

Substance Abuse Treatment Outcomes in Women

Shelly F. Greenfield, MD, MPH

Associate Professor of Psychiatry, Harvard Medical School
Associate Clinical Director, Alcohol and Drug Abuse Treatment Program,
McLean Hospital, Belmont, Massachusetts

**A National Conference on Women, Addiction, and
Recovery: News You Can Use**

July 12, 2006

Women and Substance Abuse

Women with substance use disorders:

- Advance more rapidly from first use to regular use to first treatment episode
- Use smaller quantities of substances for fewer years
- Average more medical, psychiatric, and social consequences
- Now initiate their use of substances at an earlier age and at approximately the same age as their male counterparts

Women and Substance Abuse

Among the most reproducible research findings:

- **Heightened vulnerability** of women to adverse medical and social consequences (Chatham et al., 1999; Gentilello et al., 2000; Henskens et al., 2005)
- **Telescoping**: Women **advance more rapidly** than men from regular use to first treatment episode (Randall et al., 1999; Piazza et al., 1989)
- At treatment entry, with fewer years of use, women have **more medical, psychiatric, and adverse social consequences** than males (Randall et al., 1999; Hernandez-Avila et al., 2004)

Scope of the Problem

In 2004:

- More than **7.7 million** women had alcohol or drug dependence or abuse
- More than **15.1 million** used illicit drugs
 - More than **7.5 million** reported past *month* use
- More than **32.1 million** smoked cigarettes
 - More than **27.6 million** smoked in the past *month*

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004

Treatment Outcomes

Given the heightened vulnerability to alcohol and drug abuse and dependence, what do we know about women's substance abuse treatment outcomes?

Research Prior to 1990s

- Substance abuse treatment literature based on mostly male samples or mixed-gender samples; very little focus on gender differences
- Women often excluded from studies due to their childbearing potential or other factors
- Unclear if effective substance abuse treatments were fully generalizable to women
- Possibility that gender-specific issues might be relevant for treatment entry, retention, and post-treatment clinical outcomes

Research 1990-2006

- 1994: National Institutes of Health published Guidelines on Inclusion of Women and Minorities as Subjects in Clinical Research (FDA, 1994)
- Women and minorities to be included in Phase III clinical trials
- Since then, increased number of published reports examining substance abuse treatment for women

How Effective is Substance Abuse Treatment for Women?

- What do we know about women and the:
 - likelihood of **ever receiving** substance abuse treatment?
 - characteristics and barriers associated with **treatment entry?**
 - likelihood of substance abuse **treatment retention and completion**
 - **clinical outcomes** of substance abuse treatment?
- Do women's treatment outcomes differ based on **mixed-gender versus women-only treatment?**

Substance Abuse Treatment Outcomes in Women

- Highlights from a review of women and substance abuse treatment outcomes¹
- Colleagues in Gender Special Interest Group:
 - Audrey Brooks
 - Susan Gordon
 - Carla Green
 - Frankie Kropp
 - R. Kathryn McHugh
 - Melissa Lincoln
 - Denise Hien
 - Gloria Miele
- Supported by the Gender Special Interest Group of the Clinical Trials Network of the National Institute on Drug Abuse; DA 15434 and DA019855 (SFG) from NIDA
- ¹Greenfield SF, Brooks AJ, Gordon SM, Green CA, Kropp F, McHugh RK, Lincoln MF, Hien D, Miele GM: *Drug and Alcohol Dependence*, 2006 or online: <http://dx.doi.org>, doi:10.1016/j.drugalcdep.2006.05.012)

Interpretation of Current Research

- Women with substance use disorders are heterogeneous with respect to:
 - type of substance abused
 - presence/absence of co-occurring disorders, and if present, which ones
 - history of trauma
 - ethnicity, socioeconomic circumstances, educational attainment
 - presence of children
 - geography: region and urban/rural
- Problems with generalizability

How Much Do We Know?

- Literature search 1975-2005
 - Focus on **Adult Women and Substance Abuse Treatment Outcomes**
 - Excluded studies focusing only on pregnant women, criminal justice populations, adolescents, and nicotine dependence
 - Included studies of substance abuse treatment outcomes as primary focus of study; excluded descriptive studies
- Medline and PsycInfo databases
- Relevant subject headings (34)
- 3,110 articles
- 280 relevant articles
- 90% published 1990-2005
- Of these, 44% published since year 2000

Substance Abuse Treatment Outcomes

- Characteristics associated with outcomes in women for three stages of substance abuse treatment process:
 - Entry
 - Retention
 - Post-Treatment Clinical Outcomes
- Women-Focused vs. Mixed-Gender Treatment
- New Research on a Women's Recovery Group

(Greenfield et al., 2006)

WOMEN AND SUBSTANCE ABUSE TREATMENT ENTRY

Gender Disparities in Ever Receiving Treatment

- Fewer women represented in substance abuse treatment programs than expected
- Male : female ratio in substance abuse treatment facilities in 2002 2.3:1
- Male : female ratio of alcohol dependence 1.9:1
- Male : female ratio of any illicit drug dependence 1.5:1

(Brady and Ashley, 2005; SAMHSA, 2004)

Why are there Gender Disparities in Treatment Entry?

Women may:

- Define their substance-related problem as a problem with health or mental health or a family problem
- Seek care in non-alcohol specific settings such as mental health or primary care

Weisner, 1993; Mojtabai, 2005; Weisner and Schmidt, 1992)

Gender Disparities in Ever Seeking Substance Abuse Treatment

National Longitudinal Alcohol Epidemiologic Survey (NLAES) – a retrospective cohort study of 7,539 respondents with alcohol abuse/dependence:

- **Are there gender differences in likelihood of ever receiving treatment?**
 - 23% of men and 15.1% of women ever received treatment from physician, counselor, AA, other professional or substance abuse treatment
 - Differences depended on the number of years elapsed from onset of disorder
 - There was no gender difference in years 1-8
 - Between 8-25 years, men were 13-20% more likely to enter treatment (Dawson, 1996)
 - Difference also depended on severity of disorder; fewer gender differences in the most severe range
- **Findings of no gender difference in treatment entry in other studies have looked up to 8 years after onset of the disorder**
(Wu and Ringwalt, 2004; Timko et al, 2000)

Specific Barriers to Treatment Entry For Women

- Pregnancy
- Lack of childcare
- Economic barriers (e.g., women in entitlement programs; lack of insurance; other resources)
- Higher risk for certain co-occurring psychiatric disorders such as mood, eating, anxiety, and post-traumatic stress disorder
- Trauma histories
- Social stigma and discrimination

Are there Characteristics Associated with Treatment Entry in Women?

- Individual characteristics associated with treatment entry in women vary with the population:
 - **Increased chance of entry:** Alcohol dependence diagnoses only (Green et al, 2002; Weisner et al, 2001); increased severity of drug disorder; non-minority ethnicity ; age (older), education (higher), history of prior treatment (Weisner et al, 2001)
 - **Decreased chance of entry:** mental health conditions (Green et al, 2002)

Summary: Treatment Entry

- Probability of entering treatment for alcohol abuse/dependence is lower for women than men 25 years after onset
- Women are underrepresented in substance abuse treatment programs compared with gender ratio of prevalence of substance abuse in the population
- Women may preferentially seek care for substance use disorders in mental health or primary care settings
- Specific barriers exist for women
- Treatment entry associated with some individual characteristics; may vary population to population

WOMEN AND SUBSTANCE ABUSE TREATMENT RETENTION

Treatment Retention and Completion

- Longer treatment episodes and completion of treatment related to positive outcomes
- Older literature thought women would be more likely to drop-out
- Retention is defined as length of stay
- Completion is defined as finishing predetermined course of treatment
- Does treatment retention differ by gender?
- Recent studies: smaller clinical & larger population-based studies

Gender Differences in Retention?

Twelve smaller non-population-based studies:

- Five studies demonstrated women are *more likely* than men to drop out and not complete treatment¹
- Two studies showed women were *less likely* than men to drop out or not complete²
- Four showed *no gender difference* in retention or length of stay³
- One showed *complex relationship* between gender, treatment programming, and language spoken

¹Arfken et al., 2001; King and Canada, 2004; McCaul et al., 2001; Petry and Bickel, 2000; Sayre et al., 2002; ²Maglione et al., 2000; Hser et al., 2004; ³Fiorentine et al., 1997; Green et al., 2002; Mertens and Weisner, 2000; Veach et al., 2000; ⁴Condelli et al., 2000

Gender Differences in Retention?

Larger population-based studies have shown few or no gender differences in treatment retention:

- Study of 10,010 patients in 96 programs in 11 cities found program differences in retention rates but **few gender differences**
 - Men 20% less likely than women to stay >90days (Simpson et al., 1997)
 - Individual predictors included pretreatment depression, motivation, alcohol dependence, legal pressure, and cocaine use (Joe et al., 1999)
- Study of 26,047 patients in 87 programs in Los Angeles found low retention rates across programs (residential, methadone maintenance, outpatient drug-free) but **few gender differences**
 - Females more likely to complete 360 days of methadone tx and 180 days of outpatient drug free than males (Hser et al., 2001)
- Study of 4,689 patients in mixed gender and 1,239 patients in women-only treatment (public and private) found **no gender difference** in treatment completion (Brady and Ashley, 2005)

Characteristics Associated with Retention

- Gender itself may not predict substance abuse treatment retention
- Women's retention in substance abuse treatment associated with:
 - **Individual Characteristics**
 - **Program Characteristics**

Individual Characteristics Related to Treatment Retention

For both women and men:

- higher financial resources
- fewer mental health problems
- less severe-drug problem
- employment
- older age
- less use of emotional discharge
- referral from criminal justice¹

For women:

- higher income
- being married
- unemployment
- personal stability
- fewer family problems
- lower burden of health, mental health, social problems²

¹Galen et al., 2000; Green et al., 2002; Mertens and Weisner, 2000; Kelly et al., 2001; Kohn et al., 2002; Veach, 2000; Maglione et al., 2000; ²Mertens and Weisner, 2000; Brown et al., 1995)

Program Characteristics and Treatment Retention in Women

- Specific program characteristics may be associated with increased retention in women depending on the specific population of women (Brady and Ashley, 2005)
- Random assignment cocaine dependent women: Woman-focused intensive day-treatment had better retention than residential program for women with children or traditional day program (Roberts and Nishimoto, 1996)
- Within residential treatment, programs allowing mothers to have children with them have positive association with retention versus those that do not accommodate children (Hughes et al., 1995; Szuster et al., 1996)

Summary: Treatment Retention and Gender Differences

- Non-randomized clinical studies are inconsistent regarding association of gender with treatment completion and retention
- Larger population-based studies suggest gender is not a significant predictor of completion or retention
- However, predictors of retention do exist – some are gender-specific or vary by program type
- Among women, **individual characteristics** (e.g., psychological functioning, personal stability, and number of children) may be predictors of completion and retention
- **Gender-specific treatment programming** can enhance retention among certain subgroups of women (e.g., mothers in programs that allow participation with children)

WOMEN AND SUBSTANCE ABUSE POST-TREATMENT OUTCOMES

Post-Treatment Outcomes in Women

- Past assumptions were that women would have worse substance abuse post-treatment outcomes than men (e.g. drop out sooner, have less abstinence)
- Many recent studies have found few or no gender differences in post-treatment outcomes
 - Acharyya and Zhang, 2003; Alterman et al., 2000; Ballesteros et al., 2004; Benishek et al., 1992; Foster et al., 2000; Green et al., 2004; Greenfield et al., 1998; Hser et al., 2003; Jerrell and Ridgely, 1995; Marsh et al., 2004; McCance et al., 1999; McLellan et al., 1994; Rohsenow et al., 2000; Sterling et al., 2004; Toneatto et al., 1992; Wong et al., 2002

Gender Differences in Post-Treatment Outcomes

- Among studies finding a gender difference, adult women had better outcomes than men despite differences in populations targeted, type of treatment, problem drug, and treatment setting
 - Fiorentine et al., 1997; Henskens et al., 2005; Hser et al., 2005; Jarvis, 1992; Kosten et al., 1993; Kranzler et al., 1996; McKay et al., 2003; Rivers et al., 2001; Sanchez-Craig et al., 1991; Satre et al., 2004; Stephens et al., 1994; Timko et al., 2002; Weiss et al., 1997
- Women had better outcomes than men including:
 - Greater likelihood of cocaine abstinence at 6 months (Henskens et al., 2005; Weiss et al., 1997)
 - Greater improvements in all domains of ASI in methamphetamine abusers (Hser et al., 2005)
 - More decreased drinking over 5 years (Weisner et al., 2003)
 - More alcohol abstinence in older drinkers (Satre et al., 2004)

Gender Differences in Post-Treatment Outcomes

- Gender itself may not be a specific predictor of substance abuse treatment outcomes; however, a number of characteristics are associated with treatment outcome
- Some of these characteristics vary by gender and have greater impact on treatment outcomes for women:
 - Co-occurring psychiatric disorders
 - History of trauma
 - Effects of treatment retention and completion

Predictors of Outcome: Psychiatric Disorders

- Prevalence of co-occurring psychiatric disorders varies by gender (e.g. women have higher prevalence of mood, anxiety, PTSD, and eating disorders compared to men with substance use disorders)
- Presence of other psychiatric disorders has been shown to have a negative impact on substance abuse treatment outcome in many studies (Greenfield et al., 1998; Hasin et al., 1991, 1996; Hesselbrock, 1991; Kranzler et al., 1996; Mueller et al., 1994)
- Some studies have demonstrated gender differences in prognostic significance of co-occurring disorders (Benishek et al., 1992; Mann et al., 2004; Pettinati et al., 2000; Compton et al., 2003)

Predictors of Outcome: Psychiatric Disorders

- Studies with women-only samples have shown that those with co-occurring psychiatric disorders have more alcohol and drug relapses and are less likely to follow through with aftercare (Brady et al., 1994; Brown, 2000)
- Despite evidence that co-occurring disorders affect substance abuse treatment outcomes and that there is a higher prevalence of these disorders among women,
 - Few integrated programs and treatments are available for certain populations of women with co-occurring psychiatric and SUDS
 - There is limited research on effectiveness (e.g., eating disorders and SUDs; PTSD and SUDs)

Predictors of Outcome: Trauma

- History of sexual and physical abuse may be associated with worse post-treatment outcomes¹
- Impact of history of sexual abuse on outcomes may be moderated by
 - marital status
 - education
 - employment
 - co-occurring psychiatric disorders (Greenfield et al., 2002)
- Abuse history may be associated with different aspects of outcome, such as:
 - worse psychiatric symptoms
 - more psychiatric hospitalizations
 - increased use of outpatient services
 - increased problems related to drug use following treatmentbut not necessarily with missed substance abuse treatment sessions or drug and alcohol severity (ASI) scores (Pirard et al., 2005; Kang et al., 1999; Green et al., 2004)

¹Greenfield et al., 2002; Comfort et al., 2003; Kang et al., 1999; Messina et al., 2000; Fiorentine et al., 1999; Green et al., 2002; Green et al., 2004

Predictors of Outcome: Trauma

SAMHSA Women, Co-occurring Disorders & Violence Study

(multi-site, cooperative study; quasi-experimental; 1,023 women in comprehensive, trauma-informed, integrated treatment vs. 983 women in usual care)

- Some evidence that comprehensive integrated services may provide more effective treatment for women with co-occurring substance use and psychiatric disorders and histories of victimization¹
- Individual characteristics such as alcohol severity, mental health status, lifetime and current exposure to interpersonal abuse and other stressful circumstances predicted outcomes independent of intervention condition
- Sites where intervention condition provided more integrated counseling than comparison conditions demonstrated improved effects on mental health and substance abuse outcomes (Morrissey et al., 2005)
- Treatment condition (i.e., comprehensive trauma-informed services) demonstrate improved PTSD symptoms as well as improved drug use severity (Cocozza et al., 2005)

¹ Cocozza et al., 2005; Markoff et al., 2005; McHugo et al., 2005; Morrissey et al., 2005

Predictors of Outcome: Retention

- In treatment programs in Los Angeles, longer treatment retention was associated with drug abstinence in men and women (Hser et al., 2003)
- Study of older adults in outpatient alcohol treatment found that greater length of stay predicted abstinence for men and women (Satre et al., 2004)
- Study of two therapeutic communities with mostly African American patients with cocaine and heroin dependence found treatment completers had significant reductions in drug use and arrests
 - Overall, women benefited from longer residential treatment (Messina et al., 2000)
- Within a large HMO, at 7-month follow-up, women treatment completers (vs. women non-completers) were 9 times more likely to be abstinent in past month
 - Men treatment completers (vs. men non-completers) were 3 times more likely (Green et al., 2004)

Summary: Gender Differences in Treatment Outcomes

- Large body of evidence shows women benefit from substance abuse treatment
- Important characteristics associated with treatment outcomes vary among different subgroups of women
- In particular, co-occurring psychiatric disorders and histories of trauma vary by gender and may have a specific impact on substance abuse treatment outcomes in women
- Longer retention in treatment is also associated with improved outcomes among women

WOMEN-ONLY
VERSUS
MIXED-GENDER TREATMENT
AND SUBSTANCE ABUSE
TREATMENT OUTCOMES
IN WOMEN

Women-Only vs. Mixed-Gender Treatment and Outcomes

- Gender-specific treatment for women may refer to women-only programs or women-only interventions within mixed gender programs (Hodgins et al., 1997)
- Few randomized trials have compared women-only vs. mixed-gender programs

Rationale for Women-Only Treatment

- **Individual Differences and Preferences:**
Certain women with substance use disorders may prefer single-gender over mixed-gender settings (e.g., women with trauma histories)
- **Effects of Gender on Group Process:**
Short-term groups may have enhanced cohesion by homogeneity
 - Women cite preferences for women-only groups due to:
 - Enhanced freedom to speak openly
 - Gender composition's effect on group process
 - Decreased sex-role stereotyping
- **Gender-Specific Content:**
Certain topics may be of more interest to women (e.g., substance abuse and reproductive health, women's health, parenting and family relationships, etc.)

Women-Specific vs. Mixed-Gender Treatment and Outcomes

What are the effects of single gender treatment programs on outcomes for women?

- Meta-analysis of single gender treatment for women concluded it was effective, but strongest impact was on pregnancy outcomes along with psychological well-being and HIV risk reduction (Orwin et al., 2001)
- Across studies, only small improvements in alcohol and drug use (Orwin et al., 2001)
- Many studies describe program characteristics, but few studies in meta-analysis compared gender-sensitive or gender-specific treatment to mixed-gender programs

Women-Only (WO) and Mixed-Gender (MG) Treatment Programs and Outcomes

- Randomized first-time treatment to WO or MG: No difference in treatment refusals and attrition (Condelli et al., 2000)
- Random assignment of cocaine-dependent women and their infants to intensive specialized day treatment (WO) or traditional outpatient (MG): Overall retention rates higher in WO (Strantz and Welch, 1995)
- MG and WO treatment programs the same except for gender composition: No differences for treatment completion or retention (Bride, 2001)
- WO residential program (had childcare) vs. two different MG settings (residential and inpatient detox): No significant differences in outcomes; but women enrolled in WO had more severe histories (Copeland et al., 1993)

Women-Only (WO) and Mixed-Gender (MG) Treatment Programs and Outcomes

- Publicly funded WO and MG drug treatment programs: Women in single gender treatment averaged more days in treatment and more likely to complete treatment (Grella, 1999)
- Randomized controlled trial WO day treatment with gender-specific programming vs. each of three standard MG day treatment programs:
 - Total abstinence higher in hospital based MG program than the WO program
 - Hospital based program emphasized Minnesota model, implemented by multidisciplinary staff, had on-site medical personnel, cost twice as much per week as the WO program; small sample size (Kaskutas et al., 2005)

Women-Only Treatment and Relationship to Special Needs of Women

- Important function in addressing psychosocial needs (potential barriers) more common to some subpopulations of women with SUDs:
 - Childcare needs
 - Financial concerns
 - Support for pregnant women
 - Job training
 - Life skills training
 - Transportation
 - Assistance with transportation
 - Peer support
 - Special programming to minority women (e.g., Latinas, Native American women)
 - Programming for women with trauma

(Grella et al., 1999; Volpicelli et al., 2000; Hien et al., 2004)

Summary: WO vs. MG Treatment

- Studies comparing treatments differing primarily on the issue of gender have yielded mixed results
- Some women with substance abuse may perceive single-gender treatment more positively than mixed-gender treatment
- Greater success demonstrated by treatments that address problems/barriers more common to substance abusing women and treatments designed for specific subgroups of women
- Randomized studies necessary to assess treatment outcomes for women-only programs with gender-specific services compared with standard mixed-gender programming

STAGE I
RANDOMIZED CONTROL TRIAL OF
WOMEN'S RECOVERY GROUP (WRG)
VS.
MIXED-GENDER GROUP TREATMENT

The Women's Recovery Group Study: Stage I Behavioral Therapies Development Trial

Supported by the National Institute on Drug Abuse (R01DA 015434)

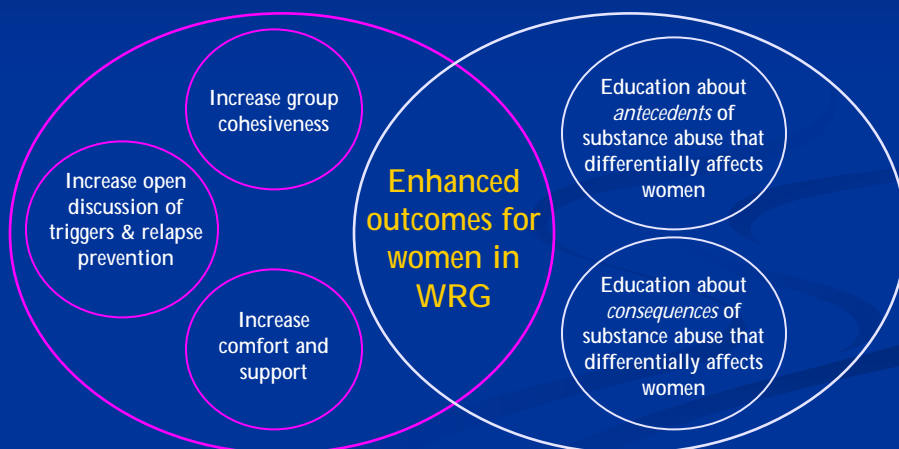
Research Questions:

- Is a single-gender women's recovery group for the treatment of women with substance use disorders feasible?
- Will a manual-based Women's Recovery Group have patient acceptability and satisfaction?
- Are there any differences in *12-week within-treatment* outcomes between single-gender WRG vs. mixed-gender control condition (GDC)?
- Are there any differences in *6 month post-treatment* patient outcomes between single-gender WRG vs. mixed-gender GDC?

Hypothesis Regarding Mechanism of Action

All women group composition

Woman-focused group content



Women's Recovery Group Study

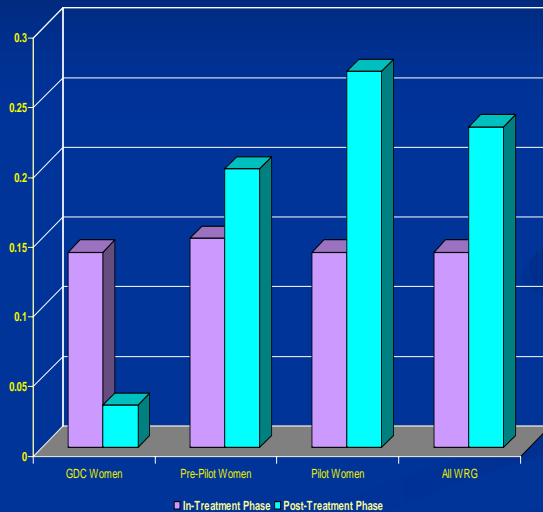
- Randomized controlled trial of manual based Women's Recovery Group (WRG) vs. standard mixed-gender Group Drug Counseling (N=16 vs. N=7)
- WRG used:
 - gender-focused content
 - all female group composition
 - weekly 90 minute structured sessions for 12 weeks
 - Follow-up monthly during 12-week treatment phase AND monthly during 6 months post-treatment follow-up phase
- Women enrolled were primarily white and well-educated; most with alcohol dependence and minority with drug dependence (e.g., cocaine and marijuana)

(Greenfield et al., Research Society on Alcoholism, June 2006)

Summary of Results

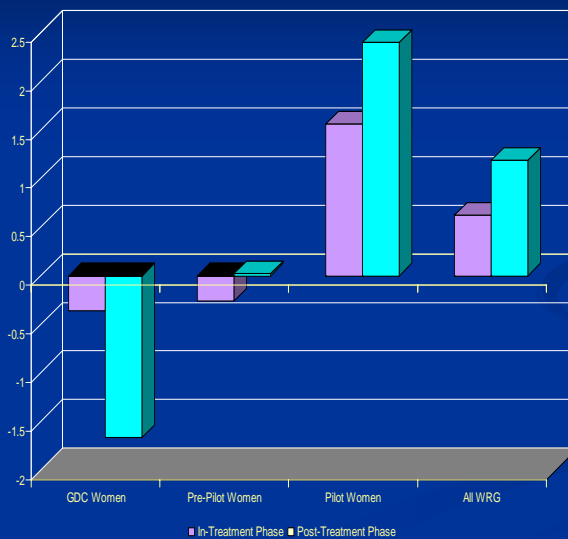
- Patient Satisfaction ratings for WRG exceeded mixed-gender GDC ($p < .009$)
- Days of any substance use and days of alcohol use decreased from baseline during the 12-week treatment phase and were not statistically significant between WRG and mixed-gender GDC
- **However, in the 6 month follow-up phase after treatment completion, alcohol use and severity scores continued to decline for WRG patients compared with GDC**

Average Reduction of ASI Alcohol Composite from Baseline



	Pr > t	Effect Size
GDC vs PPilot WRG In Tx	0.954	0.02
GDC vs Pilot WRG In Tx	0.999	0.00
GDC vs All WRG In Tx	0.982	0.01
PPilot WRG vs Pilot WRG In Tx	0.938	0.03
GDC vs PPilot WRG Post Tx	0.130	0.56
GDC vs Pilot WRG Post Tx	0.051	0.73
GDC vs All WRG Post Tx	0.063	0.69
PPilot WRG vs Pilot WRG Post Tx	0.442	0.29

Average Reduction of Drinks Per Drinking Day from Baseline



	Pr > t	Effect Size
GDC vs PPilot WRG In Tx	0.841	0.07
GDC vs Pilot WRG In Tx	0.277	0.40
GDC vs All WRG In Tx	0.596	0.20
PP WRG vs Pilot WRG In Tx	0.202	0.48
GDC vs PPilot WRG Post Tx	0.294	0.39
GDC vs Pilot WRG Post Tx	0.031	0.81
GDC vs All WRG Post Tx	0.120	0.58
PP WRG vs Pilot WRG Post Tx	0.090	0.63

Summary of Results - continued

- Patterns of greater declines in post-treatment follow-up in WRG vs. GDC in
 - days of any substance use (not statistically significant with medium effect size)
 - decrease in drinks/drinking day (statistically significant $p=.031$ with large effect size)
 - Decrease in drinking days (trend to significance $p=.053$, with medium effect size)
- Greater improvement in ASI alcohol composite scores over baseline in WRG vs. GDC in 6 month follow-up (trend to significance, $p=.051$, with medium effect size)

Conclusions from WRG Study

- The Women's Recovery Group is a manual-based group therapy for women with substance use disorders
- WRG is feasible and acceptable with high satisfaction (satisfaction scores greater than mixed-gender GDC)
- In a small pilot study, WRG produced reductions in substance and alcohol use within treatment equivalent to GDC; however,

sustained improvements in substance use in the 6-month post-treatment phase were greater in WRG compared with mixed-gender GDC

What Haven't We Discussed?

- Gender and ethnicity interactions
- Adolescent girls
- Pregnant women
- Women in the criminal justice system
- Specific subgroups of women with co-occurring psychiatric disorders
- Effectiveness of single-gender treatment for women in mixed gender treatment programs

Summary

- Nearly 90% of studies investigating gender differences in treatment outcomes were published since 1990
- Women with substance use disorders appear to be less likely to enter substance abuse treatment over the lifetime
- Complex socio-cultural and socioeconomic factors are associated with women's treatment entry
- Addressing increased need among women for certain ancillary services (e.g., childcare, perinatal treatment, family and job services) may enhance access to treatment for many women

Summary

- Gender is not necessarily a predictor of retention, completion or post-treatment outcome
- Older literature indicating worse treatment outcomes for women than men not upheld by research of the last 15 years
- Certain characteristics associated with treatment retention and post-treatment outcomes may vary by gender (e.g., psychiatric symptoms, socioeconomic status, employment, educational attainment, social stability, childcare responsibilities)

Areas of Focus for Research

- Stage I trials of new therapeutic interventions for specific subpopulations of women
- Rigorous testing of gender-specific interventions in randomized clinical trials
- Studies that compare gender-specific interventions in single-gender and mixed gender settings
- Testing of combinations of diverse therapeutic modalities plus ancillary services for sub-groups of women
- Treatments for subpopulations with specific needs: older women, adolescent girls, women with co-occurring eating and substance use disorders