these problems - substance abuse and partner abuse - within standard treatment settings for substance abuse or for partner abuse.**

Evidence for Feasibility. Based on the findings from Goals 1-3 of this study, there is a clear need for treatment programs that address jointly women's experiences of partner abuse and women's substance abuse problems. Findings from Goal 1 indicate that a majority of women in substance abuse treatment have recent and ongoing experiences of partner abuse, and that a substantial percentage of women in shelters or safe homes have substance abuse problems. Findings from Goal 2 indicate that mental health problems also play a role in women's needs in both substance abuse treatment programs and shelters/safe homes. Furthermore, findings from Goal 3 indicate that a substantial percentage of staff in both substance abuse treatment programs and shelters/safe homes recognize the need for and would like to see more collaboration with the cross-problem agency. In addition, many staff reported that substance abuse treatment programs and shelters/safe homes have already begun such collaboration with mechanisms such as linkages with the cross-problem agency; meetings with the cross-problem agency, and in the case of substance abuse treatment programs attempts to screen for the cross-problem. Based on these results, there is both a need and a desire on the part of staff to develop more services; thus, feasibility of developing

innovative programs would be rated as high.

Evidence Against Feasibility. Nevertheless, this enthusiasm for collaboration and development of innovative programs must be tempered with some very real philosophical differences that may inhibit efforts at this collaboration or development. These differences constitute barriers to cooperation which must be addressed before in-depth collaboration can occur or innovative programs that integrate disparate treatment approaches be developed. In particular, findings from Goal 3 indicate that philosophical differences in treatment and service delivery exist between substance abuse treatment staff, and shelter/safe homes specifically regarding the disease model of addiction and the feminist model of service delivery. Data from this study and from Collins and Spencer (1999) indicate that shelter staff are more likely to perceive and be concerned with philosophical differences.

Shelter staff strongly adhere to the use of empowerment and women's right to choose in service delivery, based on the belief that women are the experts on the relationship with partner. In particular, shelter staff may believe that women are the experts on safety, including which behaviors are safer under which circumstances with partner. This treatment philosophy is likely to be antithetical to treatments based on the medical model in which the treatment provider is viewed as the expert and in which agency policies are developed and uniformly applied.

Shelter staff also view the concept of codependency with suspicion because of the potential to use this concept for "victim-blaming". Codependency was developed as a means to account for the non-addicted partner's (usually woman's) dependence on the addicted partner's (usually man's) alcohol-related behavior. For example, women might be viewed as "co-dependent" for a range of "hyperfunctioning" behaviors in which they compensate for lack of male partner fulfilling his spousal or parental roles within the family (Downs, 1982). However,

shelter staff may have encountered cases in which substance abuse treatment staff have used the concept of codependency to view women's behavior as contributing to the addiction of male partners. If so, this use is contrary to the feminist belief that men alone are responsible for their behavior, in particular abusive behavior. Shelter staff may specifically object if the concept of codependency is extended to men's abusive behavior within a relationship, based on the perception that in these circumstances the woman may be held partially responsible for partner's violence in a case of "victim-blaming" (Downs and Miller, in press).

Other data from Collins and Spencer (1999) may provide an additional explanation for the philosophical differences. Collins and Spencer (1999) found that a significantly higher percentage of shelter staff as compared with substance abuse treatment program staff reported problems expected or experienced with "complementary program lacks training in field" (63.2% vs. 20.4%) while conversely, a significantly higher percentage of substance abuse treatment program staff reported problems expected or experienced with not knowing the complementary service system (26.9% vs. 19.0%). These data suggest that shelter staff may perceive that substance abuse treatment staff have less training in the cross-problem as well as that substance abuse treatment staff may actually have less training in the complementary field, and thus have less knowledge regarding competing philosophies.

These competing philosophies may be contributing to lower levels of collaboration than would exist in the absence of philosophical differences in treatment. For example, while linkage agreements between substance abuse treatment agencies and shelters/safe homes do exist, referrals for the cross-problem are probably lower than expected. Based on need alone up to two-thirds of women in substance abuse treatment are potential candidates for referral to shelters; however, the actual number referred is probably considerably lower. Additional interagency meetings are necessary to discuss criteria for referral. In the absence of these



meetings, differences in treatment philosophy may be contributing to differing criteria for referral in substance abuse agencies as compared with shelters/safe homes. These differing criteria for referral may exist for both substance abuse and partner abuse.

These differences are not just abstract incongruities in philosophy; they are likely to affect services in a number of ways and at different levels. A substance abuse treatment agency might, for example, develop a policy of mandatory referral to a partner abuse group for women based on the belief that this group will benefit all women who had experienced partner abuse. However, from the point of view of shelter staff, mandatory referral would violate the principle of empowerment and women's right to choose. Also, women not yet ready to discuss their abusive experiences may not disclose these experiences in order to avoid referral to the group. In addition, based on the empowerment model, shelter staff may question even the need to screen women in substance abuse treatment for existence of partner abuse. Based on empowerment and women's right to choose, shelter staff may have the view that women will refer themselves to domestic violence groups or other partner abuse services within substance abuse treatment agencies only when women believe it is safe to begin work on partner abuse. If so, then screening for partner abuse may be unnecessary and even counterproductive.

Other differences may surface as well. Some substance abuse treatment agencies may incorporate partners into comprehensive treatment plans for clients. If so, given the data on partner physical and psychological abuse, this service would be contraindicated for many women in substance abuse treatment. If partners are incorporated into the treatment plan, then it may be necessary in this case to screen for partner abuse. Also, it may be that substance abuse treatment staff need to be made cognizant of the fact that some male partners not only undermine treatment for women partners, but also coerce women into using alcohol or drugs as well as coerce women into providing prostitution services to pay for male partner's drug costs.

Individual staff in substance abuse treatment agencies may use the strategy of outlining for clients the negative outcomes of alcohol use, drug use, or behavior affected by intake of alcohol or drugs as a means to help clients decide to reduce or abstain from alcohol or drug use. This strategy may be effective for substance abuse treatment but is contraindicated for partner abuse. It may not be enough for substance abuse treatment staff not to use this strategy for women's partner abuse experiences; it may also be important for staff proactively to point out to women that this strategy does not extend to partner abuse experiences. Otherwise, women may themselves extend this strategy, which may have been successful for substance abuse, to their relationships and blame themselves for partner abuse they have experienced.

There may be concerns in the other direction as well. Staff in substance abuse treatment agencies may have concerns that adherence to the empowerment model and the principle that male perpetrators of partner violence are singularly responsible for that violence could lead to minimization of women's contributions relationship issues. These concerns may derive from a larger debate over the use of relationship counseling in cases of partner abuse. Johnson (1995) suggested that there are two forms of partner violence: common couple violence and patriarchal terrorism. In common couple violence, the violence is less severe, more mutual than is the case with patriarchal terrorism, and essentially without the control techniques that men use in patriarchal terrorism (Johnson, 1995). Some of the violence experienced by women in substance abuse treatment may be perceived by staff to be at the level of common couple violence and in fact may be at that level.

In the larger debate over relationship counseling, there are proponents of the view that relationship counseling is the preferred form of intervention for common couple violence, violence at lower levels which is also mutual (Downs and Miller, in press). This relationship counseling includes an examination of the woman's contribution to relationship issues, a view

contrary to the feminist approach which places full responsibility for partner violence on the perpetrator. Also, according to substance abuse treatment staff, alcohol or drug-related behavior by both the man and the woman is likely to have harmed the relationship. Repairing the relationship may then require relationship counseling. In this case, placing the full responsibility for relationship repair on the male partner may be contraindicated, and may constrain attempts by substance abuse treatment staff to assist men and women in repairing their relationship (Downs and Miller, in press). There may be a need for shelter staff to recognize this possibility in an integrated service program.

There may also be concerns over confidentiality. Shelter staff reported concerns that discovery of client's substance abuse problems might result in criminal or civil justice proceedings against women, for example in arguments that she is an "unfit mother" and thus should lose custody of her children. One possible service integration would be to offer outpatient substance abuse groups at shelters for battered women. However, before shelter staff would support such groups, concerns over which other agencies might be informed of women's attendance in these groups may need to be addressed. Substance abuse treatment agencies typically have releases of information so that, if necessary, other professionals (e.g., probation officers) can be so informed. Substance abuse treatment staff may in these cases be concerned about the need to work proactively with other agencies, while shelter staff may be concerned about preventing other agencies from using women's substance abuse against her in criminal or civil court proceedings. These concerns in both directions would need to be addressed.

Type and degree of philosophical differences are likely to vary over geographic area, rural as compared to urban community as well as a number of other factors. Further research is needed to examine: a) the nature and depth of the philosophical differences between

substance abuse treatment agencies and shelter/safe home programs, b) the extent to which and in what specific ways these differences are barriers to collaboration, c) how best to reduce these differences, and d) the extent to which these differences vary across different regions, agencies within regions, and other factors. Until these differences are fully addressed, it is likely that while there will be attempts to collaborate services across substance abuse treatment agencies and shelter/safe home programs, these attempts will be limited. The development of innovative programs that integrate the feminist approach with various models of substance abuse treatment to provide will be hampered by need for greater understanding of the cross-problem treatment approaches. At a minimum then, increased training and education for both shelter and substance abuse treatment staffs in the complementary fields would be a necessary precursor to improved understanding and collaboration. Based on these factors, feasibility for developing innovative treatment programs would be rated low.

Thus, discrepancies at many levels must be reconciled and synthesized into an integrated treatment approach before innovative treatment programs are developed. As a first step in increasing this feasibility, there may be a need for additional education and training in both directions before treatment programs that integrate partner abuse services based on the feminist model and substance abuse treatment based on the medical model can be developed.

Shelter staff may need a greater understanding of several issues, including: a) the complexities of physiological and psychological addiction, both for women and men, b) modes in which heavy use over time result in physical and psychological dependence, changes in brain structure, and may increase the likelihood of aggression via multiple pathways, c) how experiences of partner abuse and other abusive experiences contribute to women's development of substance abuse problems, d) ways in which substance abuse currently affects women in shelters and how these women cope with these issues, and e) how alcohol or drug

use may contribute to women's vulnerability to violence and abuse.

Substance abuse treatment staff may need a greater understanding of issues such as:

- a) the complexities of the dynamics in partner abuse, for example the limits of using medical model treatments or codependency in working with battered women,
- b) the ways in which experiences of partner abuse and other abusive experiences contribute to women's development of substance abuse problems,
- c) safety planning, confidentiality, and how women themselves experience and view partner abuse,
- d) how women in treatment currently cope with partner abuse, and
- e) why women stay with abusive partners (e.g., partner threatens to stalk or murder her if she leaves, that No Contact orders do not necessarily protect women in all cases).

### Theory Development

An additional barrier to the development of innovative treatment programs that jointly address women's experiences of partner abuse and substance abuse problems is the need for theory development to account for the association between partner abuse experiences and substance abuse problems. Integrated programs cannot be effective until, at a minimum, the sequencing of problems is addressed. If women's substance abuse problems are antecedent to and contribute to experiences of partner abuse, then a medical model approach may be the appropriate way to begin to address these problems. In this approach, it would be important to address substance abuse as a way to help reduce partner abuse experiences. To the extent that shelters do not address women's substance abuse problems, partner abuse would likely continue at some level. Conversely, if women's experiences of partner abuse are antecedent to and contribute to substance abuse problems, an empowerment approach may be necessary to address first the issues of partner abuse as way ultimately to reduce also substance abuse. To the extent that substance abuse treatment agencies do not address women's experiences of partner abuse, relapse is likely to occur even after successful treatment of the substance

abuse. In addition, treatment of mental health concerns might also be important. Further research is necessary to elucidate the direction of associations among women's experiences of partner abuse, women's mental health problems and women's substance abuse. Based on existing research, the following sections are an initial attempt at theory development in these areas.

Association Between Experiences of Partner Abuse and Mental Health. As stated earlier, a number of studies and literature reviews have found women's experiences of partner physical or psychological abuse to be associated with various psychological problems, such as depression or anxiety (Scholle et al., 1998; Roberts et al., 1998; Rollstin and Kern, 1998; McCauley et al., 1998; Golding, 1999). The implication from many of these studies and reviews is that experiences of both partner physical and psychological abuse predate and contribute to increases in women's psychological and psychiatric problems. However, none of these studies have used longitudinal designs and thus none could address the issue of whether women's experiences of partner abuse contribute to psychological problems or whether psychological problems increase women's risk for partner abuse experiences.

Sutherland, Bybee, and Sullivan (1998) did conduct a longitudinal study over three time waves, collecting data from 126 women who had been clients at a domestic violence shelter. The three time periods were: at shelter exit, six month follow-up, and 12 month follow-up. Using structural equation modeling, these researchers found that time 1 partner abuse predicted time 2 anxiety and depression, controlling for time 1 anxiety and depression (Sutherland, Bybee, and Sullivan, 1998). Also, there was an indirect effect of time 1 partner abuse on time 2 physical health symptoms via time 2 anxiety and depression. In addition, past abuse (abuse between time 1 and time 2) had an indirect effect on time 3 anxiety and depression via the effect on time 2 anxiety and depression (Sutherland, Bybee, and Sullivan,

1998). These data provide support for the hypothesis that women's experiences of partner abuse do contribute to increases in depression and anxiety over time. In addition, the authors suggested that mitigation of these physical and psychological problems following cessation of that abuse would be expected to be gradual as opposed to immediate.

Sutherland, Bybee, and Sullivan (1998) noted the need to replicate these results with larger and more diverse samples. However, their results support the trauma model developed by Herman (1992; 1995). In the trauma model, women's experiences of partner abuse contribute to mental health problems, with the effects of this abuse being cumulative over time. As noted earlier, Johnson (1995) speculated that there are two types of partner violence: common couple violence and patriarchal terrorism. Common couple violence is likely to be tapped in random sample surveys, such as that of Straus and Gelles (1990), with the violence being less severe and more mutual than is the case with patriarchal terrorism. Conversely, patriarchal terrorism is likely to be tapped in studies of women in treatment, especially those in shelters for battered women. In patriarchal terrorism, partner violence is much more severe, largely unilateral with the male partner perpetrating violence on the female partner, and with the motive of controlling the woman.

Partner violence can be conceptualized as a series of discrete and unrelated episodes, but such is not the case with patriarchal terrorism. Instead, between episodes of violence the threat of violence is both omnipresent and ominous. Male partners express this threat in a number of ways, both verbally and nonverbally, as if to remind women of their constant vulnerability. Furthermore, since the violence and threats occur in the woman's home, the clear implication is that she cannot be safe in her own home. Thus, women who experience patriarchal terrorism must constantly be vigilant for the likelihood of violence; in fact some researchers refer to this state as one of hypervigilance (Herman, 1992). One result is

hyperarousal, a state in which the women's flight-or-fight response is almost constantly activated. This noxious state likely contributes to increased anxiety on the part of the woman.

During part two of the interview, respondents were asked to describe the violent incident. Content analysis of this data is incomplete. However, the following descriptions provide examples of patriarchal terrorism. These examples can be used to illustrate the types of dynamics with which men terrify partners and create a living environment for partners that contributes to the hypervigilance and hyperarousal described by Herman (1992; 1995). Our contention is that in these situations partner abuse contributes to increases in anxiety disorders, over time.

First, in one set of dynamics, women reported being subjected to levels of violence that were dangerous, sadistic, and life-threatening: 1) partner tortured respondent while she was handcuffed and unable to escape, 2) partner intentionally drove his car into the woman, pinning her against the side of a building, 3) partner threw knives at respondent, and 4) partner held the woman upside down outside an upper floor window of a building with cement below. In this set of dynamics, women reported being aware that violence at this level could recur at any time, and thus lived in constant fear of life-threatening violence.

In a second set of dynamics, women reported violence or threat of violence being used to control her behavior or punish her for imagined transgressions: 1) one respondent reported waiting until a storm stopped to return home, only to be met at the door by partner who took and hid her car keys, telling her that now she would have to get his permission to go anywhere, and who later forced her to stand in the corner until he said otherwise, and 2) another respondent reported that she arrived home with groceries for the children, but partner refused to believe that she had stopped for groceries and beat her with a hockey stick. In this set of dynamics, women reported being in a position where any action would be deemed wrong and



result in violence from partner. For example, the woman stopped to get groceries would have been subjected to violence at a later point in time for not having the groceries in the home.

In a third set of dynamics, partner terrified respondent with life-threatening violence: 1) partner threatened respondent with a gun, and then shot a hole in the ceiling, 2) partner put a gun to respondent's head, 3) partner played Russian roulette with respondent while she was handcuffed and unable to escape, 4) partner forced respondent to stand in water while threatening to electrocute her, and 5) several respondents reported partner driving recklessly (e.g., running stop signs at high speed, or swerving recklessly into oncoming traffic) while she was a passenger in the car. Women reported being terrified by and in constant fear of these threats.

A different set of dynamics may contribute to increased depression among women who experience patriarchal terrorism. Men who perpetrate abuse at this level frequently attribute responsibility for the abuse to the woman who is victimized. Given the perpetrator's use of violence to control women, the victim is often in a situation in which she must provide sufficient evidence of accepting this responsibility to the perpetrator or experience additional abuse. For example, one woman in this study reported having to acknowledge her "mistakes" to the perpetrator as reasons why he "was forced to hit her". Another woman reported being coerced into writing an essay that detailed her shortcomings to provide justification for the violence that her partner perpetrated on her. To the extent that women accept these attributions for violence they experience, in effect are in the position of blaming themselves for this violence, decreased self-esteem and depression may ensue.

Mental Health Problems and Substance Abuse for Women. As stated earlier, Helzer and Pryzbeck (1988) found that for women, in 66% of comorbid alcohol dependence and major depression disorders, the depression diagnosis was antecedent to the alcohol dependence.

Recent studies have similar findings. Dixit and Crum (2000) examined 1383 women at risk for heavy alcohol use based on a 1 year follow-up of the Baltimore cohort of the National Institute of Mental Health Epidemiological Catchment Area study. Baseline history of depressive disorder was found to predict heavy drinking at one year follow-up, controlling for age of respondent, history of antisocial personality disorder, and father's history of heavy drinking. Brady and Randall (1999) also noted that women have a significantly higher rate of comorbid psychiatric disorders with substance abuse than do men, and that typically psychiatric disorders predate the substance abuse for women.

Additional research is necessary to specify the paths between particular psychiatric disorders and alcohol or drug dependence. Linkages may result from familial transmission, and may derive from genetic or specific environmental influences within the family of origin (Prescott, Aggen, and Kendler, 2000) and may derive from childhood or adolescence (Spak, Spak, and Allebeck, 2000). However, data thus far provide support for the supposition that, for women, mental health disorders (e.g., depression and anxiety) are antecedent to and primary to substance abuse.

Partner Abuse, Mental Health Problems, and Substance Abuse. In our study, a high percentage (65.8%) of women in substance abuse treatment experienced sexual abuse during childhood, and high percentages of women in substance abuse treatment experienced physical abuse from parents. In addition, high percentages of women in substance abuse treatment reported recent experiences of partner physical abuse (67.2%) or psychological abuse (93.2%). Thus women in substance abuse treatment reported experiencing a lifetime of abuse in relationships with others. Furthermore, women in both samples who experienced childhood abuse (both sexual abuse and parental violence) reported higher levels of mental health problems than women who did not experience childhood abuse. Finally, controlling for levels of

alcohol and drug problems, higher levels of partner abuse were associated with higher levels of mental health problems in both samples of women; this conclusion was true both for experiences of partner physical violence and partner psychological abuse.

Further research is necessary to examine pathways among experiences of partner abuse, mental health problems, and substance abuse for women, to determine if the hypothesized pathways can be replicated with other samples of women. However, thus far that data provides support for the suppositions that: a) prior experiences of abuse leads to mental health concerns, and b) mental health concerns in turn contribute to substance abuse for women. These data support the trauma model (Herman, 1992). If these pathways are in fact the dynamics among these problems for women, then substance abuse treatment for women will not be successful unless partner abuse experiences and mental health concerns are also addressed. This may be particularly valid for partner abuse experiences.

Additional Model. An additional theoretical model is possible. Women with substance abuse problems used greater levels of physical violence on partners. Two clear caveats are that women's use of violence on partners in this study was significantly less than women's experiences of violence from partners (in both samples), and that women typically used violence in self-defense or in anticipation of violence from partners, based on past experiences of violence with this partner. Women with higher levels of substance abuse problems may be more likely than women with lower levels of substance abuse problems to select violence as an option to respond to or to prevent partner violence. Unfortunately other ways of responding may be safer for women, for example the development and implementation of a safety plan based on work with a domestic violence advocate.

As with the model that posits partner abuse experiences antedate and contribute to mental health concerns, which in turn antedate and contribute to substance abuse for women,

this model requires further research. At a minimum, it is important to replicate the finding that higher levels of substance use place women at greater risk for partner abuse experiences with additional samples of women. These two models, while conceptually distinct, may not be mutually exclusive at the intervention level. Women may have developed substance abuse problems over time as a response to prior partner abuse experiences, but these same substance abuse problems may place them at greater current risk for additional partner abuse experiences. In sum, further research and theory development are necessary before integrated programs can be fully developed.

#### Immediate Implications for Practice

Although further empirical and theoretical work is necessary, and there have been some attempts to address the cross-problem, several improvements in services are possible. Staff at substance abuse treatment agencies and shelters/safe homes for battered women are increasingly aware of the need for programs to address jointly substance abuse and partner abuse for women. However, staff also reported that lack of resources impedes the full development of these programs. Based on the results of this study, these joint programs could consist of several components:

1) *Educational and support groups.* There is a need for women in substance abuse treatment programs to understand the dynamics of partner abuse and its effects on women, including the need for safety plans. Many women who enter substance abuse treatment have recently experienced partner physical violence, some of it being severe or potentially lethal and yet have little or no knowledge regarding safety issues. Virtually all women in substance abuse treatment have recently experienced partner psychological abuse, but have little knowledge concerning the dynamics of partner abuse, and consequently blame themselves for that abuse. An educational group would provide this information and a support group would allow women to

discuss and receive feedback on their experiences of partner abuse. To the extent that resources are available, shelter staff can lead or co-lead these groups.

There is also a need for women in shelters or safe homes to understand the impact of substance on their bodies and on their behavior, for how example how substances can be highly addictive. There is also a need for women in shelters or safe homes to develop plans to drink safely, that is there is a need for a harm reduction program. In addition, there is a need to work with shelter staff to increase the safety of women and children in the shelter, via preventing substance-related problems. To the extent that resources are available, substance abuse treatment staff can lead or co-lead these groups.

2) *Therapy groups.* A significant percentage of women who experience partner abuse have mental health issues derived from relationship-based abuse, either partner abuse and/or prior abuse from childhood. This group would offer in-depth counseling for women traumatized by partner abuse as adults as well as prior experiences of child abuse. However, this group would likely involve coordination with mental health treatment agencies, with resources being an issue.

3) *Victim advocacy services.* When women complete substance abuse treatment there is a high probability that they will experience additional partner abuse from their partners, whether or not they have decided to leave their partners. There is a need to provide legal advocacy services for women as well as facilitate their access to shelter services to ensure the safety of the women and their children. Furthermore, providing comprehensive treatment that addresses specialized service needs that contribute to, or are exacerbated by, substance abuse and partner abuse decreases the likelihood of relapse. Women experiencing partner abuse have identified the needs for safe, affordable, drug free housing; economic stability; transportation; medical care (for women and children); prenatal care; mental health services for

problems that are primarily situational in nature (derived from the partner abuse and possibly primary to the substance abuse problems); legal advocacy; and education. To the extent that there are resources available, and philosophical differences overcome, shelter staff and substance abuse treatment agency staff could collaborate to overcome these differences.

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TABLE 1  
SAMPLES  
NUMBER OF RESPONDENTS  
FROM DIFFERENT SITES

	Substance Abuse	Domestic Violence
Site 1	29	13
Site 2	22	18
Site 3	57	64
Site 4	107	98
Site 5	10	18
Site 6	--	11
TOTAL	225	222

TABLE 2  
DEMOGRAPHICS OF SAMPLE:  
RELATIONSHIP

Current Partnership

Married	12.1%
Cohabiting	6.2%
Separated	20.6%
Divorced	25.6%
Widowed	1.6%
Other/Single	33.9%

Number Times Married

Never	22.6%
Once	44.4%
Twice	22.3%
More than Twice	10.6

Age at First Marriage

Less than 18	18.4%
18-21	55.6%
22-25	15.9%
26 and older	10.1

TABLE 3  
DEMOGRAPHICS OF SAMPLE:

EMPLOYMENT

Full-time	17.5%
Part-time	12.0%
Unemployed - Looking	38.6%
Unemployed - Not Looking	31.8%

ETHNICITY

European American	77.6%
African American	16.8%
Other	5.5%

AGE

18-21	10.5%
22-25	11.2%
26-29	13.7%
30-34	20.4%
35-39	20.6%
40/older	23.5%
Median Age	33.54

EDUCATION

Less than High School	22.0%
High School Graduate	39.4%
One Year Post High School	14.0%
2 Year Degree	13.3%
3 Years Post High School	5.0%
College Degree	4.8%
Post BA	1.6%



TABLE 4  
COEFFICIENT ALPHA FOR  
MOTHER CONFLICT TACTICS CHRONICITY SUBSCALES  
BY TYPE OF SAMPLE

	FULL SAMPLE	SUBSTANCE ABUSE TREATMENT SAMPLE	SHELTER SAMPLE
Mother Non Violent Reasoning	.57	.53	.60
Mother Psychological Aggression	.77	.77	.77
Mother Corporal Punishment	.80	.80	.80
Mother Physical Abuse	.87	.86	.87
Mother Severe Physical Abuse	.60	.58	.61

TABLE 5  
COEFFICIENT ALPHA FOR  
FATHER CONFLICT TACTICS CHRONICITY SUBSCALES  
BY TYPE OF SAMPLE

	FULL SAMPLE	SUBSTANCE ABUSE TREATMENT SAMPLE	SHELTER SAMPLE
Father Non Violent Reasoning	.67	.64	.71
Father Psychological Aggression	.83	.84	.82
Father Corporal Punishment	.82	.77	.85
Father Physical Abuse	.90	.87	.92
Father Severe Physical Abuse	.51	.29	.56

TABLE 6  
KUDER-RICHARDSON FORMULA 20 FOR  
MOTHER CONFLICT TACTICS BREADTH SUBSCALES  
BY TYPE OF SAMPLE

	FULL SAMPLE	SUBSTANCE ABUSE TREATMENT SAMPLE	SHELTER SAMPLE
Mother Non Violent Reasoning	.60	.52	.63
Mother Psychological Aggression	.67	.64	.68
Mother Corporal Punishment	.67	.65	.69
Mother Physical Abuse	.74	.72	.75
Mother Severe Physical Abuse	.61	.60	.61

TABLE 7  
KUDER-RICHARDSON FORMULA 20 FOR  
FATHER CONFLICT TACTICS BREADTH SUBSCALES  
BY TYPE OF SAMPLE

	FULL SAMPLE	SUBSTANCE ABUSE TREATMENT SAMPLE	SHELTER SAMPLE
Father Non Violent Reasoning	.68	.69	.68
Father Psychological Aggression	.76	.74	.78
Father Corporal Punishment	.67	.66	.69
Father Physical Abuse	.83	.80	.84
Father Severe Physical Abuse	.57	.48	.65

TABLE 8  
PEARSON CORRELATIONS AMONG MOTHER CTS CHRONICITY SCALES  
AND CTS SEXUAL ABUSE SUBSCALE<sup>a</sup>

	1	2	3	4	5	6
Nonviolent Discipline	—	.06	.04	-.10	-.06	-.09
Psychological Aggression	.19**	—	.65***	.63***	.42***	.20**
Corporal Punishment	.15*	.57***	—	.71***	.45***	.13
Physical Abuse	-.04	.54***	.67***	—	.75***	.20**
Severe Physical Abuse	-.04	.37***	.54***	.79***	—	.15*
Sexual Abuse	-.07	.27***	.13*	.16*	.13	—

<sup>a</sup>Correlations for the Shelter/Safe Home Sample are Above Diagonal and Correlations for the Substance Abuse Treatment Sample are Below Diagonal

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 9  
PEARSON CORRELATIONS AMONG FATHER CTS CHRONICITY SUBSCALES  
AND CTS SEXUAL ABUSE SUBSCALE<sup>a</sup>

	1	2	3	4	5	6
1 Nonviolent Discipline	—	.26***	.20**	.16*	.19**	-.10
2 Psychological Aggression	.23***	—	.71***	.70***	.57***	.15*
3 Corporal Punishment	.23***	.67***	—	.85***	.80***	.26***
4 Physical Abuse	.14	.57***	.81***	—	.86***	.24***
5 Severe Physical Abuse	.12	.40***	.62***	.74***	—	.21**
6 Sexual Abuse	.07	.15*	.24***	.19**	.20**	—

<sup>a</sup>Correlations for the Shelter/Safe Home Sample are Above Diagonal and  
Correlations for the Substance Abuse Treatment Sample are Below Diagonal

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 10  
PEARSON CORRELATIONS AMONG MOTHER CTS BREADTH SUBSCALES  
AND CTS SEXUAL ABUSE SCALE<sup>a</sup>

	1	2	3	4	5	6
1 Nonviolent Discipline	—	.13	.07	-.18**	-.21**	-.13
2 Psychological Aggression	.28***	—	.59***	.49***	.34***	.13
3 Corporal Punishment	.18**	.53***	—	.67***	.37***	.13
4 Physical Abuse	-.08	.51***	.53***	—	.59***	.26***
5 Severe Physical Abuse	-.16*	.24***	.33***	.59***	—	.15*
6 Sexual Abuse	-.10	.16*	.12	.22***	.18**	—

<sup>a</sup>Correlations for the Shelter/Safe Home Sample are Above Diagonal and  
Correlations for the Substance Abuse Treatment Sample are Below Diagonal

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 11  
PEARSON CORRELATIONS AMONG FATHER CTS BREADTH SUBSCALES  
AND CTS SEXUAL ABUSE SCALE<sup>a</sup>

	1	2	3	4	5	6
1 Nonviolent Discipline	—	.19**	.14	-.02	.04	-.11
2 Psychological Aggression	.25***	—	.65***	.54***	.38***	.07
3 Corporal Punishment	.20**	.53***	—	.73***	.66***	.26***
4 Physical Abuse	.05	.48***	.71***	—	.72***	.27***
5 Severe Physical Abuse	-.05	.28***	.50***	.67***	—	.25***
6 Sexual Abuse	-.06	.10	.18*	.17*	.27***	—

<sup>a</sup>Correlations for the Shelter/Safe Home Sample are Above Diagonal and  
Correlations for the Substance Abuse Treatment Sample are Below Diagonal

\* p<.05  
\*\* p<.01  
\*\*\* p<.001



TABLE 12  
COEFFICIENT ALPHA FOR PARTNER ABUSE SCALES AND  
INDEX OF MARITAL SATISFACTION  
BY TYPE OF SAMPLE

	FULL SAMPLE	SUBSTANCE ABUSE TREATMENT SAMPLE	SHELTER SAMPLE
ABI-Psychological	.95	.95	.94
ABI-Physical	.93	.93	.92
PAS-Nonphysical	.97	.97	.97
PAS-Physical	.96	.96	.96
Physical Abuse of Partner	.92	.86	.94
Index of Marital Satisfaction	.95	.92	.96

TABLE 13  
COEFFICIENT ALPHA FOR MENTAL HEALTH INDICES  
BY TYPE OF SAMPLE

	FULL SAMPLE	SUBSTANCE ABUSE TREATMENT SAMPLE	SHELTER SAMPLE
Beck Anxiety	.94	.94	.94
Beck Depression	.90	.88	.92
Index of Self Esteem	.93	.94	.92
TSC-40	.94	.94	.94
TSC-Sexual Problems	.83	.83	.83
TSC-Anxiety	.80	.77	.82
TSC-Dissociation	.79	.79	.81
TSC-Depression	.77	.76	.79
TSC-Sexual Abuse Trauma Index	.78	.75	.80
TSC-Sleep Disturbance	.83	.81	.85
Index of Alcohol Involvement	.97	.97	.94
Index of Drug Involvement	.95	.94	.90

TABLE 14  
PEARSON CORRELATIONS AMONG PARTNER ABUSE SCALES AND  
INDEX OF MARITAL SATISFACTION<sup>a</sup>

	1	2	3	4	5	6
1 ABI - Physical	—	.71***	.66***	.56***	.14	-.43***
2 ABI - Psychological	.77***	—	.39***	.68***	.11	-.58***
3 PAS - Physical	.67***	.44***	—	.66***	.24***	-.45***
4 PAS - Nonphysical	.72***	.79***	.57***	—	.13	-.71***
5 Physical Abuse of Partner	.33***	.30***	.35***	.34***	—	-.06
6 Index of Marital Satisfaction	-.46***	-.54***	-.42***	-.59***	-.19*	—

<sup>a</sup>Correlations for the Shelter/Safe Home Sample are Above Diagonal and  
Correlations for the Substance Abuse Treatment Sample are Below Diagonal

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 15  
PEARSON CORRELATIONS AMONG MENTAL HEALTH INDICES\*

	1	2	3	4	5	6	7	8	9	10	11	12
1 Beck Anxiety Inventory	—	.65***	-.44***	.72***	.73***	.61***	.71***	.65***	.49***	.48***	.19**	.06
2 Beck Depression Inventory	.59***	—	-.61***	.72***	.62***	.68***	.63***	.65***	.47***	.51***	.25***	.21**
3 Index of Self Esteem	-.35***	-.61***	—	-.54***	-.45***	-.47***	-.49***	-.48***	-.37***	-.41***	-.24***	-.17*
4 Trauma Symptom Checklist 40	.69***	.51***	-.34***	—	.88***	.89***	.87***	.90***	.77***	.77***	.31***	.13
5 TSC-Anxiety	.69***	.38***	-.23***	.85***	—	.72***	.82***	.79***	.61***	.59***	.27***	.05
6 TSC-Depression	.59***	.51***	-.37***	.90***	.71***	—	.73***	.74***	.62***	.77***	.24***	.09
7 TSC-Dissociation	.58***	.38***	-.27***	.82***	.73***	.65***	—	.86***	.56***	.60***	.31***	.11
8 TSC-SATI	.62***	.45***	-.31***	.87***	.75***	.68***	.83***	—	.74***	.64***	.26***	.05
9 TSC-Sexual Dysfunction	.49***	.35***	-.19**	.78***	.55***	.61***	.54***	.77***	—	.44***	.18*	.08
10 TSC-Sleep Disturbance	.55***	.46***	-.28***	.78***	.62***	.80***	.57***	.59***	.46***	—	.17*	-.02
11 Index of Alcohol Involvement	.22**	.16*	-.13	.27***	.16*	.25***	.17*	.25***	.24***	.24***	—	.41***
12 Index of Drug Involvement	.12	.09	-.10	.32***	.25***	.24***	.27***	.35***	.38***	.11	-.17*	—

\*Correlations for the Shelter/Safe Home Sample are Above Diagonal and  
Correlations for the Substance Abuse Treatment Sample are Below Diagonal

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

**TABLE 16**  
**PERCENTAGE OF WOMEN REPORTING AT LEAST ONE INCIDENT FOR**  
**MOTHER-TO-DAUGHTER CONFLICT TACTICS SUBSCALES,**  
**BY TYPE OF SAMPLE**

	Type of Sample				
	Substance Abuse Treatment	Shelter/Safe Home	Chi Square	df	p
Nonviolent Discipline	97.8%	94.0	3.08	1	.079
Psychological Aggression	96.4	90.8	4.94*	1	.026
Corporal Punishment	88.3	80.6	4.50*	1	.034
Physical Abuse	60.1	57.5	.20	1	.653
Severe Physical Abuse	21.0	24.9	.74	1	.389

\* p<.05

**TABLE 17**  
**PERCENTAGE OF WOMEN REPORTING AT LEAST ONE INCIDENT FOR**  
**FATHER-TO-DAUGHTER CONFLICT TACTICS SUBSCALES,**  
**BY TYPE OF SAMPLE**

	Type of Sample				
	Substance Abuse Treatment	Shelter/Safe Home	Chi Square	df	p
Nonviolent Discipline	89.3%	86.6	.42	1	.517
Psychological Aggression	85.9	80.0	1.97	1	.160
Corporal Punishment	76.1	76.6	.00	1	1.00
Physical Abuse	44.4	44.4	.00	1	1.00
Severe Physical Abuse	23.4	22.9	.00	1	.994

TABLE 18  
PERCENTAGE OF WOMEN REPORTING AT LEAST ONE INCIDENT FOR  
CHILDHOOD SEXUAL ABUSE BY TYPE OF SAMPLE

	Type of Sample				
	Substance Abuse Treatment	Shelter/Safe Home	Chi Square	df	p
Childhood Sexual Abuse	65.8%	58.7	2.06	1	.151

**TABLE 19**  
**PERCENTAGE OF WOMEN REPORTING AT LEAST ONE INCIDENT OF PARTNER**  
**PHYSICAL ABUSE AND PARTNER PSYCHOLOGICAL ABUSE IN THE SIX MONTHS PRIOR**  
**TO TREATMENT BY TYPE OF SAMPLE**

**TABLE 19a**  
**Women Without a Partner Past Six Months Included as No Violence**

	Type of Sample				
	Substance Abuse Treatment	Shelter/Safe Home	Chi Square	df	p
Physical Abuse	62.9%	84.0	22.28	1	.000
Psychological Abuse	87.3	91.8	1.75	1	.186

**TABLE 19b**  
**Women Without a Partner Past Six Months Excluded From Table**

	Type of Sample				
	Substance Abuse Treatment	Shelter/Safe Home	Chi Square	df	p
Physical Abuse	67.2%	87.4	21.45	1	.000
Psychological Abuse	93.2	95.5	.56	1	.456



**TABLE 20**  
**INDEX OF DRUG INVOLVEMENT CLASSIFICATION**  
**BY TYPE OF SAMPLE**

	Substance Treatment	Shelter/Safe Home
No Problem 0-14	12.2%	51.4
Possible Problem 15-29	12.7	30.3
Problem 30-100	75.1	18.3

Chi Square = 119.83, df = 2  
p < .001

**INDEX OF ALCOHOL INVOLVEMENT CLASSIFICATION**  
**BY TYPE OF SAMPLE**

	Substance Treatment	Shelter/Safe Home
No Problem 0-14	29.1%	66.5
Possible Problem 15-29	11.8	19.9
Problem 30-100	59.1	13.6

Chi Square = 88.26, df = 2  
p < .001

**PERCENTAGE EITHER PROBLEM BY TYPE OF SAMPLE**

	Substance Treatment	Shelter/Safe Home
No Problem 0-29	4.0%	73.7
Problem 30-100	96.0	26.3

Chi Square = 195.63, df = 2  
p < .001

TABLE 21  
PERCENTAGES OF WOMEN WITH LIFETIME  
AND 12 MONTH DIAGNOSES OF ALCOHOL DEPENDENCE  
BY TYPE OF SAMPLE

	Substance Abuse Treatment	Shelter/Safe Home	Chi-Square	df
Lifetime Diagnosis	58.6%	26.2%	42.14***	1
12-Month Diagnosis	41.9%	12.4%	41.88***	1

\*\*\*  $p < .001$

**TABLE 22**  
**ANALYSES OF VARIANCE OF INDEX OF DRUG INVOLVEMENT**  
**BY SAMPLE TYPE AND ABUSIVE BEHAVIOR INVENTORY**

Index of Drug Involvement			
Sample Type			
		Shelter	Substance Treatment
ABI Physical	No	12.18	41.76
	Yes	18.05	55.56

Main Effects                  ABI - Physical                  F = 11.83\*\*\*                  Interaction                  F = 1.93  
    Sample Type                  F = 137.66\*\*\*

Index of Drug Involvement			
Sample Type			
		Shelter	Substance Treatment
ABI Psychological	No	7.95	42.38
	Yes	17.74	51.15

Main Effects                  Psychological Abuse                  F = 66.32\*\*\*                  Interaction                  F = .015  
    Sample Type                  F = 4.96\*

\*                  p<.05  
 \*\*                  p<.01  
 \*\*\*                  p<.001

**TABLE 23**  
**ANALYSES OF VARIANCE OF**  
**PARTNER PHYSICAL ABUSE SCALES**  
**BY 12 MONTH DIAGNOSIS OF ALCOHOL DEPENDENCE**  
**AND TYPE OF SAMPLE**

Abusive Behavior Inventory-Physical			
12 Month Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	2.03	1.56
	Yes	2.36	1.40

Main Effects            Alcohol Dependence    F = .491            Interaction F = 4.56\*  
                                 Sample Type            F = 37.96\*\*\*

Partner Abuse Scale - Physical			
12 Month Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	16.68	7.05
	Yes	29.16	7.86

Main Effects            Alcohol Dependence    F = 8.09\*\*            Interaction F = 6.24\*  
                                 Sample Type            F = 43.84\*\*\*

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 24  
ANALYSES OF VARIANCE OF  
PARTNER PHYSICAL ABUSE SCALES  
BY LIFETIME DIAGNOSIS OF ALCOHOL DEPENDENCE  
AND TYPE OF SAMPLE

Abusive Behavior Inventory-Physical			
Lifetime Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	1.99	1.47
	Yes	2.26	1.51

Main Effects                  Alcohol Dependence          F = 2.48          Interaction F = 1.36  
   Sample Type                  F = 41.11\*\*\*

Partner Abuse Scale - Physical			
Lifetime Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	16.65	4.91
	Yes	23.93	8.69

Main Effects                  Alcohol Dependence          F = 7.21\*\*          Interaction F = .725  
   Sample Type                  F = 42.89\*\*\*

- p<.05
- \*\* p<.01
- \*\*\* p<.001

**TABLE 25**  
**ANALYSES OF VARIANCE OF**  
**PARTNER PSYCHOLOGICAL ABUSE SCALES**  
**BY 12 MONTH DIAGNOSIS OF ALCOHOL DEPENDENCE**  
**AND TYPE OF SAMPLE**

Abusive Behavior Inventory-Psychological			
12 Month Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	2.85	2.25
	Yes	3.06	2.01

Main Effects                  Alcohol Dependence      F = .009                  Interaction F = 2.56  
    Sample Type                  F = 34.36\*\*\*

Partner Abuse Scale - Nonphysical			
12 Month Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	48.89	27.79
	Yes	50.77	22.50

Main Effects                  Alcohol Dependence      F = .218                  Interaction F = .973  
    Sample Type                  F = 46.08\*\*\*

\* p<.05  
 \*\* p<.01  
 \*\*\* p<.001

**TABLE 26**  
**ANALYSES OF VARIANCE OF**  
**PARTNER PSYCHOLOGICAL ABUSE SCALES**  
**BY LIFETIME DIAGNOSIS OF ALCOHOL DEPENDENCE**  
**AND TYPE OF SAMPLE**

Abusive Behavior Inventory-Psychological			
Lifetime Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	2.82	2.09
	Yes	2.97	2.19

Main Effects            Alcohol Dependence    F = 1.06            Interaction F = .073  
                                 Sample Type            F = 39.88\*\*\*

Partner Abuse Scale - Nonphysical			
Lifetime Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	49.16	22.58
	Yes	50.34	26.92

Main Effects            Alcohol Dependence    F = .809            Interaction F = .265  
                                 Sample Type            F = 66.65\*\*\*

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

**TABLE 27**  
**ANALYSES OF VARIANCE OF PHYSICAL ABUSE OF PARTNER SCALE AND INDEX OF MARITAL SATISFACTION BY 12 MONTH DIAGNOSIS OF ALCOHOL DEPENDENCE AND SAMPLE TYPE**

Physical Abuse of Partner Scale			
12 Month Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	2.11	2.53
	Yes	8.17	2.58

Main Effects                  Alcohol Dependence          F = 13.56\*\*\*      Interaction F = 13.17\*\*\*  
   Sample Type                          F = 9.76\*\*

Index of Marital Satisfaction			
12 Month Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	62.79	39.06
	Yes	62.54	46.43

Main Effects                  Alcohol Dependence          F = 1.22              Interaction F = 1.40  
   Sample Type                          F = 38.02\*\*\*

\* p<.05  
\*\* p<.01  
\*\*\* p<.001



**TABLE 28**  
**ANALYSES OF VARIANCE OF PHYSICAL ABUSE OF PARTNER SCALE AND INDEX OF MARITAL SATISFACTION BY LIFETIME DIAGNOSIS OF ALCOHOL DEPENDENCE AND SAMPLE TYPE**

Physical Abuse of Partner Scale			
Lifetime Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	1.94	2.27
Yes	5.21	2.80	

Main Effects            Alcohol Dependence    F = 7.44\*\*    Interaction F = 3.85  
                                  Sample Type            F = 2.23

Index of Marital Satisfaction			
Lifetime Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	62.68	37.22
Yes	63.10	46.51	

Main Effects            Alcohol Dependence    F = 3.13        Interaction F = 2.62  
                                  Sample Type            F = 58.81\*\*\*

\* p<.05  
 \*\* p<.01  
 \*\*\* p<.001

**TABLE 29**  
**ANALYSIS OF VARIANCE OF INDEX OF ALCOHOL INVOLVEMENT**  
**BY SAMPLE TYPE AND FATHER SEVERE PHYSICAL ABUSE**

Sample Type			
		Substance Treatment	Shelter/Safe Home
Father Severe Physical Abuse	No	38.92	14.02
	Yes	47.29	20.33

Main Effects      Father Severe Physical Abuse F = 6.07\*      Interaction      F = .119  
Sample Type      F = 75.67\*\*\*

**ANALYSIS OF VARIANCE OF INDEX OF ALCOHOL INVOLVEMENT**  
**BY SAMPLE TYPE AND FATHER PHYSICAL ABUSE**

Sample Type			
		Substance Treatment	Shelter/Safe Home
Father Physical Abuse	No	36.70	12.82
	Yes	45.98	18.48

Main Effects      Father Physical Abuse      F = 9.04\*\*      Interaction      F = .531  
Sample Type      F = 107.01\*\*\*

**ANALYSIS OF VARIANCE OF INDEX OF ALCOHOL INVOLVEMENT**  
**BY SAMPLE TYPE AND MOTHER PHYSICAL ABUSE**

Sample Type			
		Substance Treatment	Shelter/Safe Home
Mother Physical Abuse	No	39.80	10.75
	Yes	41.31	19.24

Main Effects      Mother Physical Abuse      F = 4.23\*      Interaction      F = 2.06  
Sample Type      F = 110.40\*\*\*

\*      p<.05  
\*\*      p<.01  
\*\*\*      p<.001

TABLE 30

PERCENTAGE OF WOMEN WITH AT LEAST ONE EXPERIENCE OF  
PARENTAL VIOLENCE OR CHILDHOOD SEXUAL ABUSE WHO HAD A  
12 MONTH DIAGNOSIS OF ALCOHOL DEPENDENCE

<u>Substance Abuse Treatment Sample</u>	<u>No</u>	<u>Yes</u>	<u>Chi-Square</u>	<u>df</u>
Mother-to-Daughter				
Corporal Punishment	59.0%	41.0	.000	1
Physical Abuse	61.3	38.7	.592	1
Severe Physical Abuse	70.0	30.0	2.19	1
Father-to-Daughter				
Corporal Punishment	56.6%	43.4	.000	1
Physical Abuse	49.4	50.6	2.33	1
Severe Physical Abuse	54.8	45.2	.005	1
Childhood Sexual Abuse	56.3	43.7	.354	1
 <u>Shelter/Safe Home Sample</u>				
Mother-to-Daughter				
Corporal Punishment	86.5%	13.5	.641	1
Physical Abuse	83.0	17.0	3.97*	1
Severe Physical Abuse	76.7	23.3	4.59*	1
Father-to-Daughter				
Corporal Punishment	86.4%	13.6	2.78	1
Physical Abuse	83.8	16.2	2.52	1
Severe Physical Abuse	81.8	18.2	1.41	1
Childhood Sexual Abuse	87.5	12.5	.000	1

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 31

PERCENTAGE OF WOMEN WITH AT LEAST ONE EXPERIENCE OF  
PARENTAL VIOLENCE OR CHILDHOOD SEXUAL ABUSE WHO HAD A  
LIFETIME DIAGNOSIS OF ALCOHOL DEPENDENCE

Substance Abuse Treatment Sample	No	Yes	Chi-Square	df
<b>Mother-to-Daughter</b>				
Corporal Punishment	41.9%	58.1	.000	1
Physical Abuse	40.7	59.3	.056	1
Severe Physical Abuse	35.0	65.0	.584	1
<b>Father-to-Daughter</b>				
Corporal Punishment	36.9%	63.1	.911	1
Physical Abuse	30.3	69.7	3.66	1
Severe Physical Abuse	27.5	72.5	2.31	1
Childhood Sexual Abuse	35.8	64.2	4.37*	1
<b>Shelter/Safe Home Sample</b>				
<b>Mother-to-Daughter</b>				
Corporal Punishment	73.1%	26.9	.000	1
Physical Abuse	63.7	36.3	11.92***	1
Severe Physical Abuse	56.5	43.5	7.60**	1
<b>Father-to-Daughter</b>				
Corporal Punishment	74.0%	26.0	.282	1
Physical Abuse	67.6	32.4	3.77	1
Severe Physical Abuse	74.3	25.7	.000	1
Childhood Sexual Abuse	71.2	28.8	.602	1
* p<.05				
** p<.01				
*** p<.001				



**TABLE 33**  
**ANALYSES OF VARIANCE OF PHYSICAL ABUSE OF PARTNER**  
**BY SAMPLE TYPE AND EXPERIENCES OF CHILDHOOD ABUSE**

**PHYSICAL ABUSE OF PARTNER SCALE**

Sample Type			
		Shelter	Substance Treatment
Father Physical Abuse	No	1.56	1.72
	Yes	4.95	3.30
Main Effects	Father Physical Abuse	F = 13.97***	Interaction F = 1.85
	Sample Type	F = 1.25	

Sample Type			
		Shelter	Substance Treatment
Father Severe Physical Abuse	No	2.34	2.07
	Yes	5.48	3.63
Main Effects	Father Severe Physical Abuse	F = 8.78**	Interaction F = 1.00
	Sample Type	F = 1.79	

Sample Type			
		Shelter	Substance Treatment
Mother Severe Physical Abuse	No	2.38	2.22
	Yes	4.46	3.64
Main Effects	Mother Severe Physical Abuse	F = 5.60*	Interaction F = .205
	Sample Type	F = .434	

Sample Type			
		Shelter	Substance Treatment
Childhood Sexual Abuse	No	2.02	1.61
	Yes	3.34	3.01
Main Effects	Childhood Sexual Abuse	F = 4.65*	Interaction F = .005
	Sample Type	F = .353	

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 34.

BECK ANXIETY INVENTORY CLASSIFICATION  
BY TYPE OF SAMPLE

	Substance Treatment	Shelter/Safe Home
Minimal Anxiety	39.7%	30.4
Mild Anxiety	21.9	20.6
Moderate Anxiety	21.0	24.8
Severe Anxiety	17.4	24.3

Chi Square = 5.97, df = 3

p = .113

BECK DEPRESSION INVENTORY CLASSIFICATION  
BY TYPE OF SAMPLE

	Substance Treatment	Shelter/Safe Home
Minimal Depression	25.4%	30.4
Mild Depression	28.9	21.1
Moderate Depression	38.1	31.4
Severe Depression	7.6	17.0

Chi Square = 11.52, df = 3

p = .009

TABLE 35  
ANALYSES OF VARIANCE OF MENTAL HEALTH SCALES  
BY SAMPLE TYPE<sup>a</sup>

	SUBSTANCE ABUSE TREATMENT SAMPLE	SHELTER SAMPLE	F
Beck Anxiety	13.95 (11.91)	17.19 (13.37)	7.09**
Beck Depression	16.02 (9.45)	17.19 (11.50)	1.21
Index of Self Esteem	39.70 (17.16)	40.48 (18.55)	.21
TSC-40	1.22 (.56)	1.22 (.60)	.007
TSC-Anxiety	.97 (.57)	1.09 (.66)	3.69
TSC-Depression	1.46 (.64)	1.42 (.67)	.34
TSC-Dissociation	1.10 (.69)	1.18 (.80)	1.28
TSC-Sexual Abuse Trauma Index	1.05 (.66)	1.21 (.78)	5.24*
TSC-Sexual Problems	.91 (.75)	.88 (.74)	.12
TSC-Sleep Disturbance	1.73 (.76)	1.83 (.85)	1.73
Index of Alcohol Involvement	40.91 (28.42)	15.67 (17.36)	111.45***
Index of Drug Involvement	49.50 (24.89)	17.51 (19.83)	182.05***

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

<sup>a</sup> Numbers in parentheses are standard deviations.



TABLE 36  
ANALYSES OF VARIANCE OF  
MENTAL HEALTH SCALES  
BY 12 MONTH DIAGNOSIS OF ALCOHOL DEPENDENCE  
AND TYPE OF SAMPLE

Beck Anxiety Inventory			
12 Month Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	15.46	12.63
	Yes	19.16	16.00

Main Effects            Alcohol Dependence    F = 4.65\*    Interaction F = .010  
                                 Sample Type            F = 3.34

Beck Depression Inventory			
12 Month Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	16.78	15.38
	Yes	20.00	17.26

Main Effects            Alcohol Dependence    F = 3.36    Interaction F = .236  
                                 Sample Type            F = 2.22

Trauma Symptom Checklist-40			
12 Month Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	1.14	1.17
	Yes	1.48	1.33

Main Effects            Alcohol Dependence    F = 11.27\*\*\*    Interaction F = 1.55  
                                 Sample Type            F = .660

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

**TABLE 37**  
**ANALYSES OF VARIANCE OF**  
**MENTAL HEALTH SCALES**  
**BY LIFETIME DIAGNOSIS OF ALCOHOL DEPENDENCE**  
**AND TYPE OF SAMPLE**

Beck Anxiety Inventory			
Lifetime Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	14.07	11.47
	Yes	20.23	15.56

Main Effects            Alcohol Dependence    F = 13.81\*\*\*    Interaction F = .559  
                                 Sample Type            F = 6.96\*\*

Beck Depression Inventory			
Lifetime Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	15.65	14.73
	Yes	20.07	17.14

Main Effects            Alcohol Dependence    F = 8.57\*\*        Interaction F = .740  
                                 Sample Type            F = 2.71

Trauma Symptom Checklist-40			
Lifetime Alcohol Dependence		Sample Type	
		Shelter	Substance Treatment
	No	1.08	1.04
	Yes	1.46	1.35

Main Effects            Alcohol Dependence    F = 29.99\*\*\*    Interaction F = .303  
                                 Sample Type            F = 1.66

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 38  
 ANALYSES OF VARIANCE OF INDEX OF SELF ESTEEM  
 BY DIAGNOSIS OF ALCOHOL DEPENDENCE  
 AND TYPE OF SAMPLE

12 Month Diagnosis of Alcohol Dependence	Sample Type	
	Shelter	Substance Treatment
	No	40.41
Yes	42.03	43.69

Main Effects                  Alcohol Dependence      F = 2.96                  Interaction F = 1.02  
    Sample Type                  F = .078

Lifetime Diagnosis of Alcohol Dependence	Sample Type	
	Shelter	Substance Treatment
	No	38.36
Yes	44.39	42.30

Main Effects                  Alcohol Dependence      F = 9.32\*\*                  Interaction F = .014  
    Sample Type                  F = .960

\* p<.05  
 \*\* p<.01  
 \*\*\* p<.001

TABLE 39  
PEARSON CORRELATIONS AMONG MENTAL HEALTH,  
MARITAL SATISFACTION, AND PARTNER ABUSE SCALES  
FOR WOMEN IN SHELTER/SAFE HOME SAMPLE

	ABI Physical	PAS Physical	ABI Psychological	PAS Nonphysical	Physical Abuse of Partner	Index of Marital Satisfaction
Beck Anxiety Inventory	.18**	.21*	.16*	.19**	.19**	-.24***
Beck Depression Inventory	.21**	.18*	.22*	.16*	.22**	-.25***
Index of Self Esteem	-.12	-.13	-.12	-.19**	-.18**	.21**
Trauma Symptom Checklist 40	.27***	.29***	.27***	.25***	.25***	-.31***
TSC-Anxiety	.25***	.29***	.23***	.26***	.26***	-.32***
TSC-Depression	.26***	.26***	.31***	.26***	.13	-.30***
TSC- Dissociation	.22**	.29***	.16*	.20**	.24***	-.24***
TSC-SATI	.29***	.31***	.26***	.24***	.20**	-.28***
TSC-Sexual Dysfunction	.19**	.16*	.20**	.14*	.12	-.19**
TSC-Sleep Disturbance	.26***	.27***	.24***	.21**	.11	-.28***

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 40  
PEARSON CORRELATIONS AMONG MENTAL HEALTH,  
MARITAL SATISFACTION, AND PARTNER ABUSE SCALES  
FOR WOMEN IN SUBSTANCE ABUSE TREATMENT SAMPLE

	ABI Physical	PAS Physical	ABI Psychological	PAS Nonphysical	Physical Abuse of Partner	Index of Marital Satisfaction
Beck Anxiety Inventory	.22***	.29***	.27***	.21**	.13	-.20**
Beck Depression Inventory	.21**	.12	.22**	.15*	.08	-.19*
Index of Self Esteem	-.06	-.03	-.05	-.01	-.11	.13
Trauma Symptom Checklist 40	.30***	.33***	.40***	.35***	.25***	-.30***
TSC-Anxiety	.25***	.27***	.33***	.25***	.11	-.19*
TSC- Depression	.25***	.26***	.32***	.28***	.17*	-.24**
TSC- Dissociation	.24***	.31***	.32***	.28***	.25***	-.25***
TSC-SATI	.34***	.39***	.37***	.38***	.28***	-.33***
TSC-Sexual Dysfunction	.31***	.33***	.42***	.38***	.30***	-.31***
TSC-Sleep Disturbance	.24***	.25***	.28***	.26**	.19**	-.27***

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 41  
REGRESSION OF BECK ANXIETY INVENTORY ON PARTNER ABUSE INDICES  
CONTROLLING FOR LEVELS OF ALCOHOL AND DRUG INVOLVEMENT:  
WOMEN IN SHELTERS/SAFE HOMES

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>
Index of Alcohol Involvement	.125*	.170	Index of Alcohol Involvement	.121	.167
Index of Drug Involvement	.004	.006	Index of Drug Involvement	.019	.028
ABI-Physical	2.24*	.165	PAS-Physical	.076	.126
Adj R <sup>2</sup> = .05			Adj R <sup>2</sup> = .04		
<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>
Index of Alcohol Involvement	.129*	.176	Index of Alcohol Involvement	.125*	.171
Index of Drug Involvement	.015	.022	Index of Drug Involvement	.022	.032
ABI-Psychological	1.78*	.155	PAS-Nonphysical	.070*	.156
Adj R <sup>2</sup> = .05			Adj R <sup>2</sup> = .05		

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 42  
REGRESSION OF BECK DEPRESSION INVENTORY  
ON PARTNER ABUSE INDICES  
CONTROLLING FOR LEVELS OF ALCOHOL AND DRUG INVOLVEMENT:  
WOMEN IN SHELTERS/SAFE HOMES

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>
Index of Alcohol Involvement	.106*	.175	Index of Alcohol Involvement	.110*	.182
Index of Drug Involvement	.062	.109	Index of Drug Involvement	.094*	.163
ABI-Physical	.178*	.159	PAS-Physical	.043	.085
Adj R <sup>2</sup> = .08			Adj R <sup>2</sup> = .09		
<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>
Index of Alcohol Involvement	.109*	.179	Index of Alcohol Involvement	.116*	.190
Index of Drug Involvement	.070	.121	Index of Drug Involvement	.082	.142
ABI-Psychological	.167*	.174	PAS-Nonphysical	.041	.108
Adj R <sup>2</sup> = .09			Adj R <sup>2</sup> = .08		

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

**TABLE 43**  
**REGRESSION OF TSC-40 ON PARTNER ABUSE INDICES**  
**CONTROLLING FOR LEVELS OF ALCOHOL AND DRUG INVOLVEMENT:**  
**WOMEN IN SHELTERS OR SAFE HOMES**

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>
Index of Alcohol Involvement	.01***	.300	Index of Alcohol Involvement	.009***	.263
Index of Drug Involvement	.001	.033	Index of Drug Involvement	.002	.072
ABI-Physical	.153***	.251	PAS-Physical	.007***	.251
Adj R <sup>2</sup> = .16			Adj R <sup>2</sup> = .16		
<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>
Index of Alcohol Involvement	.01***	.300	Index of Alcohol Involvement	.01***	.297
Index of Drug Involvement	.002	.052	Index of Drug Involvement	.002	.061
ABI-Psychological	.128***	.249	PAS-Nonphysical	.004***	.207
Adj R <sup>2</sup> = .16			Adj R <sup>2</sup> = .14		
* p<.05					
** p<.01					
*** p<.001					



TABLE 44  
REGRESSION OF BECK ANXIETY INVENTORY ON PARTNER ABUSE INDICES  
CONTROLLING FOR LEVELS OF ALCOHOL AND DRUG INVOLVEMENT:  
WOMEN IN SUBSTANCE ABUSE TREATMENT

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>
Index of Alcohol Involvement	.075*	.181	Index of Alcohol Involvement	.066*	.161
Index of Drug Involvement	.066	.140	Index of Drug Involvement	.048	.103
ABI-Physical	3.13*	.187	PAS-Physical	.221***	.251
Adj R <sup>2</sup> = .08			Adj R <sup>2</sup> = .10		
<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>
Index of Alcohol Involvement	.077**	.188	Index of Alcohol Involvement	.081**	.196
Index of Drug Involvement	.038	.082	Index of Drug Involvement	.049	.105
ABI-Psychological	3.02***	.258	PAS-Nonphysical	.086*	.187
Adj R <sup>2</sup> = .10			Adj R <sup>2</sup> = .08		

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 45  
REGRESSION OF BECK DEPRESSION INVENTORY  
ON PARTNER ABUSE INDICES  
CONTROLLING FOR LEVELS OF ALCOHOL AND DRUG INVOLVEMENT:  
WOMEN IN SUBSTANCE ABUSE TREATMENT

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>
Index of Alcohol Involvement	.056*	.166	Index of Alcohol Involvement	.054*	.160
Index of Drug Involvement	.022	.058	Index of Drug Involvement	.033	.087
ABI-Physical	2.51*	.182	PAS-Physical	.043	.060
Adj R <sup>2</sup> = .05			Adj R <sup>2</sup> = .02		
<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>
Index of Alcohol Involvement	.057*	.167	Index of Alcohol Involvement	.059*	.176
Index of Drug Involvement	.020	.052	Index of Drug Involvement	.034	.089
ABI-Psychological	.187*	.193	PAS-Nonphysical	.039	.103
Adj R <sup>2</sup> = .05			Adj R <sup>2</sup> = .04		

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

TABLE 46  
REGRESSION OF TSC-40 ON PARTNER ABUSE INDICES  
CONTROLLING FOR LEVELS OF ALCOHOL AND DRUG INVOLVEMENT:  
WOMEN IN SUBSTANCE ABUSE TREATMENT

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>
Index of Alcohol Involvement	.006***	.295	Index of Alcohol Involvement	.006***	.286
Index of Drug Involvement	.008***	.348	Index of Drug Involvement	.008***	.343
ABI-Physical	.163**	.205	PAS-Physical	.010***	.231
Adj R <sup>2</sup> = .24			Adj R <sup>2</sup> = .25		

<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>	<u>Independent Variable</u>	<u>B</u>	<u>Beta</u>
Index of Alcohol Involvement	.006***	.304	Index of Alcohol Involvement	.006***	.306
Index of Drug Involvement	.006***	.270	Index of Drug Involvement	.007***	.326
ABI-Psychological	.186**	.332	PAS-Nonphysical	.006***	.256
Adj R <sup>2</sup> = .29			Adj R <sup>2</sup> = .27		

\* p<.05  
\*\* p<.01  
\*\*\* p<.001



TABLE 48  
ANALYSES OF VARIANCE OF MENTAL HEALTH SCALES  
BY SAMPLE TYPE AND MOTHER PHYSICAL ABUSE

Beck Anxiety Inventory			
Sample Type			
		Shelter	Substance Treatment
Mother Physical Abuse	No	13.12	11.07
	Yes	18.66	16.02

Main Effects      Mother Physical Abuse      F = 16.84\*\*\*      Interaction      F = .053  
Sample Type      F = 3.36

Beck Depression Inventory			
Sample Type			
		Shelter	Substance Treatment
Mother Physical Abuse	No	15.59	14.34
	Yes	18.43	17.14

Main Effects      Mother Physical Abuse      F = 6.71\*\*      Interaction      F = .000  
Sample Type      F = 1.36

Trauma Symptom Checklist-40			
Sample Type			
		Shelter	Substance Treatment
Mother Physical Abuse	No	1.10	1.09
	Yes	1.27	1.34

Main Effects      Mother Physical Abuse      F = 12.76\*\*\*      Interaction      F = .351  
Sample Type      F = .144

\*      p<.05  
\*\*     p<.01  
\*\*\*    p<.001



TABLE 50  
ANALYSES OF VARIANCE OF MENTAL HEALTH SCALES  
BY SAMPLE TYPE AND FATHER PHYSICAL ABUSE

Beck Anxiety Inventory			
Sample Type			
		Shelter	Substance Treatment
Father Physical Abuse	No	15.33	13.22
	Yes	19.82	15.98

Main Effects      Father Physical Abuse      F = 7.06\*\*      Interaction      F = .404  
Sample Type      F = 4.77\*

Beck Depression Inventory			
Sample Type			
		Shelter	Substance Treatment
Father Physical Abuse	No	16.02	14.38
	Yes	20.11	18.56

Main Effects      Father Physical Abuse      F = 13.58\*\*\*      Interaction      F = .001  
Sample Type      F = 2.03

Trauma Symptom Checklist-40			
Sample Type			
		Shelter	Substance Treatment
Father Physical Abuse	No	1.15	1.19
	Yes	1.33	1.30

Main Effects      Father Physical Abuse      F = 5.38\*      Interaction      F = .365  
Sample Type      F = .021

\*      p<.05  
\*\*      p<.01  
\*\*\*      p<.001

**TABLE 51**  
**ANALYSES OF VARIANCE OF MENTAL HEALTH SCALES**  
**CTS SUBSCALES BY SAMPLE TYPE AND CHILDHOOD SEXUAL ABUSE**

Beck Anxiety Inventory			
Sample Type			
		Shelter	Substance Treatment
Childhood Sexual Abuse	No	14.45	10.56
	Yes	17.41	15.76

Main Effects      Childhood Sexual Abuse      F = 9.60\*\*      Interaction      F = .730  
                                 Sample Type                                  F = 4.44\*

Beck Depression Inventory			
Sample Type			
		Shelter	Substance Treatment
Childhood Sexual Abuse	No	14.85	13.53
	Yes	18.72	17.37

Main Effects      Childhood Sexual Abuse      F = 12.20\*\*\*      Interaction      F = .000  
                                 Sample Type                                  F = 1.47

Trauma Symptom Checklist-40			
Sample Type			
		Shelter	Substance Treatment
Childhood Sexual Abuse	No	1.03	1.07
	Yes	1.32	1.32

Main Effects      Childhood Sexual Abuse      F = 20.62\*\*\*      Interaction      F = .114  
                                 Sample Type                                  F = .122

\*      p<.05  
 \*\*     p<.01  
 \*\*\*    p<.001



**TABLE 52**  
**ANALYSES OF VARIANCE OF INDEX OF SELF-ESTEEM INVOLVEMENT**  
**BY SAMPLE TYPE AND FATHER PHYSICAL ABUSE**

Sample Type			
		Substance Treatment	Shelter/Safe Home
Father Physical Abuse	No	37.16	39.71
	Yes	43.74	42.19

Main Effects      Father Physical Abuse      F = 6.25\*      Interaction      F = 1.29  
                                Sample Type                                  F = .075

**ANALYSIS OF VARIANCE OF INDEX OF SELF-ESTEEM INVOLVEMENT**  
**BY SAMPLE TYPE AND MOTHER PHYSICAL ABUSE**

Sample Type			
		Substance Treatment	Shelter/Safe Home
Mother Physical Abuse	No	37.51	38.42
	Yes	41.03	42.08

Main Effects      Mother Physical Abuse      F = 4.20\*      Interaction      F = .002  
                                Sample Type                                  F = .317

\*      p < .05

TABLE 53  
STAFF PERCEPTIONS OF DISEASE MODEL  
AS A BARRIER TO COLLABORATION

	Substance Abuse Treatment	Shelter Safe/Home
Disagree	52.8%	14.3
Neutral No Opinion	27.8	42.9
Agree	19.4	42.9

Chi Square = 6.40, df = 2, p = .041

TABLE 54  
STAFF PERCEPTIONS OF RATIONAL RECOVERY MODEL  
AS A BARRIER TO COLLABORATION

	Substance Abuse Treatment	Shelter Safe/Home
Disagree	54.5%	0.0
Neutral No Opinion	33.3	69.2
Agree	12.1	30.8

Chi Square = 11.72, df = 2, p = .003

TABLE 55  
STAFF PERCEPTIONS OF CONTROL VS. SURRENDER ISSUES  
AS BARRIERS TO COLLABORATION

	Substance Abuse Treatment	Shelter Safe/Home
Disagree	56.8%	18.8
Neutral No Opinion	21.6	25.0
Agree	21.6	56.3

Chi Square = 7.80, df = 2, p = .02

TABLE 56  
STAFF PERCEPTIONS OF FEMINIST MODEL  
AS A BARRIER TO COLLABORATION

	Substance Abuse Treatment	Shelter Safe/Home
Disagree	58.8%	26.7
Neutral No Opinion	35.3	13.3
Agree	5.9	60.0

Chi Square = 17.53, df = 2, p < .001

Appendix A

Instruments Used

**Partner Abuse and Relationship Satisfaction**

Partner Abuse Scale: Non-physical. The Partner Abuse Scale: Non-Physical (PASNP) is a 25 item scale that was designed to measure the degree or magnitude of perceived non-physical abuse that clients have received from partner, dating partners or partners living together, and either homosexual or heterosexual. Items are rated on a seven point scale ranging from "None of the time" to "All of the time". Scores range from 0 (indicating an absence of a problem with experiencing non-physical abuse) to 100 (indicating the highest possible level of a problem with experiencing non-physical abuse). The PASNP has very high internal consistency reliability coefficients (Cronbach's alpha of .90 or higher) and validity coefficients of .60 or greater (Hudson and Associates, 1996). Hudson and Associates (1996) do not recommend cut-off scores to indicate presence of a problem with experiencing non-physical abuse, although the authors are of the opinion that this cut-off score will be much lower than 30 and possibly as low as 15.

Partner Abuse Scale: Physical. The Partner Abuse Scale: Physical (PASPH) is a 25 item scale that was designed to measure the degree or magnitude of perceived physical abuse that clients have received from partner, dating partners or partners living together, and either homosexual or heterosexual. Items are rated on a seven point scale ranging from "None of the time" to "All of the time". Scores range from 0 (indicating an absence of a problem with experiencing physical abuse) to 100 (indicating the highest possible level of a problem with experiencing physical abuse). The PASPH has very high internal consistency reliability coefficients (Cronbach's alpha of .90 or higher) and validity coefficients of .60 or greater (Hudson and Associates, 1996). Hudson and Associates (1996) do not recommend cut-off scores to indicate presence of a problem with experiencing physical abuse, although the authors are of the opinion that this cut-off score will be much lower than 30 and possibly as low

as 15.

Physical Abuse of Partner. The Physical Abuse of Partner Scale (PAPS) is a 25 item scale that was designed to measure the degree or magnitude of physical abuse that clients report they have imposed on partner, dating partners or partners living together, and either homosexual or heterosexual. Items are rated on a seven point scale ranging from "None of the time" to "All of the time". Scores range from 0 (indicating an absence of a problem with physical abuse) to 100 (indicating the highest possible level of a problem with physical abuse). The PAPS has very high internal consistency reliability coefficients (Cronbach's alpha of .90 or higher) and validity coefficients of .60 or greater (Hudson and Associates, 1996). Hudson and Associates (1996) do not recommend cut-off scores to indicate presence of a problem with physical abuse, although the authors are of the opinion that this cut-off score will be much lower than 30 and possibly as low as 15.

Abusive Behavior Inventory. The Abusive Behavior Inventory (ABI) is "a 30 item instrument that uses a 5-point Likert-type scale to measure the frequency of abusive behaviors during a 6-month period" (Shepard and Campbell, 1992, p. 292). The ABI has ten items that tap physical assault and twenty items to assess psychological abuse. The ABI does not place violence in the context of resolving conflict, a difference from the Conflict Tactics Scale (CTS). Rather the ABI is based in feminist theory in which violence is used to maintain dominance. Alpha coefficients for the full scale ranges from .70 to .92, and discriminates between men identified as having been physically abusive toward partners and men not so identified as well as women identified as having experienced physical abuse from women not so identified (Shepard and Campbell, 1992). The ABI also has excellent construct validity (Shepard and Campbell, 1992).

Index of Marital Satisfaction. The Index of Marital Satisfaction Scale (IMS) is a 25 item scale that was designed to measure the "degree, severity, or magnitude of a problem a spouse or partner has in a partner relationship" (Hudson and Associates, 1996, p. 31). Items are rated

on a seven point scale ranging from "None of the time" to "All of the time". Scores range from 0 (indicating an absence of a problem with relationship satisfaction) to 100 (indicating the highest possible level of a problem with relationship satisfaction). The IMS has very high internal consistency reliability coefficients (Cronbach's alpha of .90 or higher) and validity coefficients of .60 or greater (Hudson and Associates, 1996). Hudson and Associates (1996) have two recommended cut-off scores, 30 and 70, to indicate presence of a problem with relationship satisfaction. Scores below 30 are "free of a clinically significant problem" with relationship satisfaction while scores above 30 "have a clinically significant problem" with relationship satisfaction (Hudson and Associates, 1996, pp. 21-22). Scores above 70 indicate the presence of severe distress (Hudson and Associates, 1996).

### **Parent-to-Child Relationship**

Parent-Child Conflict Tactics Scales. The Parent-Child Conflict Tactics Scales (CTSPC) is a 22 item measure designed to assess how parents respond to children doing something wrong, disobeying or making their parents angry. There are five subscales: Non-violent discipline (four items), Psychological Aggression (five items), Minor Physical Assault or Corporal Punishment (five items), Severe Physical Assault or Physical Abuse (four items), and Very Severe Assault or Severe Physical Abuse (four items). The CTSPC has excellent psychometric characteristics and is an improved measure (relative to the original CTS) for identifying child maltreatment.

### **Mental Health**

Beck Anxiety Inventory. The Beck Anxiety Inventory (BAI) consists of 21 items that are descriptions of anxiety symptoms, and which are rated on a four point scale as follows: 0 = "Not at all", 1 = "Mildly; it did not bother me much", 2 = "Moderately; it was very unpleasant but I could stand it", and 3 = "Severely, I could barely stand it". The BAI measures severity of self-reported anxiety and was developed with adult outpatient psychiatric patients. Internal consistency reliability coefficients (i.e., Cronbach's alpha) of higher than .90 have generally



been reported, indicating high reliability (Beck and Steer, 1993). Beck and Steer (1993) reported acceptable construct validity, and ability to discriminate among different types of anxiety as well as (with moderate overlap) to discriminate between anxiety and depression. Beck and Steer (1993) recommended cut-off scores of minimal (0-7), mild (8-15), moderate (16-25), and severe (26-63) anxiety.

Beck Depression Inventory. The revised Beck Depression Inventory (BDI) [Beck, Rush, Shaw, and Emery, 1979; Beck and Steer, 1993a] is a 21 item inventory that measures severity of trait depression among adolescents and adults (Beck and Steer, 1993a). Items are rated on a four point scale. Mean internal consistency reliability coefficients (i.e., Cronbach's alpha) of .86 were reported for psychiatric samples and .81 for nonpsychiatric samples, with an alpha of .90 reported for an alcoholic sample (Beck and Steer, 1993a). The BDI can discriminate between psychiatric from nonpsychiatric samples, Dysthymic from Major Depressive Disorders, and Generalized Anxiety from Major Depressive Disorders. Thus, the BDI has excellent internal consistency reliability and discriminant validity. Cut-off scores of minimal (0-9), mild (10-16), moderate (17-29), and severe (30-63) depression have been recommended (Beck and Steer, 1993).

Trauma Symptom Checklist-40. The Trauma Symptom Checklist-40 (TSC-40) is a 40 item research measure that evaluates symptomatology in children or adults deriving from traumatic experiences Briere (1996). Items are rated on a four point scale from 0 (never) to 3 (often). There is a total score based on summation of all 40 items and six subscales: Dissociation (six items), Anxiety (eight items), Depression (nine items), Sexual Abuse Trauma Index (seven items), Sleep Disturbance (six items), and Sexual Problems (eight items). Subscale alphas range from .66 to .77 with the full scale having coefficients alpha from .89 to .91 (Briere, 1996). The TSC-40 has predictive validity with a wide range of traumatic experiences including perpetrators of intimate violence (Briere, 1996).

Index of Self Esteem. The Index of Self Esteem (ISE) is a 25 item scale that was

"designed to measure the degree, severity, or magnitude of a problem the client has with self-esteem" (Hudson and Associates, 1996, p. 20). Items are rated on a seven point scale ranging from "None of the time" to "All of the time". Scores range from 0 (indicating an absence of a problem with self-esteem) to 100 (indicating the highest possible level of a problem with self-esteem). The ISE has very high internal consistency reliability coefficients (Cronbach's alpha of .90 or higher) and validity coefficients of .60 or greater (Hudson and Associates, 1996). Hudson and Associates (1996) have two recommended cut-off scores, 30 and 70, to indicate presence of a problem with self-esteem. Scores below 30 are "free of a clinically significant problem" with self-esteem while scores above 30 "have a clinically significant problem" with self-esteem (Hudson and Associates, 1996, pp. 21-22). Scores above 70 indicate the presence of severe distress (Hudson and Associates, 1996).

#### **Alcohol and Drug Use**

Index of Alcohol Involvement. The Index of Alcohol Involvement (IAI) is a 25 item scale that was "designed to measure the degree or magnitude of problems clients have with alcohol abuse" (Hudson and Associates, 1996, p. 25). Items are rated on a seven point scale ranging from "None of the time" to "All of the time". Scores range from 0 (indicating an absence of abuse) to 100 (indicating the highest possible level of abuse). The IAI has very high internal consistency reliability coefficients (Cronbach's alpha of .90 or higher) and validity coefficients of .60 or greater (Hudson and Associates, 1996). Hudson and Associates (1996) do not recommend cut-off scores to indicate presence of alcohol abuse, although the authors are of the opinion that this cut-off score will be much lower than 30.

Index of Drug Involvement. The Index of Drug Involvement (IDI) is a 25 item scale that was "designed to measure the degree or magnitude of problems clients have with drug abuse" (Hudson and Associates, 1996, p. 26). Items are rated on a seven point scale ranging from "None of the time" to "All of the time". Scores range from 0 (indicating an absence of abuse) to 100 (indicating the highest possible level of abuse). The IAI has very high internal consistency

reliability coefficients (Cronbach's alpha of .90 or higher) and validity coefficients of .60 or greater (Hudson and Associates, 1996). Hudson and Associates (1996) do not recommend cut-off scores to indicate presence of alcohol abuse, although the authors are of the opinion that this cut-off score will be much lower than 30.