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Women with Methamphetamine Dependence: Research on Etiology and Treatment

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Abstract—The epidemic of methamphetamine dependence is spreading eastward across the United States. Unlike the gender ratio associated with most other drugs of abuse, the proportion of woman methamphetamine users is nearly equal to men. This review will describe reasons why women begin use of methamphetamine, especially those that differ from the usual reasons for initiating drug use. The characteristics of women users at entry into treatment also differ from those of men, especially in regard to employment, psychological symptoms, and history of abuse and violence in their lives. Finally, the review will address treatment issues and options that can be responsive to the distinctive needs of women dependent on methamphetamine.

Keywords—gender-specific, methamphetamine, retention, treatment, women

The epidemic of methamphetamine use is becoming of increased concern as more and more states are discovering that the problem has landed in their own cities, suburbs, and rural areas (Rawson, Gonzales & Brethren 2002). In the last two decades, the epidemic has spread from the West Coast states steadily eastward, and in a recent nationwide

survey of local law enforcement officers, methamphetamine emerged as the primary drug of concern for a majority of those responding (Hansell 2006). Certainly the heightened concern expressed by law enforcement leaders reflects their awareness of the environmental risks of widespread manufacture of the drug, but it also reflects the stress of trying to address a drug problem that does not appear to follow the usual patterns of distribution and use. Because methamphetamine is easily manufactured, availability is widespread, and the “dealer on the corner” has not been the model of accessibility.

As the methamphetamine epidemic in the United States continues to grow, the need for research on etiology and effective treatment increases. This is particularly true concerning gender-specific treatment. Historically, substance abuse treatment was oriented to the needs of men. However, in the last few decades, studies have shown that treatment specifically developed for women has increased effective treatment outcomes (Ashley, Marsden & Brady 2003;

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Covington 2002; McComish et al. 2000). Gender-specific evaluation and research studies on substance use disorders in general and on specific substances, such as cocaine and heroin, are increasingly documented in the literature (Grella & Greenwell 2004). The literature is robust in identifying areas where women in treatment need assistance, including: children and parenting (McComish et al. 2003; Laken, McComish & Ager 1997); violence (Velez et al. 2006; El-Bassel et al. 2004); abuses including, sexual, physical, and emotional (Brady & Ashley 2005); loss and grief (Greenberg et al. 2003); co-occurring disorders (Conner, Cerulli & Caine 2002) and partners (Tuten et al. 2004). The wide range and high number of risk indicators experienced by so many women make it imperative to address women's total level of burden (Brown, Melchior & Huba 1999) in treatment. As more is understood with regards to the treatment needs of women, the body of literature on gender-specific treatment outcomes is increasing (Pelissier & Jones 2005; Conner, Cerulli & Caine 2002; McComish et al. 2000). It is increasingly apparent that the implementation of comprehensive treatment approaches addressing the multifaceted personal, familial, cultural and social needs of women is becoming a standard of best practice (Ashley, Marsden & Brady 2003).

This research presentation will focus on how people begin methamphetamine use, what circumstances are associated with dependence on the drug, and how treatment services can best address the problems that users bring to treatment. It will not address manufacture or access issues. This report also will not address the extent of psychosis associated with extensive methamphetamine use, since the research data to be presented here come from outpatient treatment programs that admit people without psychotic diagnoses.

To date, there are few reports of outcomes of treatment specifically for methamphetamine dependence. One notable exception is the recent report on two-year outcomes of treatment for methamphetamine use by Brecht and colleagues (2007). Following 349 randomly selected admissions to outpatient treatment in an urban area, they found that reductions in drug use and criminal activity and improvement in employment rates were typical, but that these differed by gender as well as other factors.

Most of the research information presented here comes from the Methamphetamine Treatment Project, the only controlled multisite trial of treatment for methamphetamine dependence, which was conducted from 1999-2002 and funded by the Center for Substance Abuse Treatment (CSAT). The trial enrolled more than 1,000 users in eight sites, located in three states (Rawson et al. 2004). Study participants were admitted to outpatient treatment and were administered a wide array of assessments at study entry, treatment completion, and six and 12 months after study entry. A second source of information is provided by secondary analyses of California treatment data reported from the

UCLA Integrated Substance Abuse Programs (ISAP) (Evans et al. 2006). Findings of particular interest to Californians address the effect of Proposition 36, the state proposition that provides for treatment as an alternative to prison for those who abuse drugs but have not committed violent crimes. To date, more than half of those entering treatment report methamphetamine as their primary drug; further, almost half of those are women.

Most early users experience the immediate effects of methamphetamine from sniffing or inhaling the drug; they include increased energy, sensory acuity, heart rate, blood pressure, and respiration, as well as reduced reaction time, appetite, and sleep. These effects have created an image of methamphetamine use as increasing energy, confidence, alertness, mood, and sexual drive. Using also is reputed to banish boredom and timidity. With a reputation like this, it is easy to see the appeal for men and women of all ages and backgrounds. When asked about reasons for starting methamphetamine use, women reported having more energy and losing weight significantly more often than men. They also reported using it because their friends used, for escape, and for fun and partying. Men, on the other hand, were significantly more likely to report beginning to use in order to work more, or to try something new. Men also reported using it to get high, to have better sex, and because their friends were using. Thus, most users began using with friends, and to have more energy and good times, but women were attracted by weight loss, contrasted to men who named more work and better sex among their primary reasons (Brecht et al. 2004).

Demographic patterns of methamphetamine users differ from those of other drug users. In the United States, users are primarily White, followed by Latinos and Asians; there are relatively few African-American methamphetamine users. Data from the Methamphetamine Treatment Project revealed that users' median education level was graduation from high school. Most participants were single or separated. Regarding employment history of men at admission to treatment, 64% reported full time work; only 10% reported being unemployed. Women, on the other hand, were much less likely to report full time employment (24%), and 30% reported that they were unemployed (Rawson et al. 2004).

At treatment entry, methamphetamine users reported a significant number of psychiatric symptoms and psychological problems. On the Brief Symptom Inventory, (Table 1; Zweben et al. 2004) they reported higher scores than normal, especially for anxiety, paranoid, and depressive subscales. On every psychological symptom measure in the study, women scored higher than men.

When asked about some specific psychological problems, men and women showed some interesting differences. Women were significantly more likely to report attempted suicide (28% vs. 13%); while men reported much larger numbers of assault charges (46% vs. 16%). Problems caused by violent behavior were reported by 46% of women and

TABLE 1
Methamphetamine Treatment Trial Brief Symptom Inventory Scores and Subscores by Gender

BSI Scale	Males (n = 454)	Females (n = 562)	T Values
Anxiety	0.76	1.08	6.01
Depression	0.98	1.30	5.30
Hostility	0.71	0.94	4.51
Interpersonal Sensitivity	0.79	1.19	6.52
Obsessive-Compulsive	1.01	1.38	6.11
Paranoid Ideation	0.94	1.16	3.89
Phobic Anxiety	0.46	0.68	4.46
Psychoticism	0.79	0.99	3.78
Somatization	0.53	0.84	6.92
Global Severity Index	0.78	1.07	6.34
Positive Symptom			
Distress Index	1.63	1.83	5.07
Positive Symptom Total	22.96	28.03	5.84

(from Zweben et al. 2004:183)

40% of men. These findings are understandable, given the chronic psychological effects of methamphetamine use, including anger, confusion, insomnia, irritability, and reduced memory and concentration. Methamphetamine-related psychosis, including hallucinations and paranoia, is well known (the 2006 article by McKetin and colleagues indicates that psychosis was 11 times higher in meth users than in the general population; 59% of the sample was male).

Methamphetamine use is also associated with violence and abuse. This is a programmatic issue for treatment that needs to be incorporated into safety considerations. The CSAT-funded cross-site study asked in detail about violence and abuse in subjects' lives. When asked if they had experienced abuse during their lifetimes, 29% of women and 7% of men reported sexual abuse, and 64% of women and 36% of men reported physical abuse. In addition, emotional abuse was reported by 84% of women and 64% of men. Much of this abuse began early in life: physical abuse occurred before the age of ten for 43% of those who reported the abuse, and sexual abuse at that age for 44% of the women and 58% of men who reported it. Nor was abuse a distant experience for all. When asked about abuse in the month before admission to treatment, sexual abuse was reported by 3% of women, physical abuse by 12% of women and 3% of men, and emotional abuse by 43% of women and 27% of men (Cohen et al. 2003).

Of course, the problems reported above are rarely single life occurrences. Therefore, Cohen and colleagues looked at the total level of burden these kinds of problems brought with them, assuming that someone coming to treatment with a relatively low level of these problems would be better able to respond to change efforts than one who had many additional problems at the time. The concept of "level of burden" was originally presented by Brown, Melchior and Huba (1999) in discussing the problems women brought to treatment in addition to their substance use disorder. Ten

possible burdens were included: chronic medical problems, less than a high school diploma, unemployment, dependents to support, underemployment (part time/seasonal), past criminal convictions, a history of psychological problems, and experience of abuse, whether physical, sexual, or emotional. Total level of burden is the number of items to which respondents answered yes. Male methamphetamine users were significantly more likely to score at the low end of the burden scale: 63% of all men reported zero to two problems, compared to 34% of women. Relatively fewer participants scored in the high range with seven to ten problems, but they included only 1% of men, compared with 11% of women.

Many women entering treatment for methamphetamine use do so with some external motivation, such as mandates by child protective services or drug or family court (Brecht, Anglin & Dylan 2005). The literature indicates that women in treatment are at high risk for both physical and psychological health care concerns. They appear to be more vulnerable to the physiological effects of substance use and are more likely to have been identified with co-occurring mental health disorders including depression, PTSD, anxiety, bipolar affective disorders and the effects of previous trauma resulting from violence or sexual, physical and emotional abuse (Brady & Ashley 2005). Given the multiproblem profiles presented above, optimal treatment provision requires screening and integrated dual disorder, gender-specific programs (CSAT 1997). Women bring other problems including poor physical and psychological health, a history of abuse and violence, and few resources for employability or close family support. Best practice indicates that careful screening for psychological and psychiatric problems in addition to physical ones and a sensitive review of the current and ongoing potential for abuse and violence would help inform the treatment plan. Integrated dual disorder programs and woman-specific services are the

most likely to have the necessary resources for assessment (Claus et al. 2007).

In a sense, the involuntary nature of the admission can be seen as positive, because it mandates treatment for long enough for the pervasive effects of methamphetamine use, (which can last for six months or more) to fade away and permit a more complete understanding of problems of those in treatment. In the cross site treatment trial, one site that had admissions to treatment mandated from a drug court had retention and completion rates more than twice as high as those from all other sites in the trial (Rawson et al. 2004).

There is limited research information about relapse in methamphetamine use. As might be expected, the reasons given for relapse tend to differ by gender (Hser, Evans & Huang 2005). Women returned to using again because they wanted to lose weight, or have more energy for their kids, or because they were no longer pregnant. Men reported that they relapsed because the drug was available and friends were using, and because they wanted to get high or have more sex again. It is interesting that the focus was again on short-term positive changes, not the negative longer-term changes they had also experienced.

At this time, there is little information on the efficacy of treatment specifically for methamphetamine dependence. Treatment options have only recently become widespread enough for outcome analyses. In particular, little is known about whether programs that are able to address the problems specific to women will show better outcomes for them

than those programs that do not provide dual disorder and abuse integrated components. It is known that for women substance users in general, the dropout rates from treatment are higher than for men in mixed gender programs (Grella & Greenwell 2004). Further, looking at data from treatment programs in California, the ISAP group reported that only about three in every 10 methamphetamine-using women entering treatment were still abstinent 24 months later, but specific program components were not described (Hser, Evans & Huang 2005). Because women methamphetamine users typically begin and continue to use within a family and community context, programs need to recognize this aspect in planning treatment. Follow-up data from the cross-site trial are still being analyzed, and may help to tell whether those who enter treatment with these personal and family history characteristics have different treatment experiences and outcomes.

As the problems of methamphetamine abuse continue to increase, it is necessary to work to ensure that the specific resources to better understand and to treat these problems are increasing as well. Gender-specific techniques, treatment content and modalities focused on methamphetamine use need to be developed and evaluated for treatment efficacy. Given the important differences between men and women in regard to methamphetamine use and treatment, women-specific strategies that include staff training are required to maximize our ability to help women and their families to move beyond dependence.

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