

## **CHAPTER 3: A REVIEW OF GENDER DIFFERENCES AMONG SUBSTANCE ABUSERS**

This chapter provides a review of literature on gender differences among substance abusers. In the past two decades there has been an increasing recognition of the need to identify gender differences in the etiology of drug use, drug treatment needs, the drug treatment process, and the recovery process. While still comprising a much smaller portion of persons imprisoned, substance-abusing women are being incarcerated at increasingly higher rates than men. Because most treatment programs were originally developed for men, researchers have, in recent years, more frequently cited the need to understand how women use treatment services, to identify how treatment needs of women differ from those of men, and to assess how effective the various substance abuse treatment approaches are for women. Our report attempts to begin addressing some of the gaps in the literature, particularly within criminal justice settings, on the use of treatment services by women and treatment effectiveness for women.

We review the literature to provide a backdrop for understanding why we chose to analyze the data separately for men and women. The literature review was also used to select some of the predictor variables included in our analyses, to provide a framework for interpreting the results and to suggest avenues for future research. We begin this literature review with a discussion of gender differences among substance users and follow this with a review of the literature on the differing treatment needs of men and women. We conclude with a review of treatment outcome studies for women, both prison- and non-prison-based studies. This review demonstrates that this literature also suffers from inferential problems due to selection bias as does the commonly cited literature based primarily on sample populations of men.

### **Characteristics of Substance Users: Gender Differences**

The recent attention to female offenders, and, more specifically to female substance abusing offenders, is due to the increasing incarceration rate of females. Much of this incarceration rate is being fueled by substance abusers (Kassebaum, 1999). Between 1980 and 1989, the female population of State and Federal prisoners increased by 202 percent as compared to an increase of 112 percent among men (Greenfeld and Minor-Harper, 1991). Since 1990 the annual rate of growth in State and Federal prisons has averaged 8.8 percent for women as compared with a rate of 6.9 percent for men (Gilliard and Beck, 1998). The increase in the number of women in State or Federal prisons was higher than that of men in 1996 through 1998 (Gilliard, 1999; Gilliard and Beck, 1997; Gilliard and Beck, 1998).

Few studies have examined gender differences among incarcerated populations with a substance abuse problem (Henderson, 1998; Peters et al., 1997). However, numerous studies have examined gender differences among substance users and others have examined gender differences among incarcerated offenders. Women substance abusers have consistently been

shown to differ from male substance abusers on several dimensions of psychosocial functioning. Many of these gender differences have also been found within the general offender population.

Incarcerated women as well as female substance abusers have generally had more difficult economic circumstances than incarcerated men or male substance abusers. Women are less likely to be employed than men (Byqvist, 1999; Chatham et al., 1999; Fiorentine et al., 1997; Greenfeld and Snell, 1999; Griffin et al., 1989; Inciardi, Lockwood, and Pottieger, 1993; NEDTAC, 1997). Women have also been found to have lower educational levels (Gil-Rivas et al., 1997), less marketable skills (Moras, 1998) and lower household incomes (Brady et al., 1993). However, one study of methadone maintenance program participants found no educational differences between men and women (Chatham et al., 1999).

Overall, female offenders and female substance abusers have been shown to have more psychological and psychiatric problems than male offenders and male substance abusers (Fiorentine et al., 1997; Robles et al., 1998; Stevens and Glider, 1994; Weiss et al., 1997). In surveying mental health problems, there are somewhat conflicting results for specific psychiatric diagnoses across different populations. In a sample of hospital treatment admissions (Brady et al., 1993) women were not any more likely to have a diagnosis for an affective disorder (including depression) but in several other studies of treatment participants — both outpatient and inpatient samples (Blume, 1990; Byqvist, 1999; Fiorentine et al., 1997; Griffin et al., 1989; Moras, 1998) — higher rates of depression were found among women. Incarcerated women in general have also been found to have higher rates of depression (Peters et al., 1997). The prevalence of anxiety disorders has also been found to differ across gender. Among both jail inmates and individuals admitted to inpatient drug treatment (Brady et al., 1993; Peters et al., 1997) women had higher rates of anxiety disorders than did men. But, as Brady et al. (1993) point out, these gender differences mirror gender differences in the general population.

McKay et al. (1996), in their review of previous literature, point out that studies of individuals addicted to specific drugs or alcohol do not consistently find higher rates of antisocial personality among men. For example, Brady et al. (1993) found no gender differences in Axis II diagnoses (including antisocial personality) in an inpatient treatment population but Weiss et al. (1997) found higher rates of antisocial personality among men in an inpatient population. DeLeon (1988) found women entering therapeutic community treatment displayed more psychopathology than did men entering the same programs.

The drug use patterns among female substance users and female incarcerated populations differ from those of male substance users or incarcerated populations. Women are more likely to be polydrug users (Jarman and Lowe, 1993; NEDTAC, 1997). Women offenders also report higher usage (Greenfeld and Snell, 1999; Snell and Morton, 1991). Gender differences have also been found for drug of choice. Women are more likely than men to report cocaine as their major drug problem (Brady et al., 1993; Gil-Rivas et al., 1997; Peters et al., 1997; Robles et al., 1998) and to have used cocaine more frequently than their male counterparts before admission to treatment (Chatham et al., 1999; Fiorentine et al., 1997). However, in looking at heroin addicts some have

found no difference in the drug use patterns of men and women (Hser, Anglin, and McGlothlin, 1987). The onset of drug use and the circumstances under which drugs are used have been found to differ between men and women. Women describe their onset of drug use as sudden and heavy rather than gradual (Byqvist 1999; Kassebaum, 1999). In addition, women's drug use is more likely to occur for specific reasons such as depression or family pressures whereas men's drug use is more often associated with a general pattern of antisocial behavior (Griffin et al., 1989; Hser, Anglin, and McGlothlin, 1987). Men are more likely to use drugs for thrills or pleasure and in response to peer pressure whereas women are more likely to use drugs for self-medication, that is, to cope with depression, stressful life events, and trauma (Inciardi, Lockwood, and Pottieger, 1993).

Women are more likely to use drugs in private and in isolation rather than in public places with others (Nelson-Zlupko, Kauffman, and Dore, 1995). Although very little research exists on the relapse experiences of men and women, gender differences have been identified. A study of cocaine users found that women are more likely to report negative affect before relapse and are more likely to seek help. In contrast, men are more likely to report positive affect before relapse and justify their behavior after relapse (McKay et al., 1996).

Numerous studies point to women's drug use as the major component of a pattern of codependency. Women are more likely than men to have been initiated into drug use (as well as antisocial behavior) by their male sexual partners (Griffin et al., 1989; Henderson, Boyd, and Mieczkowski, 1994; Hser, Anglin, and McGlothlin, 1987; Kassebaum, 1999; Robles et al., 1998). Even if a woman does not have her primary relationship with an individual who also has a substance abuse problem, she is likely to develop and remain in a relationship which is negative and hinders recovery from drug addiction (Zankowski, 1987).

One of the most frequently cited gender differences concerns abuse history. A higher incidence of sexual abuse and physical abuse histories among women has been found in offender populations, substance abusing offenders and substance abusers in treatment (Bloom, Lind, and Owen, 1994; Browne, Miller, and Maguin, 1999; Greenfeld and Snell, 1999; Kilpatrick et al., 1998; Moras, 1998; Peters et al., 1997; Robles et al. 1998; Snell and Morton, 1991; Taylor, 1996). Some have found that up to 80 percent of incarcerated women have a history of abuse, either as a child or adult (Bloom, Lind, and Owen, 1994).

In addition to having had greater exposure to physical and sexual abuse, women substance users and women offenders are more likely to come from dysfunctional families than are men (Chatham et al., 1999). More specifically, women are more likely to have relatives with a substance use or psychiatric problem, to experience a greater number of family problems and to experience less family support (Marsh and Miller, 1985; Kingree, 1995; Davis and DiNitto, 1996; Robles et al., 1998). Marriage to a spouse with an addiction problem has been found to occur more frequently among women heroin addicts than among male heroin addicts. Women are also more likely to be responsible for the support of children, especially minor children under the age of 18 (Greenfeld and Minor-Harper, 1991; Inciardi, Lockwood, and Pottieger, 1993; Robles

et al., 1998; Snell and Morton, 1991).

Criminal history is the only aspect where women appear to have less severe problems than men. Women from both offender populations as well as treatment populations are less likely to have been arrested or convicted of a crime or incarcerated (Anglin and Hser, 1987; Anglin, Hser, and Booth, 1987; Anglin, Hser, and McGlothlin, 1987; Snell and Morton, 1991; Gil-Rivas et al., 1997; Chatham et al., 1999; Greenfeld and Snell, 1999).

In summary female substance abusers have a greater number of life problems than do male substance abusers. Furthermore, many of these gender differences mirror gender differences found within the offender population. Women are more likely to have employment problems, mental health problems, and family problems. Women are also more likely to have experienced trauma in the form of physical and sexual abuse. The only dimension where women appear to have a less severe problem is criminal justice system involvement: women are less likely to have a criminal history and are represented in the criminal justice system in far few numbers. In addition, to the differences in the number of life problems, the patterns of drug use differ between men and women. Men and women begin use, continue use and relapse for different reasons.

### **Treatment Needs of Substance Abusing Women**

Much of the literature on women's treatment needs state that women substance users require specialized, gender-specific services. However, as noted by Henderson (1998), attempts to understand and address incarcerated women's drug treatment needs have been patched together from a variety of indirect sources. The sources of information used to identify these treatment needs include research on treatment programs for incarcerated offenders and research on community based-treatment programs for women. There appears to be considerable overlap between the treatment needs of incarcerated women in general and incarcerated substance abusers specifically. The range of treatment needs cited is wide. In discussing treatment needs, some cite the type of service needed, others cite the types of issues to be addressed, and some discuss the style of the program.

Discussion of the types of services needed for female substance abusers focuses upon ancillary services which comprehensively address all the needs of women. Most notably for community-based programs, women are seen as needing system-oriented services with linkage between criminal justice agencies, drug treatment programs and social service agencies (Wellisch et al., 1993; Hagan, Finnegan, and Nelson-Zlupko, 1994; Prendergast, Wellisch, and Falkin, 1995; Lockwood, McCorkel, and Inciardi, 1998). Primary and specialty health care services are often cited as necessary to address women's specific health care problems (Hagan, Finnegan, and Nelson-Zlupko, 1994). Female staff members are seen as providing important role models (Doshan and Bursch, 1982; Drabble, 1996; Koons, et al., 1997; Stevens and Glider, 1994; Wallen, 1998). Some have even found that having a woman director appears to increase the

success of co-ed as well as women-only programs (Lockwood, McCorkel, and Inciardi, 1998).

The types of issues to be addressed in drug treatment programs with female participants should recognize the comprehensive range of women's problems. The issues most often cited include women's experiences as victims of sexual and/or physical abuse (Drabble, 1996; Kassebaum, 1999; Landry, 1997; Morash, Bynum, and Koons, 1998; Root, 1989) the need for vocational training (Drabble, 1996; Landry, 1997; Reed, 1985; Wellisch et al., 1993;) and child care or parenting issues (Doshan and Bursch, 1982; Drabble, 1996; Koons et al., 1997; Kane-Cavaiola and Rullo-Cooney, 1991; Reed, 1985; Wellisch et al., 1993; Wallen, 1998). Women's treatment programs have also been viewed as requiring special attention to relationship issues, particularly relationships with their partners (Laudet et al., 1999; Wallen, 1998). For those with childhood victimization experiences, attention to the resulting variation in developmental processes (e.g. neglected developmental phases) is required (Hagan, Finnegan, and Nelson-Zlupko, 1994). Gender role issues of women and their low self-esteem (Reed, 1985; Wheeler, Biase, and Sullivan, 1986) suggest that one of the goals of treatment is to "empower" women. That is, treatment should provide skills to allow women to gain independence and treatment should focus upon strengths rather than deficits (Bloom, 1999; Finkelstein, 1996; Inciardi, Lockwood, and Pottieger; 1993; Koons et al., 1997; LaFave and Echols, 1999).

Descriptions of programs demonstrate that gender specific issues are incorporated in some of the correctional treatment programs serving female drug users (US, Inc., 1994). Some programs emphasize community rather than the usual system of individual progress through various program levels. The literature reports that the latter is comfortable for men. Programs describe groups as being interactive and responsive rather than confrontational. In addition, programs address issues of self esteem, sexual abuse, parenting, and co-dependency. It is noteworthy, however, that these programs are not described as incorporating most or all gender specific issues. Rather, each program appears to have one or several gender specific foci.

Not only do the issues addressed in treatment differ for men and women but the literature reports a need for different treatment delivery styles. Women's programs are seen as more effective if the focus is on support, skill-building and strength-identifying rather than on confrontation, as is the case with many programs for men (Landry, 1997). The confrontation strategies used for men are seen as inappropriate and even harmful for women (Reed, 1985). Some believe that women do better in all-female settings because the atmosphere is more nurturing and supportive and because in such an environment women may be more comfortable talking about issues such as sexual abuse and may better bond to each other (CASA, 1996; Lockwood, McCorkel, and Inciardi, 1998). Covington and Surrey (1997) crystallize much of the thinking on gender specific program needs in their discussion of the relational model of women's psychological development. The relational model says that women's development and growth is oriented towards connection with other persons. The treatment models suggested by Landry (1997) and Reed (1985) acknowledge and build upon this relationship orientation of women.

Most of the literature citing the specific program needs of women offenders and women

substance users claim that programs have been biased towards the needs of men. As a result much of the literature on program needs for women do not refer to the literature on gender differences and furthermore study just women. As noted by Anglin and Hser (1987), studying just women is as meaningless as studying just men. This is complicated by the fact that gender differences among substance abusers may reflect gender differences within an incarcerated population or gender differences within the general population (Reed, 1985; Brady et al., 1993). As shown in our review of previous literature, some of the gender differences were found both among offender populations in general and substance using populations, both incarcerated and non-incarcerated. Thus, as suggested by Davis and DiNitto (1996) female substance abusers may be suffering from problems that are the effect of gender and not simply the effect of being a female substance abuser.

While much of the prior research on women's treatment needs have focused on single-sex programs, information on meeting treatment needs in mixed-gender programs is almost nonexistent. Despite this information gap there is some indication that meeting women's treatment needs within a mixed-sex program context affects not only treatment entry but treatment retention. Stevens and Glider (1989) found that when a co-ed therapeutic community program was modified to address women's needs, not only did the percentage of women participating in the program increase, but women were also more likely to remain in treatment.

### **Treatment Outcome Literature: A Focus on Women**

Since 1980 the Federal government has funded more than 100 demonstration treatment programs for women with substance abuse problems. The Center for Substance Abuse Treatment (CSAT) also created a women's and children branch (WCB) and some of its activities include the administration of 65 residential treatment programs for women and children and 12 outpatient programs for parenting and pregnant women (Mactas, 1998). More recently CSAT awarded grants to seven demonstration programs to treat women with substance abuse problems in correctional settings (e.g., prisons and jails) (Kassebaum, 1999). Few studies look at outcomes of treatment programs designed specifically for women (Landry, 1997). This is true whether considering correctional or non-correctional programs. However, we note that outcome literature on correctional drug treatment programs for men is also still sparse.

The limited outcome data on women is considered by some as surprising given the large literature arguing for gender-specific treatment (Moras, 1998). However, one problem may be the relatively small numbers of female participants which result in sample sizes too small for statistical analyses (Moras, 1998). On the other hand, Hagan, Finnegan, and Nelson-Zlupko (1994) notes that in all the studies published between 1984 and 1989, only 27.8% of the studies in which potential gender differences could have been observed reported evaluating such differences.

What is known about drug and alcohol treatment outcomes for women? Some studies attempt to

compare the outcomes of men and women. Landry (1997) summarizes his review of treatment effectiveness by stating that men and women treated for alcoholism do as well as each other, but there is less agreement regarding the area of addiction to drugs other than alcohol (Landry, 1997). He continues by stating that the presence of pretreatment psychiatric problems has been a much better predictor of outcome than gender (Landry, 1997). Research has not systematically addressed whether women have better outcomes when treated in all-women programs as compared to mixed-gender programs (Walitzer and Connors, 1997). Nonetheless, several studies found that women in mixed-sex alcohol or drug treatment had poorer outcomes than men (Doshan and Bursch, 1982; NEDTAC, 1997). Anglin and Hser (1987) and Gil-Rivas, Fiorentine, and Anglin (1996) found only small differences or no difference in outcome measures between men and women in methadone maintenance. Davis and DiNitto (1996) found that the recovery rates following treatment are the same for men and women. A number of other studies have found overall lower failure rates of women following treatment (Hagan, Finnegan, and Nelson-Zlupko, 1994; Weiss et al., 1997).

Other recently published national drug treatment studies have examined gender differences in outcome by measuring the percent reduction in drug use or criminal activity between the year before and the year after treatment (Gerstein et al., 1997; Schildhaus et al., 1998). Schildhaus et al. (1998) reported 5-year outcomes from a nationwide sample of 99 drug treatment facilities. They found that women had a greater percent reduction in drug use and criminal activity than did men. They did not, however, report gender differences in pre-treatment and post-treatment drug use or criminal activity. In multivariate models where they controlled for various factors including gender and pre-treatment drug use, Schildhaus et al. (1998) found that men were more likely to use alcohol and illicit drugs after treatment. The findings for criminal activity, however, varied by type of criminal activity. Men were more likely to sell drugs and commit burglaries after treatment whereas women were more likely to engage in prostitution. The National Treatment Improvement Evaluation Study (NTIES) sampled more than 4,000 clients from a sample of the 157 demonstration programs that CSAT funded in its first three years of operation. Gerstein et al. (1997) conducted multivariate analyses to predict outcome by type of treatment program and included gender as one of the predictor variables. They found that women had less positive change (pre- to post-treatment) than men in crime severity (reported criminal activity) and that gender was not significant for either drug or alcohol use when looking at methadone, long-term residential and outpatient non-methadone treatment program participants. Women in short-term residential treatment programs also showed less positive change for crime severity and alcohol severity, but there was no difference between men and women in drug severity.

One study of outpatient treatment subjects included in a large national study of drug treatment programs compared pre- and post-treatment characteristics (Rounds-Bryant, 1999) with the hypothesis that pre-treatment gender differences would affect post-treatment outcomes. Rounds-Bryant (1999) concluded that the results did not support this hypothesis. Rather, it appeared that despite pre-treatment gender differences, men and women had similar post-treatment outcomes.

Since the studies of non-correctional programs address different questions and use different

methods of studying gender differences, clear conclusions cannot be made about the differential effects of treatment for men and women. It is unclear whether the lower relapse rates among women and the higher percent reductions of drug use and general criminal activity are a reflection of gender differences or differential responses to treatment.

If we consider gender differences in recidivism among all offenders, both drug using and non-drug using, we are more likely to find a pattern of lower recidivism among women than men. The three-year recidivism rate for 1985 through 1992 release cohorts from New York State Department of Corrections was 44.0 percent for men as compared to 30.9 percent for women. When comparing new crime to parole violations, a higher recidivism rate occurred primarily for new commitments. There was a 22.0 percent return rate for men compared with a 13.2 percent return rate for women (Chard-Wierschem, 1992). This pattern of a higher recidivism among men was also found in a five year follow-up of New York State Department of Corrections releasees from 1987 (Donnelly and Bala, 1994) and in a three year follow-up of Florida State Department of Corrections releasees (Florida Department of Corrections, 1999). Harer's 3-year recidivism report on 1987 Federal prison releasees did not find a difference in the unconditional recidivism rate between men and women. However, his multivariate analyses of the recidivism data showed that men had higher recidivism rates (Harer, 1993). Additional data on Federal offenders which assessed the effect of prison work experience and vocational training showed that women had lower recidivism rates: during the 8 to 12-year follow-up period 31.6 percent of the men were recommitted as compared with 19.3 percent of the women (Saylor and Gaes, 1995).

While much of the literature discussed highlights gender differences in the characteristics of substance abusers, these differentiating characteristics are seldom if ever discussed in outcome studies. One of the exceptions is for abuse history. Women substance abusers are more likely to have experienced physical and sexual abuse and the literature consistently cites the need to address these issues in treatment. Outcome research has found that a history of sexual or physical abuse is not associated either with lower levels of treatment participation or higher failure rates after treatment (Davis and DiNitto, 1996; Gil-Rivas et al., 1997; Harvey, Rawson, and Obert, 1994). Post-traumatic stress disorder (PTSD), a result of abuse, has also not been found to be related to drug relapse after treatment (Gil-Rivas, Fiorentine, and Anglin, 1996). In contrast, Palacios, Urmann, et al. (1999) found that women who had a history of criminal or delinquent behavior before drug use were less successful after treatment than other women.

We now turn our attention to the literature on correctional treatment program evaluations that have either included women or studied all-women programs. There is only one study of a mixed-gender program where gender was included in the multivariate outcomes analyses. The Martin et al. (1999) study of correctional treatment programs in Delaware reported that 19 percent of the participants were women. Martin et al. (1999) found no overall gender difference in the percent drug free or the percent arrest free after release. In addition, they did not find gender to be predictive of outcome in their multivariate analyses where outcome was measured either as arrest or drug use.



Of the 4 CSAT prison demonstration drug treatment programs, only one – the Forever Free program in California – has post-release outcome evaluation results available. In addition, two other female prison treatment programs have been evaluated, the Turning Point Alcohol and Drug Treatment Program in Oregon and the Gateway program in Illinois.

The first evaluation of the Forever Free in-prison program for women in California found no statistically significant difference between a treatment and comparison group in parole success with a follow-up time frame ranging between 6 and 14 months (Jarman and Lowe, 1993). There were actually two comparison groups. The first group was comprised of matched female inmates from two other prisons and the second of inmates from the same facility who did not apply for the program. The first group was matched on ethnicity, primary offense and date of release. However, differences were found when comparing treatment completers with treatment drop-outs: treatment completers had better outcomes than drop-outs. A later evaluation by Prendergast, Wellish, and Wong (1996) of the same program had a minimum follow-up period of one year and divided women who graduated from the in-prison treatment program into two additional subgroups: those who entered (voluntarily) community-based residential treatment for at least 30 days and those who did not (the majority). Prendergast, Wellisch, and Wong (1996) found that the Forever Free graduates who also participated in community-based residential treatment had better outcomes, where outcome included successful parole discharge and self-reported drug use.

The Turning Point Alcohol and Drug Treatment Program for women in Oregon was first evaluated by Field (1995). His evaluation did not include a comparison group of non-treated individuals. Rather, he studied treatment participants categorized by time spent in the program. Decreased recidivism defined as arrest, conviction and incarceration, was lower for individuals who were in treatment for more than 180 days than for those who dropped out before 90 days or those who left between 90 and 180 days (Field, 1995). A subsequent evaluation of this program by Falkin and Strauss (2000) focused upon predictors of outcome among women and also did not include a comparison group. Falkin and Strauss (2000) found that women who participated in treatment had lower rates of drug use and criminal activity one year after release than they did in the year before treatment.

A third in-prison program for women, the Gateway program in Illinois, was evaluated by Gransky and Jones (1995). The comparison group used in the evaluation of this program consisted of treatment volunteers who were unable to receive treatment due to lack of treatment slots and who were matched on substance abuse history, age, race, and time remaining on sentence, to treatment subjects. Gransky and Jones (1995) found less than a 2 percent difference between treatment and comparison group members in the percent who were returned to prison within 2 years – 41.4% of treatment group vs. 42.1% of comparison group. However, when separating offenders who spent less than 90 days in the program from those who spent more than 90 days in the program, the rates were 45 and 35.3 percent, respectively.

The methodological problems and the results mirror those found in evaluations of prison-based

treatment programs for men (discussed in Chapter 2). The subject groupings which often separate program graduates from drop-outs exacerbate the potential bias of treatment effects due to subject selection into and out of treatment. Once again, some of the findings show no difference between treatment and comparison groups when treatment groups are not divided into completers and non-completers.

Much research remains to be done to adequately address the question of what specific components of treatment are necessary to ensure positive outcomes for female substance abusers. The studies of prison-based treatment do not address the question of whether the programs would have had more or less success with gender specific interventions. The degree to which the prison drug treatment programs evaluated incorporate gender specific issues varies, but, for the most part, there is little, if any mention, of gender specific issues. The Gateway program is described as a therapeutic community program which includes education, daily group therapy and individual counseling (Gransky and Jones, 1995). The Forever Free program is described as a residential program with individual counseling, educational seminars, 12-step programs, parole planning, and urine testing (Prendergast, Wellisch, and Wong, 1996).<sup>1</sup> The description of the Turning Point program in Oregon is the only one which specifically mentions some gender-specific issues. This residential program includes a family component which addresses a range of issues: family dynamics, domestic violence, couples issues, and childcare (Strauss and Falkin, 2000).

Despite the lack of information about treatment effectiveness for women, some, such as Zweben (1996) are ready to speculate why existing treatment models are less effective for women: male partners play a large role in recovery and are less supportive; and women face stressful life situations – they have many competing child care, legal, employment, and financial demands. In addition, poor vocational skills, depression, and physical disorders, make recovery for women much more difficult.

In contrast to Zweben's (1996) viewpoint, Fiorentine et al. (1997) discuss the "gender paradox" which refers to the fact that women are no more likely to relapse despite having "risk factors" for relapse. One explanation offered for the "gender paradox" is that women are more likely to engage in drug treatment (Fiorentine et al., 1997). Treatment engagement was found to be a primary reason why women in outpatient drug treatment programs were less likely to relapse than men. However, as noted by Fiorentine et al. (1997) we do not know why women are more likely than men to engage in treatment. But, the finding of greater treatment engagement is consistent with gender norms concerning help-seeking and personal independence.

In summary, the literature on gender differences among drug users consistently points to women

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<sup>1</sup> However, a subsequent process evaluation of this program (Prendergast et al., 1999) points to the gender specific issues covered in group sessions – self-esteem, post-traumatic stress disorder, co-dependency, parenting, sexual abuse survivors – and notes that the relapse prevention group is not confrontational as it is in men's programs.

as having a greater number of life problems than men. However, the precise nature of some differences has been shown to vary across different sample populations. The literature on gender differences in treatment needs points to gender-specific needs but conclusions are often not empirically based. The outcome literature, still very sparse, has not yet incorporated the literature on gender differences in pre-treatment characteristics and has not provided information on what components of gender-specific treatment are necessary to produce more successful outcomes for the female substance abusing population. This is made apparent by Fiorentine et al.'s (1997) discussion of the gender paradox. Why is there evidence that women have better outcomes than men despite the fact that they are at higher risk of failure? There are several related questions which have not been clearly addressed: Are there different processes of natural recovery for men and women; how does treatment differentially affect the drug use and criminal behavior of women; and, what gender-specific treatment components are crucial to ensure or increase treatment effectiveness for women. Lastly, the limited treatment outcome studies for women are plagued by a variety of methodological problems. Not only are they plagued by the problem of addressing selection bias, a problem that also plagues the evaluations of drug treatment programs for men, but they also have unique methodological problems. Evaluation of programs for women are often limited by small sample sizes and lower sensitivity of outcome measures such as post-release recidivism.