Evaluation of a Trauma-Informed and Gender-Responsive Intervention for Women in Drug Treatment

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Abstract—There is growing recognition of the complex needs of women with dual diagnoses of substance abuse and mental health disorders. Recent research indicates that 55% to 99% of women with co-occurring disorders have experienced trauma from abuse and that abused women tend to engage in self-destructive behaviors. These women often are not well served by the services found in their communities, which separate substance abuse and mental health programs, despite the fact that research shows that integrated, trauma-informed treatment services will increase the success of their recovery. A recent study examined the use of two gender-responsive, trauma-informed curricula presented in a residential facility for women, 55% of whom had criminal histories. *Helping Women Recover* and *Beyond Trauma* are both manualized programs founded on research and clinical practice and are grounded in the theories of addiction, trauma, and women's psychological development. This treatment model is named "Women's Integrated Treatment" (WIT). Women who successfully completed the programs were assessed at several points in time on several scales, including trauma symptomology, depression, and substance use before and after the programs. The findings indicated less substance use, less depression, and fewer trauma symptoms ($p \leq .05$)—including anxiety, sleep disturbances, and dissociation—after participation in the WIT curricula.

Keywords—co-occurring disorders, integrated services, intervention outcomes, substance abuse, trauma, women's integrated treatment

The effects of substance abuse and dependence are devastating to—and far reaching in—the lives of millions of people. According to a Substance Abuse and Mental Health Services Administration (SAMHSA) report published in 2006, over 22.2 million individuals were classified as having substance abuse or dependence disorders in the preceding year. In the same time period, over six million women (aged 18 or older) in the United States met the criteria for abuse of or dependence on alcohol or an illicit drug. The report also stated that substance abusers often have additional mental health issues (co-occurring disorders). In the field of substance abuse and mental health treatment, these dually-diagnosed individuals have the poorest prognosis (Moggi et al. 1999).

Historically, the challenges that dually-diagnosed individuals face have been compounded by the lack of treatment services designed to address both their substance use and

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mental health issues simultaneously. In a qualitative study investigating reasons for relapse (Sun 2007), one woman reported:

> When you're not working on your mental illness along with it [alcoholism], it is almost nil. . . . You can't do it. . . . Most of the time, my chemical use is like self-medication. I was dealing with those feelings, putting them away. . . . If you are bipolar, you are manic, you use booze to bring yourself down. I didn't really have a chance to make it until I knew I was dual diagnosis. Then I started working on that; I'd go to behavioral centers and psychiatric units, to work on that . . . then I was not working on alcohol. So I was working on one or the other.

Although both men and women may use substances as a result of trauma, there is a strong link between victimization or traumatization in women and substance abuse and dependence disorders (Grella 2003; Najavits, Weiss & Shaw 1997). Trauma can affect a woman's relational experiences and hinder her psychological development (Colman & Widom 2004). It can influence the way a woman relates to staff members, her peers, and the therapeutic environment (Rosenbaum & Varvin 2007; Mullen et al. 1996). However, traditional addiction treatment and mental health treatment often do not deal with trauma issues in early recovery. Many treatment providers lack the knowledge and understanding of what is needed in order to do this work, and many of the treatment programs available to women have a single focus (Najavits et al. 2004). Although some practitioners believe that the incorporation of trauma issues into substance abuse treatment will put sobriety at risk, trauma is a primary trigger for relapse among women and may underlie their mental health disorders (De Bellis 2002).

In 1999, Moggi, Ouimette, Finney, and Moos conducted a study to look at outcomes one year after the completion of substance abuse treatment. Their results suggested that dually-diagnosed patients did better when their psychiatric problems were dealt with directly during their substance abuse treatment.

Additional research also indicates that there are positive effects when trauma counseling is integrated with substance abuse treatment. Two studies using a six-month-outcome, nine-site quasi-experimental design (Cocozza et al. 2005; Morrissey et al. 2005) looked at women with mental health and substance use disorders who had experienced physical or sexual abuse and who were enrolled in either comprehensive, integrated, trauma-informed, and consumer/survivor/recovering-person-involved services or in treatment as usual. The purpose of these studies was to assess the efficacy of integrated services at both program and personal levels. Results from the Morrissey (2005) study indicated that all the women showed improvement over the six months. However, women who received services from sites with higher levels of integrated counseling had greater reductions in mental health symptoms and better improvements in their substance-use behaviors. The Cocozza (2005) study looked at the similarities and differences in programs that integrated trauma, mental health, and substance abuse services for women. The authors assessed post-traumatic symptoms, severity of alcohol and drug use, and mental health status as measured outcomes. Women in the intervention programs—which integrated their trauma, mental health, and substance abuse services—showed increased improvement on posttraumatic symptoms and severity of drug use. These findings demonstrate that integrated services make a positive difference in the lives of dually-diagnosed women.

This article reviews the lack of integrated services for individuals with co-occurring disorders, discusses substance abuse and trauma in the lives of women, and proposes an integrated model of treatment as a promising way of providing treatment for addicted women who have co-occurring disorders and/or who have experienced trauma. It then describes a study of two trauma-informed curricula presented in a residential facility for women in recovery. It provides preliminary evidence of the positive outcomes associated with integrated trauma-informed services and calls for additional research in this area.

THE LACK OF INTEGRATED SERVICES FOR INDIVIDUALS WITH CO-OCCURRING DISORDERS

There are many barriers to the integration of substance abuse treatment and mental health treatment. One is the historical separation between the two types of service agencies. Many practitioners in mental health treatment have strict policies: they will not see clients who are actively using substances (Grella 2003). Some in the substance abuse treatment field believe that focusing on mental health issues will hinder the attainment of recovery (Osher & Drake 1996). In the case of co-occurring substance abuse and trauma symptomatology, some fear that "uncovering" trauma issues will risk the client's sobriety and, therefore, that trauma should not be addressed until the individual is stabilized (i.e., has achieved six to twelve months of recovery). As a result, individuals often are not referred to mental health services until they have completed treatment for substance abuse (Cook et al. 2006; Link et al. 1997; Timko 1995). This leaves dually-diagnosed clients in a disadvantaged position, despite the significant body of research that shows a specific relationship between substance abuse disorders and traumatic experiences, particularly in the lives of women (Brown, Reed & Kahler 2003; Najavits, Weiss & Shaw 1997).

Another barrier to the integration of substance abuse treatment and mental health treatment is the stigma attached to individuals with co-occurring substance abuse and mental health disorders (Young & Grella 1998). For such dually-diagnosed individuals, the stigma has been shown to be related to decreased access to care (Kinsler, Wong & Sayles 2007), more barriers to recovering from mental illness, and a reluctance to take medications that indicate mental illness (Liggins & Hatcher 2005; Corrigan, Watson & Ottati 2003).

Because individuals with co-occurring disorders have more difficulty successfully achieving and maintaining recovery, they are often deemed hopeless cases. It may be that this outlook hinders the ability of treatment providers to offer the best possible care for these individuals.

Young and Grella (1998) conducted a survey of counties in California to assess services for co-occurring substance abuse and mental health disorders. Among other items, the survey asked the agencies to identify barriers to the implementation of integrated services. Results of the survey indicated that although California was creating a collaborative system, it remained at the level of information sharing and coordination of services. There still was (and is) a gap in terms of true integration of treatment services. The agencies cited the historical differences and rifts that exist between the services as a barrier to integration.

SUBSTANCE ABUSE AND TRAUMA IN THE LIVES OF WOMEN

Although substance abuse is a devastating phenomenon for men and women, research has shown that the pathways to drug use and abuse are different for women than for men (Covington 2007; Deas, St. Germaine & Upadhyaya 2006). Although substance abuse and dependence may affect the legal status, child custody, employment, and housing situations of both men and women, in our society many of these issues have a greater impact on women because of ascribed societal gender roles and the ways in which women derive their identities (Grella 1997). Women who abuse substances are often grappling with other stressors that complicate their relationships with drugs and alcohol as well as their treatment. Specifically, research has demonstrated that in comparison to men, women are more likely to experience stressors such as histories of maltreatment, mood and affective disorders, relationship difficulties (Colman & Widom 2004), personality disturbances (Wekerle & Wolfe 2004; Tong, Oates & McDowell 1987), posttraumatic stress disorder (PTSD) symptomology (Schaaf & McCanne 1998), and sexual-adjustment problems (Wekerle & Wolfe 2004; Beitchman et al. 1992). Additionally, for substance-abusing women with histories of childhood maltreatment, there is an increased risk of revictimization and retraumatization in adulthood (Cloitre, Tardiff & Marzuk 1996). Revictimization may occur as domestic violence (Noll 2005; Colman & Widom 2004; Delsol & Margolin 2004), sexual violence (Casey & Nurius 2005), and/or sexual coercion (Casey & Nurius 2005; Noell et al. 2001).

A growing body of research articulates the strong relationship between past trauma and substance abuse in the lives of women. The research demonstrates that there are high numbers of women in substance abuse treatment with histories of sexual and physical abuse, with rates ranging from 66% to 90% of the women entering drug treatment (Hien, Cohen & Campbell 2005; Covington 1997; Kilpatrick et al. 1997). One type of trauma in particular in which this relationship exists is childhood sexual abuse (CSA). There is strong empirical support for the assertion that women with (reported) histories of sexual abuse are more likely to abuse drugs (Najavits, Weiss & Shaw 1999). In a retrospective analysis of the relationship between childhood sexual abuse and the onset of psychiatric disorder, Molnar, Buka, and Ronald (2001) found strong support for the relationship between CSA and drug dependence.

The Coping Hypothesis, which had been used to explain use and relapse in alcohol- abusing populations, has now been used to describe drug abuse in traumatized populations. Originally, it was thought that inadequate coping skills alone were the cause of relapse and use in substance-abusing populations. Applying the Coping Hypothesis to the dually diagnosed, substance use can be explained as a way to attempt to self-medicate because of the psychological trauma of abuse (Miranda et al. 2002). Women who experience negative effects from their trauma will drink more frequently to reduce those effects (Carpenter & Hasin 1999; Sayette 1999). For example, there are high rates of substance abuse in women who are experiencing domestic violence. Subsequent research has shown that social-support interventions decrease relapse and improve the success rate of recovery better than coping-skills interventions alone (Sinha 2001). Additional literature suggests that women who drink more frequently have a preexisting expectation that abusing substances will decrease their negative emotions (Sun 2007; Brown, Read & Kahler 2003).

Substance Abuse, Trauma and the Criminal Justice System

Research has also shown an association between prior trauma, substance abuse, and future involvement in the criminal justice system. The relationship between sexual violence and addiction often follows women into adulthood, as they may engage in sexual acts to support their drug habits (Cusick, Martin & May 2003). This interplay between drugs and the sex trade can put women at further risk for entering the justice system. Incarcerated women, in particular, demonstrate the cumulative effects of substance abuse and trauma. A strong body of research reveals that incarcerated women report elevated rates of emotional, physical, and sexual abuse (Messina & Grella 2006; Messina, Burdon & Prendergast 2003; Jordan et al. 2002; Langan & Pelissier 2001; Jordan et al. 1996). One manifestation of these early childhood traumas is behavioral problems that place women at risk for involvement in the criminal justice system (Messina & Grella 2006; McClellan, Farabee & Couch 1997).

A criminal justice system that is philosophically predisposed to address male criminal offenders is poorly suited to treat the primary reasons that these women enter the justice system. The dearth of treatment modalities capable of addressing the prevalence of co-occurring disorders among incarcerated women is also evident as women seek treatment upon release. Again women are faced with alcohol and

drug treatment models that are historically singular in focus and not equipped to address the underlying trauma issues facing many addictive women (Bloom & Covington 2008; Covington & Bloom 2006).

TRAUMA-INFORMED TREATMENT PROGRAMS FOR WOMEN

Successful treatment with women requires an understanding that there are differences between the experiences of men and women. Covington and Bloom (2006) call this "gender responsiveness." They define gender responsiveness as "creating an environment through site selection, staff selection, program development, content, and material that reflects an understanding of the realities of women's and girls' lives and is responsive to their strengths and challenges." They point out that traditional therapy generally reflects the dominant male culture. One result is that programs and policies called "gender neutral" are actually male based. When working with a population with the greatest risks to recovery, it is important to have a primary focus on creating a setting that provides a safe environment. The National Institute of Corrections (Bloom, Owen & Covington 2003) has developed guiding principles to ensure gender-responsive and trauma-informed services. These principles entail creating an environment that conveys safety, respect, and dignity for all those involved, including staff members.

Part of the definition of gender-responsive treatment includes providing materials that reflect women's lives. Because the lives of many women in substance abuse treatment and mental health treatment include trauma, it is essential to use materials designed for women that are trauma-informed.

Staffing Issues

Another barrier to integrated services is the concern of some practitioners about the competence of staff members in terms of implementing a trauma-informed curriculum. Many staff members in substance-abuse treatment programs have not been trained to work with co-occurring disorders or trauma. Studies have shown that paraprofessionals who staff treatment programs often report not feeling comfortable and competent when trauma is an issue (Saakvitne et al. 2000).

Some staff members experience discomfort in talking about trauma with the clients because they have their own unresolved issues with trauma. (e.g., 50% of the staff members in the KIVA program, where the research project described below was conducted, are women who successfully completed the program). Programs need to acknowledge and address these life experiences, in terms of the staff members as well as the clients. This can be challenging. Practitioners give a variety of reasons to avoid dealing with their clients' trauma, but they rarely state that they do not want to deal with it themselves. However, staff members with traumatic life experiences need to learn what the women receiving treatment need to learn.

In creating a gender-responsive and trauma-informed program, it is first important to ensure that both staff members and clients learn what trauma and abuse are and about their effects (physically and psychologically). There is an immense amount of misinformation and secrecy about abuse in present-day society. Both staff members and clients need to learn that women who are victims of trauma are much more vulnerable to being retraumatized and to engaging in self-destructive action. They also need to learn coping skills. Knowing about trauma and its effects may change the framework through which staff members see and work with their women clients.

A STUDY OF TWO TRAUMA-INFORMED CURRICULA

To begin addressing the need for trauma services, Dr. Stephanie Covington has developed the Women's Integrated Treatment (WIT) model and designed two gender-responsive curricula that integrate trauma and substance abuse treatment. Below are descriptions of the curricula and an overview of a recent study on the outcome of the two curricula implemented within a social model residential treatment facility for women and women with children (Burke & Keaton 2007).

In May of 2004, the McAlister Institute for Treatment and Education (MITE) received funding from the California Endowment to provide specialized trauma services to the women residing at the KIVA Women and Children's Learning Center in San Diego, CA. KIVA offers a twelve-month residential drug and alcohol treatment program to women, including those with children. The program is based on a social model; that is, staff members model appropriate behaviors and rely on peer influence to help the participants achieve sobriety and other goals. The majority of the counselors and staff members at KIVA are former participants. The funding was directed to the implementation of two curricula created by Dr. Covington and aimed at addressing the co-occurrence of substance abuse and trauma in the lives of women. Seventy-three women who lived at KIVA with their children completed *Beyond Trauma* (BT) after the successful completion of *Helping Women Recover* (HWR), in order to deepen the trauma work begun in HWR. Each of these curricula is gender responsive and trauma informed.

Helping Women Recover: A Program for Treating Addiction is an integrated, manualized curriculum for treating women with histories of addiction and trauma. It is designed for use in a variety of settings, including outpatient and residential substance abuse treatment programs, domestic violence shelters, mental health clinics, jails, prisons, and community corrections facilities (there is a special edition for women in the criminal justice system). HWR is founded on research, theory, and clinical practice and is grounded in the theories of addiction, trauma, and women's psychological development. These theories are applied using psychoeducational, cognitive-behavioral, expressive arts,

and relational approaches. They create the basis of the seventeen-session program. The sessions are in four modules: Self, Relationships, Sexuality, and Spirituality (Covington 1999, rev. 2008) These are the four areas that recovering women have identified as triggers for relapse and as necessary for growth and healing (Covington 1994).

Beyond Trauma: A Healing Journey for Women is also a manualized curriculum for women's treatment, based on theory, research, and clinical practice (Covington 2003). The materials presented in BT are trauma-specific. The connection between trauma and substance abuse is recognized and integrated throughout the curriculum. Three modules include eleven sessions focused on violence, abuse and trauma, the impact of trauma, and healing from trauma. Like HWR, BT is designed for use in outpatient, residential, and criminal justice settings and is intended for use alone or in conjunction with HWR. The major emphasis is on coping skills, with specific exercises for developing emotional wellness. BT has a psychoeducational component that teaches women what trauma is, its process, and its impact on both the inner self (thoughts, feelings, beliefs, and values) and the outer self (behavior and relationships, including parenting). Through cognitive-behavioral techniques (CBT), expressive arts, and the principles of relational therapy, BT aims to help women deal with the expression and containment of feelings (fear, loss, grief, anger, and shame) as they move toward emotional wellness.

Both programs are designed to be implemented by a staff with a wide range of training and experiences. The materials are designed to be user friendly and self-instructive. Each program has an instructor's manual, which serves as a step-by-step guide and contains the theory, structure, and content needed to run the groups. It is recommended that each of the curricula be implemented sequentially in closed groups, but this is not a requirement. Each session includes an overview of the materials to be covered, a group check-in, a teaching component (to enhance understanding), an interactive component that includes exercises in a supportive environment, and a closing that includes questions for the women to think about prior to the next session. Participant workbooks allow women to process and record the therapeutic experiences. The BT curriculum includes three instructional videos (two for facilitators, one for clients).

For this study, HWR and BT were provided sequentially, and the primary training for the staff members was their participation in the BT curriculum prior to facilitating the client groups. The KIVA staff already was familiar with, had been trained in and had been conducting the HWR program, so the line staff and program director were trained in the BT model, which was to be added. The staff members went through the BT curriculum themselves and then were instructed in how to facilitate the groups. Throughout the intervention, methods to ensure fidelity to the curricula were employed. These methods included direct observation of the staff by an outside licensed clinical social worker (LCSW) who served as the consultant to the program and who was trained by Dr. Covington. Weekly group and individual meetings were held with the staff and the consultant. The consultant also monitored the participants to ensure that the group facilitator was addressing their needs.

Because of staff turnover, which is common in nonprofit treatment programs, the training had to be provided to new staff members at several different times to ensure that all received training in both BT and HWR prior to working with clients in the programs.

The San Diego Association of Governments (SANDAG) was responsible for assessing the program materials by doing a process-and-outcome evaluation of the project. Although the evaluation had several limitations, the results suggest that the integration of trauma-informed and trauma-specific services with substance abuse treatment could have a positive impact on the recovery of the women involved.

Methodology

Although SANDAG was the evaluator of the program, because of limited evaluation funding, the KIVA staff members were responsible for data collection as well as documenting how the program was implemented, including staff changes and any changes to the model. Because of the significant role of the program staff, the analysis was influenced by the data received and limited because of the small sample size. A randomized control study was not feasible, and research design was limited to a one-group pre/post test design. Women who successfully completed the programs were assessed on several scales, including trauma symptomology, depression, and substance use both before and after completion of the programs. Significance was reported at the .05 level. Despite the limitations of the study, the results support future research on this topic, utilizing a larger sample size and a more stringent research design.

Assessment Time Points

To determine the impact of successful completion of the treatment program, a series of standardized assessment and program intake forms were administered at several points in time: (1) intake, (2) completion of the first 45 days (i.e., a period of stabilization prior to beginning HWR to allow the women to adjust to their living situation and take care of logistics), (3) completion of HWR, (4) completion of BT, and (5) exit. As shown in Table 1, data were available only on clients who completed each set of assessments and/or forms as they progressed through treatment. Of the 202 clients who entered the program and qualified for inclusion in the study, baseline data were available for 195 to 199. For those clients who exited the program successfully (i.e., completed their treatment plans or goals) and completed both intake and exit forms, data were available for analysis on 79 to 84 KIVA clients, and matched (completed 45 days, end of HWR, and end of BT) outcome assessments were available for 40 to 44 of the study clients. Because of the transitory nature of the client population and KIVA's limited ability

TABLE 1
Data Available for Analysis

Completion of 45 day Orientation and Stabilization (Baseline Data)
(n = 195-199)
Completion of Assessment at 45 days
(n = 188 – 192)
Completion of HWR Forms
(n = 82 – 89)
Completion of BT Forms
(n = 51 – 53)
Completion of 45 days, HWR and BT Forms
(n= 40 – 44)
Completion of both Intake and Exit Forms
(n = 79 – 84)

Source: Burke & Keaton 2007.
HWR = *Helping Women Recover* curriculum
BT = *Beyond Trauma* curriculum

to locate all women who had exited the program, 12-month follow-up data are not included in the SANDAG report.

Measurement Tools

To capture change over time, several standardized assessments were administered to the clients by the program staff. They are described below.

Sociodemographic characteristics. The San Diego County Alcohol and Drug Data System (SDCADDS) standardized survey form was used to gather information about the substance abuse histories of the clients, their races and ethnicities, and their current living situations. The AIDS/Hepatitis Assessment (AIDS/HEP) was used to assess their risk and status of infection.

Trauma. The Trauma Symptom Checklist (TSC-40; Elliott & Briere 1990) is a 40-item, self-reporting instrument that assesses symptomology in adults associated with childhood or adult trauma—in particular, with symptoms of posttraumatic stress disorder (PTSD). It consists of six subscales: Anxiety, Dissociation, Depression, Sexual Abuse Trauma Index (SATI), Sleep Disturbance, and Sexual Problems. Each symptom item is rated according to its frequency of occurrence over the prior two months, using a four-point scale ranging from 0 ("never") to 3 ("often"). Studies using the TSC-40 indicate that it is a relatively reliable measure (subscale alphas typically range from .66 to .77, with alphas for the full scale averaging between .89 and .91; Dunn, Ryan & Dunn 1994).

Depression. Characteristics and symptoms of depression were measured by the Beck Depression Inventory (BDI; Beck et al. 1961), a 21-item self-report rating inventory that measures characteristic attitudes and symptoms of depression. Internal consistency for the BDI ranges from .73 to .92, with a mean of .86, and with alpha coefficients of .86 and .81 for psychiatric and nonpsychiatric populations, respectively (Beck, Steer & Garbin 1988).

Criminal activity and current drug use. The Addiction Severity Index for females (ASI-F; SAMHSA 1999) was used to assess the criminal and mental health histories of the clients. The ASI measures the severity of drug and alcohol use and five related problem areas (family/social, legal, psychological, employment and medical).

Client satisfaction. At program exit, clients were asked to complete an anonymous survey, The Client Satisfaction Questionnaire (CSQ), regarding their opinions of the program. They were asked to place their surveys in a locked box that could be accessed only by one program staff member. Interviews also were conducted to assess client perceptions of the two curricula.

Participant Selection

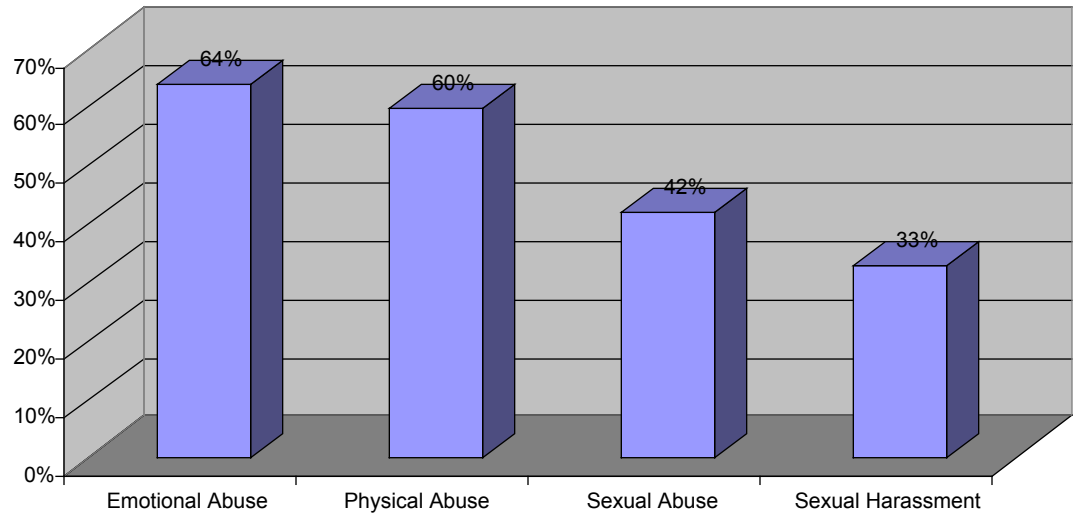
Women were referred to KIVA from various programs. According to the San Diego County Alcohol and Drug Data System (SDCADDS), about half the women were mandated to treatment—34% by the criminal justice system and 13% by the Department of Social Services, specifically Child Welfare Services. Forty-seven percent were described as self-referrals, and the other 6% were referred by other sources. These sources included another alcohol or drug treatment program, an employer/union, parole department, or other health care provider.

Between August, 2004, and October, 2006, two hundred and two women completed the first forty-five days of the program (orientation), which qualified them as study participants. Of these, 157 exited KIVA by October. Of the 157, 55% successfully completed KIVA, 36% exited with a satisfactory discharge, and 10% exited unsuccessfully. Data are not available for all the women who completed the KIVA program.

Participant Characteristics

Sociodemographic characteristics. The average age of the women entering KIVA was 30.1 years (ranging from 18 to 54 years old), and 79% had children under the age of 18. Of the 157 women who exited by October, 52% planned to bring their children with them to the program and 22%

FIGURE 1
Clients' Traumatic Experiences



reported being pregnant at the time of intake. Most of the women either had never been married (68%) or were divorced or separated (21%). Nine percent were currently married, and 2% were widowed at time of intake.

The KIVA population was ethnically diverse, with Whites composing approximately two-fifths of the group (41%), around one third (31%) identifying as Hispanic or Latina, and 18% as Black/African-American. Other (10%) races included American Indian, Asian, and "not specified."

In general, the women entering the KIVA program had few educational resources, lacked stable housing, and were underemployed. Forty-two percent of them had less than 12 years of education, and 44% had completed twelfth grade or obtained GEDs. Fourteen percent reported having some college experience (at least one year of college, an AA degree, or a bachelor's or higher degree).

Trauma-related symptoms. Seventy-eight percent of the clients reported experiencing some form of trauma in their lifetimes, perpetrated by either a stranger or someone they knew, and 61% had experienced more than one type of trauma. The level of trauma was measured by their self-reports of being physically abused (including threats and actual physical harm), sexually abused (including rape or nonconsensual sexual acts), and/or emotionally abused (including harsh words, humiliation, and manipulation); and of being sexually harassed (including stalking, coercive sexual contact, and inappropriate sexual contact) (N = 192-194; see Figure 1).

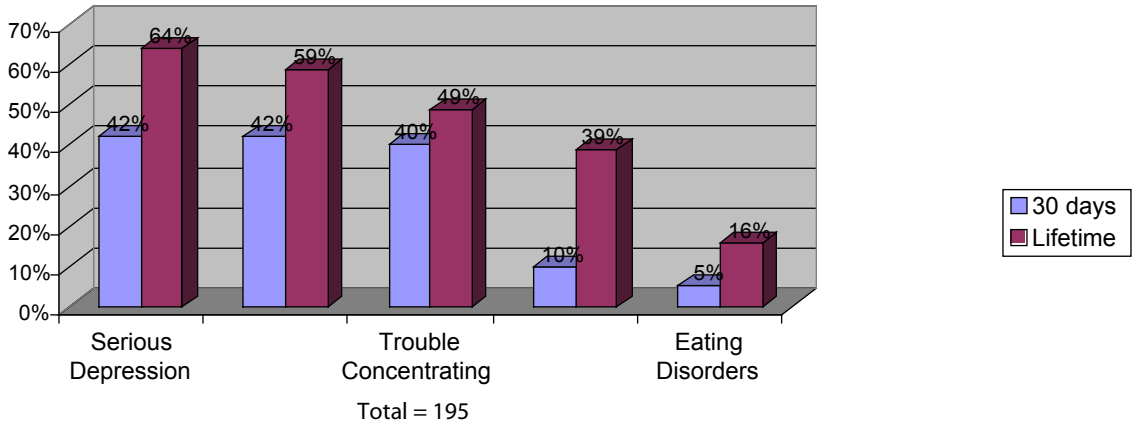
Clients were also asked to assess how affected they were by their traumatic experiences in the past thirty days. Nearly one third (30%) reported being troubled by the physical abuse they had experienced, 23% were bothered by the sexual abuse that had occurred, and less than one in five (15%) were currently upset about a rape or a sexual-harassment experience (13%).

Mental health. The majority of clients reported having suffered from depression and/or anxiety and having a history of various types of abuse. Specifically, 42% of the clients (two in every five) reported dealing with what they considered a significant level of serious depression in the past thirty days, and nearly two-thirds (64%) had experienced it in their lifetimes (N = 195; see Figure 2). A similar percentage reported suffering from anxiety—42% in the past thirty days and 59% in their lifetimes. In addition, many of the women had dealt with both anxiety and depression in the past—31% in the past 30 days and 51% in their lifetimes.

At intake, BDI scores for 20% of all study clients indicated that they currently were dealing with moderate to severe levels of depression; over one third (36%) were experiencing mild to moderate levels of depression. Consistent with these scores is the finding that nearly one third (32%) of the women had thought about suicide in their lifetimes and that 28% had actually attempted it.

Drug and alcohol usage. All the women entered the program with the goal of addressing their alcohol and/or drug addictions. A majority of the women (66%) identified methamphetamine as their drug of choice, and 10% identified marijuana/hashish as their drug of choice. The average age of first use of the primary substance was 18.1 (with a range of 7 to 42), and the women reported having the problem for an average of 10.1 years (with a range of 1 to 33 years).

FIGURE 2
Clients' Mental Health Experiences in the Past 30 Days and in Lifetime



Sixty-five percent of the women also reported having a problem with a secondary substance, with the most commonly reported substance being marijuana or hashish (45%). More than two thirds (68%) of the women had received some form of treatment for their addictions in the past.

Criminal history. Over half (55%) of the women were on probation or parole at the time of intake. Ninety percent had a prior arrest, with an average of 4.2 arrests (SD = 2.8). Of the 176 women (90%) with prior arrests, data from the ASI-F showed that the most common charge self-reported by the women was for drug-related offenses (61%), followed by burglary or larceny (54%). Other notable charges were for weapons offenses (9%) and prostitution (8%). This information was important when creating exit plans for the women, as a criminal history can restrict opportunities for employment, housing, and public assistance, which can place an additional burden on a woman who is trying to become self-sufficient.

Risky sexual behaviors. Thirty-six percent of the clients reported having sex in the 30 days prior to intake, and 73% of these reported not having used a latex condom/barrier. The mean number of sex partners in the past 30 days was 1.5 (ranging from one to six). The most commonly reported sexual behavior was having sex while they, or their partners, were "high" on alcohol or other drugs (67%), followed closely by having sex with someone who sometimes uses methamphetamine (63%). Forty-two percent of the women had sex with persons who were not their spouses or primary partners; 14% had sex with someone who injected drugs and 12% had sex for trade.

RESULTS

Trauma

The highest total score possible for the TSC-40 is 120, with a lower score indicating change in a positive direction. The TSC-40 was administered after the 45 day orientation period, at the completion of HWR, and at the completion of BT. Of the 41 women who completed all three assessments, the average score of the TSC-40 decreased significantly from 26.3 (SD = 20.4) at 45 days to a mean score of 19.3 (SD = 19.2) after completion of HWR; t (40)=2.908, $p < .01$. The scores continued to decrease to a mean of 17.5 (SD = 21.0) after completion of BT (see Figure 3).

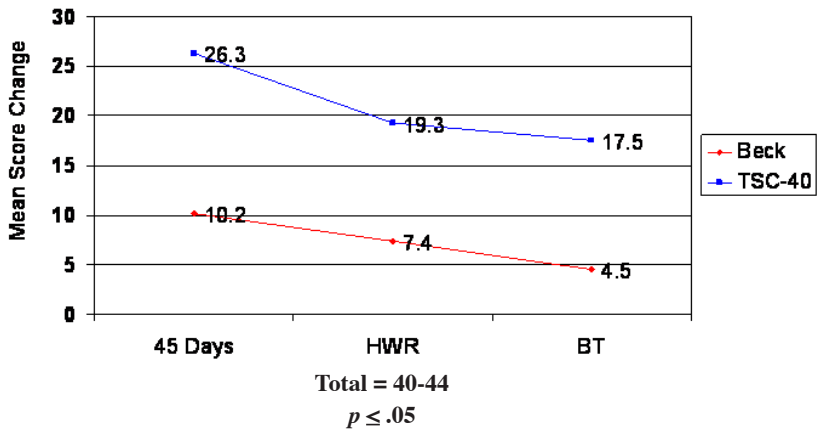
Two subscale scores showed significant improvement between the 45-day time point and the completion of HWR (see Table 2). The mean subscale score of depression was 6.1 (SD = 4.6) at the 45-day point and 4.3 (SD = 4.7) after completion of HWR; t (40)=2.806, $p < .01$. The mean subscale score of sleep disturbances was 6.3 (SD = 5.4) at the 45-day point. After the HWR intervention, mean sleep disturbances scores were 4.3 (SD = 4.7). This change was statistically significant; t (40)=3.057, $p < .01$.

Anxiety was significantly lower at 4.2 (SD = 5.4) than it was at 45 days (5.8, SD = 5.4) at the completion of BT. Dissociation was also significantly decreased, from a mean score of 4.8 (SD = 4.4) at 45 days to a mean score of 3.4 (SD = 4.1). Depression scores continued to improve with the completion of BT, dropping from 6.1 (SD = 4.6) to 3.8 (SD = 4.7). Sleep disturbances also significantly decreased, from a mean score of 6.3 (SD = 5.4) to 3.8 (SD = 4.5) at the completion of BT.

Depression

At program intake, the mean BDI score for the 186 study clients was 13.8 (SD = 9.3), which falls within the range categorized as mild depression. This score decreased significantly at 45 days to 10.4 (SD = 8.7); t (185)=5.711. In addition, scores for those clients who completed an assessment at 45 days, at completion of HWR, and at the end of BT showed significant decreases at completion of each

FIGURE 3
Client Assessment Scores Improve after Completion of HWR and BT



HWR: *Helping Women Recover* curriculum ; TSC-40: Trauma Symptom Checklist-40 scale;
BT: *Beyond Trauma* curriculum; Beck: Beck Depression Inventory
Source: Burke & Keaton 2007.

treatment component (see Figure 3). Specifically, there was a decrease in the mean score from 45 days (10.2, SD = 9.4) to the end of HWR (7.4, SD = 8.2); t (43)=2.380. The score continued to improve after participating in BT (4.5, SD = 6.4); t (22)=4.246.

Current Drug Use and Criminal Activity

Almost all (99%) of the KIVA clients *who successfully completed the program* reported remaining drug and alcohol free, as well as conviction-free, during the program. This was similar to the twenty-nine who completed a six-month follow-up, of whom 97% reported not having a new conviction and 72% reported not using any alcohol or other drugs since exiting the program. Lack of additional follow-up data precluded measurement of the long-term impact on substance abuse.

Client Satisfaction with KIVA, HWR, and BT

Fifty-four women completed the exit satisfaction questionnaire. Ninety-two percent rated their experiences at KIVA as being either "very positive" or "positive," and all the clients said they would definitely (94%) or probably (6%) recommend KIVA to other women they know who have similar issues. Clients overwhelmingly felt better about their emotional and physical health after participation in the program. Ninety-one percent stated that their emotional health had improved. Each of the women shared reasons why they felt positive about their experiences. They listed the opportunity to grow and become familiar with oneself (41%), support/unity (36%), the structure and the tools learned (16%), and being reunified with their children (7%) as having contributed to their experiences in the program. One participant reported on the CSQ, "I enjoy the things I've learned from KIVA and I have complete and total gratitude for all that I've lost, learned, and gained. The staff deserves to be commended. They take time out of their busy schedules to connect with the women here. They share their experiences, strength, and hope without judgment, conflict or confusion." Another reported, "It was the most positive experience I've ever had in my life. I'll take home everything I've learned and apply it to my everyday life." Others reported similar learning experiences:

- *Group Discovery*: Megan is a hard-working mother of six children. During her BT group, many deep issues were addressed. Through this experience, Megan learned that she was not alone and that she didn't have to go through that pain again. With grounding techniques and meditation exercises, she discovered how to focus on the here and now.
- *Overcoming Addiction*: Kelly is a 32-year-old heroin addict who had very few communication skills and who described herself as codependent. She felt that BT helped her to identify what trauma really is and how it has truly impacted her life. She now has coping skills to use instead of using drugs.
- *Taking Back Control*: Maria is a 44-year-old woman who had a thirty-year drug habit. She learned a lot about herself and about the trauma she had experienced in her life. She learned that even though she had trauma, she doesn't have to let it run her life or ruin it. She found it most useful to identify and understand the impact of trauma in her life as well as how to deal with it.
- *Recovery Through Expression*: Celeste, a twenty-two-year-old recovering addict, believed that confidentiality was an important part of the groups. She also said that

TABLE 2
Clients' Trauma Symptom Checklist (TSC - 40)

	Clients' TSC Subscale Scores Change after Completion of *Helping Women Recover* (HWR) and *Beyond Trauma* (BT)	
Subscale	**45 days to HWR**	**45 days to BT**
Anxiety	5.8 (SD=5.4) to 4.6 (SD=5.3)	5.8 (SD=5.4) to 4.2 (SD=5.4)*
Dissociation	4.8 (SD=4.4) to 3.9 (SD=4.3)	4.8 (SD=4.4) to 3.4 (SD=4.1)*
Depression	6.1 (SD=4.6) to 4.3 (SD=4.7)*	6.1 (SD=4.6) to 3.8 to (SD=4.7)*
Sexual Abuse Trauma Index	4.2 (SD=3.9) to 3.4 (SD=3.8)	4.2(SD=3.9) to 3.1(SD=4.2)
Sleep Disturbances	6.3 (SD=5.4) to 4.3 (SD=4.7)*	6.3 (SD=5.4) to 3.8 (SD=4.5)*
Sexual Problems	2.8 (SD=3.3) to 1.9 (SD=2.6)	2.8 (SD=3.3) to 2.2 (SD=3.9)

*Significant at $p < .05$ or lower

the meditations and collages made the patterns of her actions visually and emotionally obvious, which, in turn, allowed her to work through the issues she was struggling with.

When asked to name the aspects of HWR and BT that they found most useful, 54 women responded. The women stated that having a place to talk about their experiences, learning about trauma, and learning ways to heal were the most useful components of the BT program. Regarding HWR, they stated that learning ways to heal through the lessons, hearing the stories of other women, and finding out they were not alone helped them the most. Although some of the women questioned the usefulness of the homework exercises, more of the women felt that there was nothing wrong with the BT and HWR programs and did not identify anything as least useful.

DISCUSSION OF THE RESULTS

The analyses of the current study focused on changes made in the areas of trauma symptomatology, depression, and substance use. Results of the study suggest that the women experienced continued improvements in the areas of trauma symptomatology and depression over each time point (see Figure 3). The women's scores on the TSC-40 showed significant improvement at the completion of both HWR and BT. Examination of the six subscale scores (anxiety, dissociation, depression, sexual abuse trauma, sleep disturbances, and sexual problems) at the three points in time indicates that the combination of completing HWR and BT produces a stronger effect than if the client participated only in HWR. The greatest improvements were seen in the depression subscale and the sleep-disturbances subscale after completion of HWR. After completion of HWR and BT, there were also improvements in the anxiety and dissociation subscales. Because none of the women went through the BT program only, it is not possible to determine whether BT alone yields positive outcomes. Future studies may take this into account.

Analyses also show that there were clinically significant improvements for the women in the realm of depressive symptomatology as measured by the BDI, including in the first 45 day orientation phase. This is a period of stabilization for the women, with no formal treatment provided during this time, and women are encouraged to become familiar with the environment, address any outstanding administrative needs (e.g., reapply for benefits upon release from jail), and tend to their children (either helping them adjust to KIVA or starting reunification plans). This finding is consistent with the theory of trauma recovery put forth in the preceding article in this issue "Women and Addiction: A Trauma-Informed Approach," as well as other publications (Covington 1999, rev. 2008; 2007, 2003): that safety is the first stage of trauma recovery and creating a safe environment for women is imperative for the healing process. While not an expected outcome of the study, the initial decrease in depression suggests that there was clinical value in providing routine, boundaries, supportive staff members, and structure. In addition, the women who completed the assessments showed significant improvements in depressive symptoms at the completion of each treatment component (HWR and BT). Additional outcome measures included qualitative data related to client satisfaction with KIVA, HWR, and BT.

Limitations of the Study

The primary focus of funding for this project was service delivery, and research funds were limited. This created research limitations, including: having to rely on program staff members (who lacked research experience and who had other program responsibilities) to collect the data and to locate clients and conduct follow-up assessments; lack of a comparison group; utilization of a sample of convenience; and a small sample size. Efforts were made by the research staff to mitigate the impact of these limitations. To increase the integrity of the data set, the research staff reviewed case files and forms, created data-entry forms on Survey Monkey (an online data-entry service), created systems to assist the staff in keeping track of data time points, attended monthly meetings with the program staff to discuss issues, and provided written feedback to the staff about their forms. However, there was not the level of standardization that would have occurred if the data had been collected by

the research staff. As a result, there were issues with the standardization of data collected, amount of data collected, and qualitative data interpretation.

In addition, because the attrition rate from intake to exit provided a small sample of convenience, comprised of those clients who were available and agreed to participate, the data that were received should be viewed with caution. Not represented are those women who left the program prior to completion and those who attended the groups but did not complete the assessment forms.

CONCLUSION

Research has demonstrated that the greatest risks to addiction recovery are present in women with histories of victimization and/or trauma. As a result, interventions must approach such individuals with a dual purpose. Results from the study described above demonstrate the extent to which gender-responsive, trauma-informed services can make a difference in this endeavor. Women who completed *Helping Women Recover* and *Beyond Trauma* within a safe treatment environment demonstrated positive gains in the areas of symptoms associated with trauma and depression and were able to remain engaged in treatment while also maintaining their sobriety.

Although a strong foundation of research exists on what comprises successful treatment programs for women, integrated, gender-responsive, trauma-informed services have been developed only in the last ten years. The Women's Integrated Treatment (WIT) model is currently being further evaluated in several rigorous experimental studies funded by the National Institute on Drug Abuse. The preliminary findings show significant improvement among the women randomized to WIT compared to treatment as usual (Messina & Grella 2008). In addition to the *Helping Women Recover* and *Beyond Trauma* curricula, there are several other programs, including *Seeking Safety* (Najavits 2007) and *Trauma Recovery and Empowerment* (Harris 1998) that have been shown to be effective. All of these curricula stress the importance of integrating services for the dually diagnosed in order to help women understand and cope with the effects of abuse and other forms of trauma, acknowledge the special psychological needs of women, create supportive and therapeutic treatment environments, and provide women with knowledge and more effective coping skills that they can use in helping to facilitate their own recovery.

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