THE EFFECTS OF THERAPEUTIC ALLIANCE AND CLIENT READINESS TO CHANGE ON COGNITIVE BEHAVIOR THERAPY TREATMENT OUTCOMES FOR A SAMPLE OF SUBSTANCE AND NON-SUBSTANCE ABUSING PSYCHIATRIC INPATIENT WOMEN

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ABSTRACT

Inpatient women with psychiatric and substance abuse problems have higher rates of relapse and non-compliance with medication and treatment, and poorer treatment prognoses and general outcomes, compared to their non substance-abusing counterparts (Kavanagh & Mueser, 2007). The present study examined whether therapeutic alliance and client readiness to change that are known to predict improved treatment outcomes predict better treatment outcomes among women with or without a substance abuse history that are receiving acute psychiatric inpatient treatment. This study examined the hypothesis that women with comorbid substance abuse problems receiving cognitive-behavioral therapy (CBT) on an acute inpatient unit would benefit more from high readiness to change and therapeutic alliance than their counterparts without comorbid substance use problems. The sample consisted of 117 women receiving concurrent CBT and pharmacotherapy treatment on an acute inpatient unit at a major metropolitan hospital. Self-report measures of therapeutic alliance, psychological functioning, and alcohol and drug abuse were administered within 72 hours of their admission, every 7 days post admission date, and 24 hours prior to discharge. Repeated measures analysis of variance and multiple regression analyses were conducted to examine the relationship between alliance, motivation, treatment group, and psychological functioning at discharge. Results indicated that women in both treatment groups made significant improvements in psychological functioning from admission to discharge. Also, high levels of readiness to change at admission and high levels of therapeutic alliance at discharge were linked to better overall psychological functioning at discharge for both treatment groups. The hypotheses previously mentioned were not supported, that is, the
two groups did not statistically differ in the relationship between alliance, readiness to change, and treatment outcomes. Findings from this study suggest that women with comorbid substance use disorders experiencing more acute psychological distress at admission seemed to benefit from an intensive, supportive, and structured CBT inpatient program just as much as their counterparts without a comorbid substance use problem. Similarly, alliance and readiness to change do play a significant role in improving outcomes for women after an acute psychiatric inpatient hospitalization, despite having a substance abuse history. More studies are needed to examine the link between alliance, readiness to change, and treatment outcomes in order to promote recovery by providing the most effective treatment for patients with and without a substance abuse history.
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CHAPTER I

INTRODUCTION

*Cognitive Behavior Therapy*

Cognitive behavior therapy (CBT) has been identified as one of the leading therapeutic treatments for a number of psychological disorders, including but not limited to, substance abuse, depression, anxiety, eating disorders, obsessive compulsive disorder, schizophrenia and comorbid diagnoses (Barlow, 2001; Beck, Wright, Newman, & Liese, 1993; Carroll, 2004). CBT has been found to be efficacious and has enduring effects, that is, CBT has properties that function as a prophylactic for some of the above mentioned disorders (Hollon, Stewart, & Strunk, 2006). For example, CBT reduces existing symptoms and the risk of relapse for panic disorder (Craske & Barlow, 2001), obsessive compulsive disorder (Foa et al., 2005), and post traumatic stress disorder (Foa, Rothbaum, Riggs, & Murdock, 1991), and it also offers depressed patients immediate symptom relief (Hollon, DeRubeis, Shelton, Amsterdam, & Salomon, 2005). The primary mechanisms of change identified in CBT include identifying triggers, challenging negative automatic thoughts, behavioral self control, problem solving, social skills training, and relapse prevention (Beck, 1995).

In addition to the effectiveness of CBT for numerous psychological disorders, CBT also has additive and synergistic interactions with pharmacotherapy (Segal, Vincent, & Levitt, 2002) and is compatible with other models of therapy, for example,
motivational enhancement (Holtforth & Castonguay, 2005) and mindfulness (Teasdale et al., 2000). These combined benefits make CBT one of the most widely practiced behavioral interventions in outpatient settings with adults (Barlow, 2001). For example, Keller and colleagues (2000) conducted a randomized controlled study comparing the effectiveness of concurrent CBT and pharmacotherapy with two other treatment conditions: CBT alone and pharmacotherapy alone for 519 patients diagnosed with major depression. The results revealed that the CBT treatment condition combined with pharmacotherapy had superior and enduring effects than did each treatment provided in isolation. More specifically, approximately 85% of patients receiving combined treatment had a positive response rate by session 12, compared to 50% for each monotherapy group. Also, the concurrent treatment provided relief as early as by the 4th session and these effects were maintained throughout the 12 weeks of treatment. Therefore, it appears that each treatment provides independent treatment effects. For instance, the medications help provide immediate symptom relief which, in turn, enhances treatment experiences of CBT (Segal et al., 2002).

*Cognitive Behavior Therapy for Inpatient Populations*

In contrast to the well established evidence of CBT efficacy on an outpatient milieu, there are limited randomized control studies that validate the efficacy of CBT in hospital settings in the US (Wright, Thase, & Sensky, 1993). However, several European studies confirm the clinical efficacy of CBT on inpatient units (Turkington, Kingdom, & Weiden, 2004). For example, Drury, Birchwood, and Cochrane found that patients at a major hospital in the UK, who were diagnosed with schizophrenia and received cognitive
therapy, reported decreased positive symptoms of schizophrenia during their stay on an inpatient unit and some of these benefits were maintained when followed up five years later, compared to patients who received a supportive recreational program. However, this finding should be interpreted with caution because of the high attrition rate at the follow up (Drury, et al., 2000). In addition, Veltro et al. found that the application of a cognitive behavior group therapy on an inpatient unit, with patients diagnosed with schizophrenia and mood disorders, was associated with decreased rates of hospital readmission, compulsory readmission, and increased patient satisfaction on the unit (Veltro, et al., 2006). A few naturalistic observational studies have been conducted in the US, which show a link between CBT and decreased patient symptomatology at discharge (Masters, 2005; Stuart, & Bowers, 1995). Whisman and colleagues found that 55 patients diagnosed with depression receiving CBT during inpatient stay reported less hopelessness and fewer cognitive distortions, and subsequently improved readiness for outpatient treatment (Whisman, Miller, Norman, & Keitner, 1991). These and several other studies (Miller, Norman, & Keitner, 1989; Page & Hook, 2003; Tarrier et al., 2004) provided the preliminary foundation for the increased implementation of CBT on inpatient units in the US.

Cognitive behavior therapy is particularly promising for hospital settings because it is a cost-effective treatment and reduces the length of hospital stays as mandated by managed care (Page & Hook, 2003). Moreover, cognitive behavioral techniques can be implemented by the entire multidisciplinary treatment team. For instance, cognitive interventions implemented by the individual therapist can be reinforced throughout the
day by psychiatrists, nurses, mental health workers, and other staff, ensuring that the patient gets a comprehensive treatment to stabilize for discharge and continued outpatient treatment. This type of treatment also puts emphasis on psychoeducation and learning techniques that involve challenging maladaptive thoughts and behavior with the ultimate objective of teaching the patients to take charge of their lives upon discharge (Durrant, Clarke, Tolland, & Wilson, 2007; Stuart, Wright, Thase, & Beck, 1997; Wright et al., 1993). More importantly, by combining CBT with medications on an inpatient unit, several symptoms are addressed simultaneously. For example, medications alleviate the loss of appetite and insomnia, while psychotherapy addresses hopelessness and suicidal ideation in majorly depressed patients, thus alleviating more symptoms in less time (Wright, 1996). This is especially vital because hospitalized patients are more likely to suffer from more acute and severe psychopathology, impaired social support networks, be diagnosed with multiple comorbid disorders, and have an overwhelming sense of helplessness and hopelessness (Wright et al., 1996).

Traditionally, the primary mode of treatment on an acute psychiatric unit has been exclusively pharmacotherapy. However, more recently, research has found that cognitive behavior individual and group psychotherapy are effective adjuncts to pharmacotherapy to treat patients with acute psychiatric symptomatology through enhancing coping strategies, cognitive restructuring, and reality testing (Tarrier et al., 2004). In addition, some of the benefits of CBT on an inpatient unit, especially in a short term acute psychiatric unit, include primary emphasis on problem identification, problem solving, and coping skills. Cognitive behavior therapy groups are open-ended and each group
focuses on learning a new coping skill (Wright, 1996). Finally, CBT may be administered using a standardized manual which permits the therapy to be replicated in a valid and efficacious manner across various formats and diverse populations (Thase & Wright, 1991; Wright, 1996).

**Comorbidity with Substance Use Disorders**

Over the past decade there has been an alarming increase of patients diagnosed with comorbid substance abuse and psychological disorder (Kay-Lambkin, Baker, Lewin, 2004), and one in every two comorbid patients who utilize emergency services are admitted to inpatient units (SAMHSA, 2006). In this current study comorbidity will be restricted to patients with a mental illness and a concurrent substance use disorder. The comorbidity of substance abuse and mental illness is not a new phenomenon, yet it is only within the past few years that researchers have begun to fully examine its prevalence and courses of illness for treatment. According to the 2007 National Survey on Drug Use and Health (NSDUH), 5.4 million of the US general population met diagnostic criteria for comorbid psychiatric and substance use disorders (SAMHSA, 2006). Furthermore, the prevalence of drug and alcohol use among persons with mental illness was higher (28%) than among persons without mental illness (12.2%) (OAS, 2008). These staggering statistics indicate that comorbidity is more a rule rather than an exception in both outpatient and inpatient settings (Kay-Lambkin, et al., 2004). A few of the common mental illnesses that co-occur with substance abuse are schizophrenia, antisocial personality disorder, and conduct disorder among men (Mueser, Bellack, & Blanchard, 1992; Mueser, Crocker, Frisman, Drake, Covell, & Essock, 2006) and bipolar, anxiety,
depression, eating disorder, and post traumatic stress disorder among women (Alexander, 1996; Rosenthal & Westreich, 1999). The high prevalence rate mentioned above is further evidence that comorbidity has developed into one of the most urgent problems facing the mental health inpatient and outpatient systems in the 21st century.

The heterogeneous courses, increased prevalence, and worse outcomes associated with co-occurring substance use disorders are important and complex issues to be addressed, because they can lead to a lifetime of suffering for the patient (Brown, Ridgely, Pepper, Levine, & Ryglewicz, 1989). For instance, evidence exists that substance abuse exacerbates psychiatric illnesses (Brady, Anton, Ballenger, Lyduard, Adinoff, & Selander, 1990), and vice versa (Velasquez, Carbonari, & DiClemente, 1999), and having one addiction increases the risk of having another (Mueser et al., 1992). Furthermore, comorbidity is typically associated with poor treatment outcome due in part to the following factors that precede or are concurrently exhibited by these patients: a much severer course of both illnesses (Drake, Mueser, Clark, & Wallach, 1996; Hanson, Kramer, & Gross, 1990); increased suicidal ideation and attempts (Mueser, et al., 1992; Osher & Kofoed, 1989); higher rates of hospitalizations and re-hospitalizations (Drake & Wallach, 1989); increased exposure to environmental stressors, such as homelessness (Caton, Wyatt, Felix, Grunberg, & Dominguez, 1993); violence (Lindquist & Allebeck, 1989); incarceration (Mueser et al., 2006); sexual and physical abuse (Fullilove et al., 1993); prostitution (Dore, Doris, & Wright, 1995); financial problems and family burden (Drake, Osher, & Wallach, 1989); and other medical complications, such as exposure to HIV/AIDS, Hepatitis B, and C (Essock et al., 2003). Also, drug and alcohol use
compromises the efficacy of psychotropic medications and increases the risk of pharmacological abuse (Kessler, 2004; Kranzler & Rosenthal, 2003).

The above mentioned worse outcomes for comorbid patients are coupled with their poor overall treatment compliance, which includes dropping out of treatment prematurely, and noncompliance with medication regimens (Mueser et al., 1992). For instance, Owen and colleagues (1996) found that at the 6-month follow-up, male and female patients with comorbid schizophrenia and substance abuse were 8.1 times more likely to be non compliant with their medication regimen, compared to those patients without substance abuse (Owen, Fischer, & Booth, 1996). Furthermore, patients with comorbid schizophrenia and substance abuse are at an increased risk of suicide attempts if they prematurely drop out of treatment (Mueser et al., 1992). Therefore, there are substantial clinical implications in favor of retaining comorbid patients in treatment because results have shown a significant positive relationship between treatment retention, symptomatic improvement, and patient functioning (Zweben & Zuckoff, 2001).

Due in part to the chronicity and exacerbation of symptoms comorbid patients have been regarded as more problematic during treatment and have been labeled as “unmotivated, unrewarding and unattractive persons who not only resist treatment when it is offered but also do not respond well to services that are available” (Hanson, et al., 1990, p. 110). All these factors combined can lead to a poorer treatment outcome for patients with a comorbid substance use disorder when compared to patients without comorbidity, who may be more likely to remain in treatment and have a better chance of treatment success (Kessler, 2004).
**Women and Comorbidity**

An estimated 48% of 4 million adults in the US with comorbid mental illness and substance abuse are women and these women are frequently admitted to psychiatric hospitals throughout their lifetime (SAMHSA, 2004). Unfortunately, much of the existing treatment research on mental illnesses and substance abuse disorders has been focused on men, and very little is known about treatment effects for women and whether gender differences exist in response to treatment (Alexander, 1996). When this gap in the research was identified in the early 1990s, a proliferation of research ensued. For example, Gilman and Abraham (2001) conducted a longitudinal study exploring the gender differences in the onset and course of major depression and alcohol dependence using the Epidemiologic Catchment Area data set. The results staggeringly revealed that women with major depression were seven times more likely to develop alcohol dependence, while men with major depression did not show increased risk.

One of the explanations for comorbidity in women is a history of sexual abuse, physical abuse, and other forms of victimization before their 18th birthday, that is less prevalent for their male counterparts. This history of victimization may be related to drug or alcohol use as it is believed to lessen the pain of the trauma (Alexander, 1996; RachBeisel, Scott & Dixon, 1999). In addition, alcohol and drug use increases the risk of repeated victimization, thus more likely perpetuating the cycle of abuse and substance abuse among some women (Kilpatrick, Resnick, Saunders & Best, 1998). This is not to say that all women with abuse histories resort to drug and alcohol abuse, but a majority of
women with comorbid substance abuse and psychiatric illness have a history of physical and/or sexual abuse (Fullilove et al., 1993).

Women diagnosed with comorbid substance use disorders are more likely to experience more severe psychiatric problems, unemployment, addiction to more severe drugs, such as cocaine and heroin, rapid progression from use to dependence, more emotional stress, stigma, and ridicule from society for their substance abuse, compared to their male counterparts (SAMHSA, 2004). These women are also less likely to enter treatment because of the stigma, discrimination, lack of emotional support, fear of being arrested for charges of child neglect or endangerment, prostitution, drug sale and possession, and difficulties finding long term child care (Greenfield et al., 2007). In addition, trauma histories with men also make a mixed gender treatment program less desirable for women (Brady & Ashley, 2005; Greenfield et al., 2007; Sun 2006). As a result of these barriers, women are less likely than men to have received treatment for alcohol and drug dependence and the women who eventually seek these specialized treatments have more severe problems than men, suggesting a delayed treatment utilization effect (Alexander, 1996; Finkelstein, 1994). Therefore, women appear to be at a greater disadvantage for having a comorbid substance use disorder than men.

Sun (2006) and Alexander (1996) reviewed numerous studies published over the years on women and comorbidity. Although there were suggestions related to enhanced treatment, few of these studies reviewed were empirically based and thus more empirical studies with sound research designs are needed to expand our limited knowledge.
Consequently, this present study will focus exclusively on women with the aim of enhancing treatment outcome for this population.

**Cognitive Behavior Therapy and Comorbidity**

Cognitive behavior therapy has been found to be efficacious to improving overall treatment outcomes and quality of life for patients with comorbid substance abuse and psychiatric illnesses in outpatient settings. For instance, Bellack and colleagues (2006) randomly assigned 175 patients, diagnosed with drug dependence and severe and persistent mental illness to either a manualized behavioral or supportive counseling group. The results revealed that the manualized behavioral group was more effective in retaining patients, increasing participation, and decreasing drug use during 6 months of treatment compared to the supportive counseling group. There were also significant after treatment effects for the behavioral group 3 months post discharge, such as inpatient admission (both psychiatric and substance abuse) decreased from 29.5% to 6.5%, decreased reports of arrests, and increased quality of living (finances, housing, clothing); while there were no changes observed for the supportive counseling group in these areas (Bellack, Bennett, Gearon, Brown, & Yang, 2006). Likewise, Barrowclough et al. conducted a randomized control study to evaluate the effectiveness of a 9-month integrated manualized CBT, motivational interviewing program on treatment outcomes for comorbid patients, with schizophrenia and alcohol abuse and dependence. The results showed a reduction in positive psychotic symptoms and an increase the number of days abstinent from drugs.
In spite of these promising results, prior research has focused on the specific cognitive behavioral techniques as mechanisms of change; however, utilizing these skills in the absence of a strong therapeutic alliance and patient readiness to change may not result in these same promising results (Krupnick et al., 1996; Morgan, 2006; 1994; Zweben & Zuckoff, 2002). In fact, therapeutic alliance and patient motivation have been identified as the common and primary mechanisms for change for therapeutic interventions (Horvath 2001; Mueser et al., 1992; Wolfe & Goldfried, 1988), including but not limited to CBT (Holtforth & Castonguay, 2005). Alliance and motivation may be especially important for female comorbid patients because some of these patients may have been disrespected, demoralized, degraded, in and out of several treatments without success, and have lost hope in the treatment system (Alexander, 1996; Sun, 2006). Therefore, they may enter treatment programs with significant feelings of helplessness and hopelessness. As a result, alliance and readiness to change may become necessary precursors for technical interventions through which positive treatment outcomes can be achieved (Horvath, 2001; Kavanagh & Mueser, 2007; Mueser et al., 1992).

**Therapeutic Alliance and Treatment Outcome**

Therapeutic alliance in CBT refers to the collaboration between therapists and patient with regards to goals and tasks. It encompasses “positive affective bonds between patient and therapist, such as mutual trust, liking, respect, and caring. Alliance also encompasses the cognitive aspects of the therapy relationship; consensus about, and active commitment to, the goals of therapy and to the means by which these goals can be reached” (Horvath & Bedi, 2002, p.41). In the literature, at least two meta-analytic
studies evaluated the impact of alliance on treatment outcomes (Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000). Horvath and Symonds analyzed over 24 studies and found a moderate but consistent effect size of .26 between alliance and psychotherapy outcome. More recently, Martin and colleagues also found a positive correlation of .22 between alliance and treatment outcome across 68 studies. These results underscore the importance of the therapeutic alliance as a vehicle for change, with more of the variance in outcome attributed to alliance than to the treatment method (Krupnick, et al., 1996). More so, researchers found that a less than satisfactory therapeutic relationship resulted in poor outcome (Burns & Auerbach, 1996; Horvath & Symonds, 1991).

The positive relationship between therapeutic alliance and treatment outcome has been found for patients diagnosed with depression (Krupnick et al., 1996), addictive disorders (Beck et al., 1993;), eating disorders (Gallop et al., 1994; Loeb, et al., 2005), and schizophrenia (Svensson & Hansson, 1999), and these findings are consistent in both inpatient (Clarkin, Hurt, & Crilly, 1987; Lieberman, Rehn, Dickie, Elliott & Egerter, 1992) and outpatient settings (Horvath, 2001; Horvath & Luborsky, 1993; Horvath & Symonds, 1991; Krupnick et al., 1996). Meier et al. reviewed numerous articles on drug abuse and retention over a span of 20 years, and they found that a positive therapeutic alliance is predictive of treatment retention, completion, and improvements in drug use outcomes (Meier, Barrowclough, & Donmall, 2005). Patients with weak alliances dropped out of treatment much sooner than patients with strong patient-therapist alliances (Meier, Donmall, McElduff, Barrowclough, & Heller, 2005).
Some researchers have criticized the manual-based approach to CBT, in that it is less likely to facilitate a positive therapeutic relationship between patient and therapist (Addis & Krasnow, 2000). However, numerous researchers have contradicted this argument with substantial evidence that therapist adherence to the techniques of manual based treatment does not hurt but aids the development of a positive relationship (Addis, Wade & Hatgis, 1999; Carroll, Nich & Rounsaville, 1997; Wilson, 1998). There is data to suggest that CBT can facilitate a stronger therapeutic alliance because of the delivery of "active ingredients" in CBT, such as psychoeducation, cognitive restructuring, and behavioral modification (Carrol, 1999). For instance, CBT focuses on the patient’s current distress in order to provide immediate symptom relief by teaching coping skills to effectively manage a broad spectrum of problems. Also, there is a continuous collaboration and partnership with the patient regarding goals and tasks, not to mention the psychoeducational component that emphasizes teaching skills to manage daily struggles outside of the therapy room. Collectively, these behavioral techniques can empower the patient and increase self efficacy and motivation to transition from maladaptive to more adaptive behavior (Newman, 1997). In fact, the sessions that are focused on skill development were rated as having a more positive therapeutic alliance (Carroll, Nich, & Rounsaville, 1997). In addition, Raue, Goldfried, and Barkham (1997) assessed the quality of alliance of 57 patients diagnosed with major depression. Each patient was randomly assigned to receive 16 sessions of CBT or psychodynamic interpersonal therapy. Of the two, cognitive behavior therapy sessions were rated to have higher alliance, indicating a “greater degree of empathy, congruence, interpersonal
contact, and use of more supportive communication than psychoanalytic therapy” (p. 586).

Establishing a therapeutic relationship with substance abusing patients can be difficult when compared to establishing it with non substance-abusing psychiatric patients. For example, Clarkin et al. found that hospitalized patients with substance abuse disorders had the poorest alliance, as well, as the poorest outcome (Clarkin, Hunt, & Crilly, 1987). It may be because patients with comorbid mental illness and substance abuse report unsatisfactory relationships with their friends and family and typically have poorer interpersonal social skills, which are the principal foundations for establishing and maintaining any meaningful social relationships, including therapeutic relationships (Padgett, Henwood, Abrams, & Drake, 2008). Patients with comorbid disorders often do not enter treatment voluntarily, and if they do enter treatment, they do so with an intense sense of hopelessness and helplessness. Thus, patients may view the therapist as part of the “system” and not as an ally, and have a difficult time believing that the therapist cares about them. In addition, some patients may be involved in criminal activities and, therefore, invested in secrecy.

Despite the above mentioned formidable tasks, working with comorbid patients requires a primary focus on the therapeutic alliance to foster engagement and retention, thereby ultimately increasing the likelihood of achieving a good outcome (Connors, et al., 1997; Meier, et al., 2005). For instance, De Weert-Van Oene et al. found that the therapeutic alliance accounted for 8% of the unique variance in treatment retention and outcome for inpatient substance abusers (De Weert-Van Oene, et al., 2001). In addition,
Petry and Bickle (1999) conducted a study with 114 patients diagnosed with mental illness and opioid dependence. These patients received methadone and behavioral therapy treatment for a period of 4 months. The results indicated that 75% of patients with moderate to severe psychiatric symptoms were more likely to complete treatment if they had a strong therapeutic alliance. Similarly, it is expected that establishment of a therapeutic alliance will be useful when working with both single- and dual-diagnosis inpatient women.

In addition to the noted difficulties of establishing a therapeutic relationship with comorbid patients, there is also difficulty establishing and maintaining an effective therapeutic relationship with briefly hospitalized patients (Allen, Deering, Buskirk, & Coyne, 1988). To address this concern, Lieberman and colleagues evaluated the effects of therapeutic alliance on outcome during acute psychiatric hospitalization. They found that a strong therapeutic alliance with the treatment team, specifically related to shared goals and expected benefits of hospitalization, were associated with symptomatic improvement at discharge (Lieberman, et al., 1992). There is evidence that patients also identify the patient-staff relationship as one of the most important component to their inpatient treatment (Hansson, Bjorkman, Berglund, 1993). One of the primary factors associated with this significant relationship in a hospital setting may be that the patient develops multiple meaningful relationships via interacting with the multidisciplinary team of social workers, nurses, mental health workers, and psychiatrists. For instance, patients can compensate low-quality alliances with a particular member of their treatment team by forming helpful relationships with other people on the unit, thus ensuring that
treatment progress will continue (Dinger, Strack, Leichsenring, Wilmers, & Schauenburg, 2008).

In general, therapeutic alliance may be necessary to provide the conditions under which specific cognitive behavioral interventions are implemented. This effect can be magnified in an inpatient setting, where the entire staff is trained in CBT techniques, and patients can continue to receive interventions from a multidisciplinary team leading to better outcomes. However, to date, there has been no research that evaluates the relationship between therapeutic alliance and outcome for hospitalized women diagnosed with comorbid mental illness and substance abuse receiving cognitive behavior therapy.

**Readiness to Change and Treatment Outcome**

There exists substantial evidence that patient motivation or readiness to change represents a critical part of the recovery process for all patients, irrespective of their presenting problem (Miller & Rollnick, 2002; Prochaska, DiClemente & Norcross, 1992). For example, high readiness to change signifies the client’s recognition of the need for change and, therefore, the client seeks treatment in order to successfully achieve behavior change (Daley, Salloum, Zuckoff, Kirisci, & Thase 1998; Herman, et al., 2000).

Moreover, low readiness to change has been linked to lack of engagement and early dropout, which results in poor treatment outcomes (Ball, Carroll, Canning-Ball & Rounsaville, 2006). Consequently, perceived readiness to change is a key component in treatment to precipitate maladaptive behavior change (Kavanagh & Mueser, 2007; Pantalon & Swanson, 2003).
All treatment approaches for substance abuse or dependence will require eliciting and enhancing the client’s intrinsic motivation to change, specifically because of the “virulent defense mechanism - denial” that typically accompanies alcohol or drug use (Miller, 1985, p. 85). For example, often patients refuse to admit their abuse or dependence, rationalizing that they need to drink or use drugs for social, health, or business reasons (Miller, 1985). This is no different for comorbid clients. More likely, intrinsic motivation may be even more critical for this comorbid population because drug or alcohol use may help to temporarily reduce psychotic symptoms, alleviate the side effects of neuroleptics, and/or reduce the negative affective states of depression and anxiety (Velasquez, et al., 1999), likely lowering motivation to stop substance use. In addition, patients with comorbid schizophrenia and substance abuse typically suffer from negative symptoms, such as anergia or some degree of generalized avolition, which may compromise the experience of positive affect in the absence of substance abuse (Bellack & DiClemente, 1999). Patients with comorbid disorders typically report low levels of readiness to change their drug and alcohol behaviors. This reluctance is commonly exemplified during acute stages of psychosis precipitated by drug and alcohol intoxication, which is when comorbid patients tend to utilize emergency psychiatric services but deny their substance abuse as problematic. As a result of their denial and refusal of substance abuse services they may not accept the necessary treatment they need to improve their overall quality of life (Prochaska & DiClemente, 1992; Ziedonis & Trudeau, 1997).
Denial, poor treatment adherence, and high dropout rates among patients with comorbid disorders demand that greater attention be paid to increase patients’ readiness to change maladaptive behaviors. In both inpatient and outpatient settings, clinicians are plagued with higher percentages of dropouts among comorbid patients in both outpatient and inpatient settings; however drop out is higher among outpatient programs (Baekland & Lundwall, 1975; Drake & Wallach, 1989). The lower attrition rates found in inpatient settings can be attributed to the hospital’s intensive individual and group therapy structure, positive engagement and interactions, and removal from external pressures and triggers to use. Consequently, there is a greater chance of increasing readiness to change during one’s hospital stay. This would make hospitalization one of the most efficient agents to increase motivation and behavior change success. Pollini and colleagues (2006) conducted a study with 353 patients with substance abuse problems in an inpatient hospital setting. Upon admission, these patients endorsed low levels of motivation; however their motivation increased throughout their hospital stay. This increase in motivation occurred despite the fact that a number of the patients entering treatment were institutionally referred from the court system, child custody cases, and employment. Pollini et al. argued that intrinsic motivational factors such as, ‘being tired of using’ or ‘wanting a better life’ rather than external motivators, were identified as sustaining motivating factors for abstinence, which was associated with significant increases in readiness to change levels throughout their hospital stay (Pollini, O’Toole, Ford, & Bigelow, 2006).
Furthermore, Wilke, Kamata, and Cash (2005) found that for women the desire for sobriety and improved psychological functioning were significantly related to increased motivation for treatment. However, it was surprising to find that having children was associated with lower motivation for treatment. As a result, it may be important that the treatment facility offers women only groups to discuss the delicate issue of the role of substance abuse and motherhood, so as to decrease the likelihood of this association becoming a barrier to completing treatment or continuing with referrals for outpatient services (Greenfield et al., 2007).

Cognitive behavior therapy, like other therapies, works to increase the patient’s readiness to change throughout the entire treatment process in order to promote good outcome. This can be achieved through the strategies of a decisional balance, which can cultivate awareness of problem areas; respecting the client’s autonomy; emphasizing the client’s strengths; and expressing empathy; but most importantly teaching the patient problem solving strategies and coping skills, which fosters increased self efficacy (Carroll, 1998; Longo, Lent, Brown, 1992), which is one of the principal components of behavior change (Bandura, 1977). Cognitive behavior therapy may involve a risk of premature drop out because of the exposure to high levels of discomfort in order to build tolerance (e.g., exposure therapy or tolerating negative affective states) and activity requirements between sessions. It is reasonable to expect that high levels of readiness to change will be important to enhance treatment response and reduce premature termination, especially for a population that is generally noncompliant (Prochaska & DiClemente, 2001).
To further support this argument, Davidson and colleagues (2007) conducted a study with 148 patients diagnosed with alcohol dependence. Patients were randomly assigned to receive either cognitive behavior therapy or motivational enhancement therapy (MET). Results revealed that at post treatment patients in the CBT group had higher levels of motivation, which led to significantly more abstinent days than the participants in the MET condition (Davidson, Gulliver, Longabaugh, Wirtz, & Swift, 2007). Instead, a more behaviorally oriented efficacious treatment, like CBT may be better suited for this population (Barrowclough, et al., 2001; Bellack et al., 2006; Carroll, 2004).

In the literature, treatment outcome findings primarily based on the transtheoretical stage of change have been inconsistent (DiClemente, Schlundt, & Gemmell, 2004). This is in part because readiness to change is dynamic in nature and fluctuates constantly over time (DiClemente et al., 2004). For instance, a patient may be ambivalent today and motivated to take action to change tomorrow. Therefore, assessing a fluid variable at a single point in time may not be fruitful in attempting to predict treatment outcomes. As a result, there has been a proliferation of studies that have examined this issue, and as of to date, the recommendation is to assess readiness to change at different intervals throughout the treatment process, including admission and discharge (De Weert-Van Oene et al., 2001). For example, in a longitudinal study, Zhang et al. found that higher levels of ambivalence at baseline in patients with comorbid disorders were related to higher rates of alcohol use at 9-month follow-up, compared to those patients in the action stage, who reported less alcohol use over a 9-month period.
post treatment (Zhang, Harmon, Werkner, & McCormick, 2006). Similarly, Carey and colleagues (2002) studied a group of outpatients with comorbid psychiatric disorders and found that participants with higher levels of motivation at pre and post intervention reported fewer days of substance use and more steps toward change, compared to those patients who were in denial or ambivalent (Carey, Purnine, Maisto, & Carey 2002).

One of the most widely used self report assessment is the URICA, which is based on the transtheoretical stage of change (Sutton, 2001). Current researchers have supported the use of this measure with comorbid populations (DiClemente, Nidecker, & Bellack, 2008; Velasquez et al., 1999); primarily because the URICA can significantly detect subtle differences in motivation to change the same problem between substance abusing and comorbid samples (Shields & Hufford, 2005). One of the reasons for its popularity with comorbid populations is because the URICA assesses readiness to change across a range of multiple problems (e.g. drug use and mental illness), whereas other measures specify only one target behavior (e.g. readiness to change questionnaire, RCQ; Rollnick, Heather, Gold, & Hall, 1992, which only targets alcohol use). Researchers have used the URICA to identify the impact of readiness to change on outcome for patients with comorbid disorders, and it was found that increased readiness to change at intake was positively correlated with retention (Hunt, Kyle, Coffey, Stasiewicz, & Schumacher, 2006), treatment utilization, and decreased substance abuse (Kinnaman, Bellack, Brown, Yang, 2007).

Unfortunately, research has found unexpected results regarding the relationships between readiness to change as measured by the URICA and treatment participation,
adherence, and outcome for patients with comorbid disorders on inpatient units. In one study by Pantalon and Swanson (2003), patients with comorbid substance abuse disorders who were ambivalent about treatment at intake participated in more CBT groups during their hospitalization and attended more follow-up outpatient appointments, compared to their counterparts who were more motivated but less involved in treatment during hospitalization. This counterintuitive finding was also shown in the study by Ziedonis and Trudeau (1997) based on another readiness to change assessment. It is unclear whether this counter-intuitive finding is a result of a gender confound, that is, it is possible that the aggregate sample masked subtle gender differences in terms of the relationship between readiness to change, treatment adherence and outcome. Therefore, this present study is aimed at examining the relationship between readiness to change and treatment outcomes for sample of inpatient women diagnosed with comorbid disorders. A better understanding of this relationship could lead to the development of more effective interventions for these patients, who generally have the poorest prognoses (Rounsaville, Dolinsky, Babor, & Meyer, 1987).

The Current Study

Among a sample of acute psychiatric inpatient women receiving CBT and pharmacotherapy treatments, the primary goal of this pilot study was to examine the effects of client motivation and therapeutic alliance on treatment outcomes and to examine whether these effects differed for the participants with comorbid substance abuse and mental illness problems (SA group) versus the participants without substance abuse problems (NSA group). The following four hypotheses were developed: (1) all
participants will make significant improvements in overall psychological functioning from admission to discharge (i.e., no group differences), (2) high levels of client readiness to change during hospitalization (e.g., at intake and discharge) will predict positive outcomes for all the participants but more strongly for the SA group than the NSA group, (3) a strong therapeutic alliance during hospitalization (e.g., at intake and discharge) will positively impact treatment outcomes for all the participants; but more strongly for the SA group than the NSA group, and (4) alliance will increase during hospitalization for all participants in both the SA and NSA groups (i.e., no group differences in alliance itself).

This was a naturalistic study of women in treatment; therefore, there were no control groups or random assignment. To adjust for confounding variables that may be related to these groups, the length of hospital stays on inpatient units was controlled primarily because acute psychiatric symptoms settle quickly in the absence of drug and alcohol use (Sinclair, Latifi, & Latifi, 2008). In addition, marital status was included in all analyses as a between subjects variable because married patients may have an advantage in terms of their motivation levels at admission and their ability to have stable relationships with their partners.
CHAPTER II
METHODS

Participants

The participants for this present study were 139 adult inpatient women aged 18 years and older who were admitted to receive acute psychiatric inpatient care on the Women’s Unit at New York Presbyterian Hospital. This is a subset sample from a larger study designed to evaluate the effectiveness of CBT on treatment outcomes. To qualify for participation in this study, all participants must be able to speak, read, and understand English. Similarly, this study excluded the patients with severe psychotic symptoms, patients with moderate to severe mental retardation and those who were not oriented to person, time, and place. Based on the above criteria, only one participant was excluded because she received a Standard Score of 62 on the Wechsler Test of Adult Reading (WTAR), which is equivalent to a predicted Full Scale IQ Standard Score of 73, a rating in the Borderline range.

Of the 139 participants who originally provided informed consent for this study, 21 were excluded from the analyses because either 1) they did not complete all the discharge measures prior to their discharge \((n = 14)\), or 2) they refused to continue their participation in the study \((n = 6)\), or 3) they did not complete admission measures within 72 hours prior to admission \((n = 1)\).

Independent \(t\) tests were conducted to compare research completers and noncompleters. Research noncompleters \((n = 20)\) were those participants who did not
complete the discharge measures either because they dropped out of the study after completing the admission measures or they did not complete all the discharge measures prior to discharge. Both research completers and noncompleters did not differ significantly in age, education, income, marital status, average reading skills, alliance, and levels of readiness to change. However, both groups differed significantly on two measures of overall psychological functioning at admission, OQ-45, \( t(20.75) = -2.71, p = .006 \), Basis-24R, \( t(21.34) = -1.82, p = .04 \), and past or current alcohol use, \( t(36.10) = -1.82, p = .04 \). This showed that those who did not complete the study reported fewer psychiatric symptomatology and less alcohol related problems at admission, compared to those who completed the study. This suggests that patients who endorsed more psychiatric symptomatology and alcohol use at admission were more likely to complete their participation in the research when compared to those who did not complete the research. One participant was identified as a multivariate outlier and so she was also excluded from further analyses (see “Missing Data”). Therefore, a total of 117 participants were included in the analyses.

Fifty participants met criteria for having a substance abuse (SA) problem using the TWEAK (Russell, 1994) and Drug Abuse Screening Test (Cocco & Carey, 1998) assessed at baseline. The demographic and clinical characteristics of the SA participants are shown in Table 1. Participants were at least 18 years of age (\( M = 32.5 \ SD = 11.3 \) years). This SA group was predominantly Caucasian (68%), and 18% were Hispanic women, who comprised the largest ethnic group. Sixty-four percent were never married and 44% attended some college but did not graduate. The word reading skills of these
participants were 106.6 (average, \(SD = 14\)), which indicated an average range of intellectual functioning. The average length of stay was 10 days \((SD = 6.8\) days). Of the 50 participants who identified a substance abuse problem, 68\% likely met criteria for alcohol dependence and drug abuse/dependence according to the number of symptoms endorsed on these measures, which correlate with the DSM-IV (Bradley, Boyd-Wickizer, Powell, & Burman, 1998; Skinner, 1982). At discharge 50\% were diagnosed with depression and 24\% with bipolar.

Of the 67 participants who were not identified as having a substance abuse problem (NSA), their mean age was 35.6 \((SD = 10\) years; see Table 1), 70\% were Caucasian and 17\% Hispanic. Forty-nine percent were never married and 41\% attended some college. On average these participants remained in the hospital for approximately 11 days \((SD = 9\) days); and their word reading skills were in the average range of intellectual functioning \((106, SD = 13\)). At discharge, 55\% were diagnosed with depression and 16.4\% with bipolar.

There were no significant differences between the two treatment groups, in terms of age, ethnicity, marital status, source of income, level of education, length of stay, and discharge diagnosis. A priori power analyses for the planned statistical procedures (i.e., linear regression) suggested that a total of 55 participants would be a sufficient sample size to detect a medium effect needed to detect significant group differences on four variables based on the general power (Gpower) analysis program (Erdfelder, Faul, & Buchner, 1996). Data collection took place over the course of approximately 9 months (June 2009 - May 2010) in order to obtain a sufficient sample size for this study.
Procedures

Trained research graduate assistants met with each new patient to orient her to the unit and also to invite her to participate in the research. The participants were informed that their consent to participate in the research would not affect the quality or quantity of treatment they received during their hospital stay. There were no differences in the treatment offered to the patients participating in the research and the patients who refused to be involved in the study. If the patient agreed to participate, the research assistant reviewed in detail the consent forms and answered questions.

After providing written consent the participants were asked to complete a battery of assessments within 72 hours of admission, 24 hours prior to discharge and brief reassessments on a weekly basis during their hospital stay. These assessments were paper-and-pencil self-report questionnaires that each participant completed on her own. A trained research assistant was available to assist the participant as needed with the completion of these materials. Also the research assistants reviewed the participants’ medical records after the participants were discharged in order to obtain discharge diagnoses.

Interventions

Upon entry to the unit, all patients were given a user-friendly CBT manual that introduced the CBT model and gave a brief overview of the topics to be discussed in each CBT group. Treatment on the inpatient unit is primarily cognitive behaviorally focused and consisted of individual psychotherapy; rounds with the patient, social worker, psychiatrists and charge nurse five times per week; three to four CBT oriented groups per
day; and medications. The patients were also encouraged to be active in their treatment and, therefore, they were given daily worksheets to evaluate and challenge automatic thoughts. Also, twice per week a Mentally Ill Chemical Abuse (MICA) specialist facilitated a comorbid therapy group, which taught the patients to identify triggers, manage urges, and relapse prevention strategies related to alcohol and drug use. This group also explicitly highlighted the relationship between substance abuse and mental illness and educated the patients about coping strategies to utilize for both disorders.

Measures

Demographics. The participants completed a demographic questionnaire (See Appendix A), which included information about ethnicity, age, marital status, years of education, employment status, and income. Marital status was trichotomized into three groups, 0 was coded as never married and 1 was coded as divorced, separated, or widowed. These two marital groups were compared to the referent group: married. Education was coded based on a 5-point scale, not completing high school was coded 0, having a high school diploma or GED was coded 1, attending some college with no degree was coded 2; college graduate was coded 3; and having a graduate degree (Master’s, Ph.D etc.) was coded 4. Employment was dummy coded 0 for unemployed and 1 for part time or full time employment. Annual household income was coded 1 for $0-$25,000; 2 for $25,001-$65,000; and 3 for $65,001-$100,000 or more.

Treatment alliance. Treatment alliance was assessed by the Inpatient Treatment Alliance Scale (I-TAS), developed by Blais (2004). It is a brief 10-item self administered scale that measures the patients' perception of the alliance towards their treatment team as
it developed across the inpatient experience. The responses were scored based on a 7-point Likert scale ranging from 0 = false to 6 = completely true. Sample items from this questionnaire included "I felt like an active member of my treatment team," "My treatment team and I agree about what needs to change so I can leave the hospital," "I feel that my treatment team has a good understanding of my problems," "I feel that someone from my treatment team will be available if I need them." This scale was preferred to the Working Alliance Inventory (WAI; Horvath and Greenburg, 1986), Penn Helping Alliance Questionnaire (PHAQ; Alexander & Luborsky, 1986) and others primarily because each of the other mentioned scales assesses the patient’s relationship to their individual therapist and, therefore, has relatively little use in inpatient settings because multiple staff members cater to the needs of a single patient (Blais, 2004). Secondly, alliance ratings completed by staff are less stable (Martin et al., 2000) and there is a weaker association with outcomes compared to the patient self report alliance ratings (Horvath, 2001). This I-TAS was also developed to fit the major aspects of alliance: bond (3 items), collaboration on task (3 items) and goals (4 items), however, the scale is uni-dimensional and was not categorized into groups because all the items measured a single latent variable (Blais, 2004). Previous research indicated that for an inpatient sample of 140, the I-TAS was found to have good internal consistency at both admission and discharge (α = .94 and .91 respectively) and a high test retest correlation (.61), with factor loadings ranging from .63 to .91 (Blais, 2004). For this study this scale had high internal reliability (α = .96).
Attitudes toward and readiness to change. The University of Rhode Island Change Assessment (URICA; McConnaughy, DiClemente, Prochaska, & Velicer, 1989) is a 32-item self-administered questionnaire which assesses attitudes and behaviors associated with changing a target behavior. This questionnaire consists of four subscales each representing one of the four stages of change, namely precontemplation, contemplation, action, and maintenance (McConnaughy, DiClemente, Prochaska, & Velicer, 1989). The preparation stage was excluded because previous studies show poor psychometric properties of the subscale representing that stage of change (Pantalon, Nich, Frankforter, & Carroll, 2002). Each subscale contains eight items with responses based on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) with higher scores indicating greater endorsement of change. Total subscale scores range from 8 to 40 and total readiness to change scores range from -16 to 112.

In this study, a readiness to change score (RtC) was used by averaging contemplation, action, and maintenance subscale scores and subtracting the sum of these averages from the average of the precontemplation subscale score. This method was preferred because it captured a more global representation of the individual’s readiness to change by using a composite score that takes into account all four stages rather than interpreting a single discrete subscale score (Carey, et al., 1999). Higher scores on the RtC indicated greater motivation to change. For this study, the internal reliability for this scale was $\alpha = .68$.

Alcohol and drug abuse. The TWEAK (Russell, 1994) is a brief 5-item self-administered questionnaire that screens for hazardous drinking and alcohol dependence in
women (Russell, 1994). Positive responses to the first two items (tolerance and worry) were scored 2 points each. An endorsement of five or more on the tolerance question was a positive response and a score of 0 was given if she endorsed less than five drinks. A weight of one was applied to the rest of the items. Based on previous studies using a cutoff point of three or more, the TWEAK has a sensitivity of 84-94% and a specificity ranging from 81-89%, which is ideal for screening purposes (Chan, Pristach, Welte, & Russell, 1993) and identifying DSM-IV abuse or dependence disorders (Bradley, Boyd-Wickizer, Powell, & Burman, 1998). This questionnaire is more sensitive to identifying alcohol problems in women than men because it takes into account their lower tolerance threshold (Bradley, et al., 1998; Chan et al., 1993; Russell, 1994). For this sample, this scale had a reliability score of $\alpha = .38$.

The Drug Abuse Screening Test (DAST-10) developed by Skinner (1982) is a brief 10-item self administered questionnaire that assesses the severity of drug problems, including dependence symptoms and consequence as a result of use, experienced during the past 12 months (Carey, Carey, & Chandra, 2003; Cocco & Carey, 1998). The DAST-10 contains 10 items from the original DAST 28 with a few minor modifications; however, these changes did not change its correlation to DAST-20 ($r = .97$) which is highly correlated with the original DAST-28 ($r = .99$) (Yudko, Lozhkina, & Fouts, 2007). Previous research reported that the internal consistency for DAST-10 ranges between .86 and .94, sensitivity ranges between 70% and 90%, and specificity between 67% and 80% for detecting diagnosis and symptoms for comorbid patients (Maisto, Carey, Carey, Gordon, & Gleason, 2000). The DAST-10 significantly discriminated between the
patients of three different categories: patients with lifetime substance abuse history, patients with current substance use, as well as patients who have never met the criteria for drug abuse or drug dependence (Cocco & Carey, 1998). A score of 1-2 indicates low level problems, 3-5 indicates moderate level problems likely meeting DSM criteria, 6-8 indicates substantial level of problems and 9-10 represents severe difficulties (Skinner, 1982). This study used a cut off score of 3 to identify patients who were struggling with drug problems. For this sample, the reliability score was $\alpha = .89$.

*Treatment outcomes.* The Outcome Questionnaire (OQ-45; Lambert, Hansen, Umphress, Lunnen, Okiishi, & Burlingame, 1996) is a 45-item self report instrument that is designed to assess patients’ baseline symptomatology, track the patients’ progress throughout treatment and function as an outcome assessment (Lambert, Gregersen & Burlingame, 2004). The OQ-45 is divided into three subscales: symptom distress (25 items), interpersonal relationships (11 items) and social role performance (9 items). Each item is scored based on a five point Likert scale ‘never’ to ‘almost always.’ This measure yields a total score of 180, with the higher scored indicating a greater the level of patient endorsed distress. Scores on the OQ-45 can be divided into four severity ranges: normal (0 to 61), mild (62 to 79), moderate (80 to 95), and severe (96 to 180) (Brown, Burlingame, Lambert, Jones, & Vaccaro, 2001). The OQ-45 is sensitive to subtle changes (Brown et al., 2001), has good discriminant validity between patient and non-patient samples, has good internal, test-retest reliability, and concurrent and construct validity (Lambert et al., 2004; Lambert, et al., 1996). This scale has also been validated across multiple ethnicities and genders and it appears to adequately provide reliable data
for these samples (Lambert et al., 2004). Data has shown that with a cutoff score of at least 63 to indicate normal psychological functioning, the OQ has a sensitivity index of 84% and a specificity index of 83% (Lambert et al., 2008). For this study this scale demonstrated a reliability score of $\alpha = .92$.

The Behavior and Symptom Identification Scale Revised (Basis-24R; Eisen, Normand, Belanger, Spiro, & Esch, 2004) is a 24-item questionnaire that assesses the patient reported severity of six major areas of difficulty during the past week, which are depression and functioning (6 items), relationships (5 items), self harm (2 items), emotional lability (3), psychosis (4 items) and substance abuse (4 items). Each item is rated based on a 5 point Likert scale (0 to 4) with higher items equivalent to more distress. Response options range between ‘no difficulty’ to ‘extreme difficulty’ and ‘none/never’ to ‘all of the time/always.’ Like the OQ-45, the Basis-24 can be used to evaluate baseline (pretreatment) distress, treatment planning and outcome assessment (Eisen et al., 2004). Research has validated the Basis-24R to be used with both inpatient and outpatient adults of varying racial and economic backgrounds (Eisen, Gerena, Ranganathan, Esch, & Idiculla, 2006). Basis-24 was found to be sensitive to treatment effects and have adequate internal consistency of .71 or greater for all six subscales among a sample of inpatients (Eisen et al., 2006). Furthermore, each subscale successfully distinguished clinic versus non clinic samples (Cameron, Cunningham, Crawford, Eagles, Eisen, Lawton, et al., 2007; Eisen et al., 2004). Previous data also found that the Basis-24 has adequate concurrent, construct, and discriminant validity.
(Eisen et al., 2004; Cameron, et al., 2007). For this sample, the reliability score was \( \alpha = .88 \).

**Missing Data and Checking for Assumptions of ANOVA and Multiple Regression**

One case was identified using Mahalanobis distance as a multivariate outlier with \( p < .01 \) and, therefore, was deleted from subsequent analyses. This resulted in a total sample of 117 participants. This participant had some missing data across the four measures at either admission or discharge (a total of 4.1% missing items). Little’s (1988) chi-square test of Missing Completely At Random (MCAR) resulted in a nonsignificant chi-square \( \chi^2 (40) = 34.44, p >.05 \). This showed that the pattern of missing values was random and, therefore, the expectation maximization (EM) algorithm for maximum likelihood (ML) was used to impute missing values for this dataset. The presence of outliers in a skewed distribution led to the logarithmic transformation for the length of stay variable. All the assumptions required for analysis of variance and regression were met.

**Analytic Plans**

To examine Hypothesis 1, a repeated measures analysis of variance (ANOVA) was conducted to examine the mean differences in change in psychological functioning from admission to discharge between the SA and NSA groups. The effects of the change in psychological functioning from admission to discharge were also examined as moderated by the group condition (i.e., interaction effects of the change in psychological functioning from admission to discharge and treatment group). Prior to examining Hypotheses 2 and 3, repeated measures ANOVA was performed to examine if there
existed any between group differences in the change in readiness to change and alliance from admission and discharge. The interaction effects of change in readiness to change (from admission to discharge) x treatment group and change in alliance (from admission to discharge) x treatment group were also examined. To test the roles of readiness to change and alliance, multiple regression analyses were conducted to examine the effects of alliance (admission and discharge) and motivation (admission and discharge) on psychological functioning at discharge for both groups. To examine Hypothesis 4, a repeated measures ANOVA was utilized with alliance as the outcome and treatment group as the independent variable. For hypotheses 2 through 4, marital status was included in the model as a between-subjects variable and length of stay as a covariate. At all times, when examining psychological functioning, two separate analyses were always conducted, one for the composite Basis-24R and the other for the composite OQ-45 variables.

For the repeated measures ANOVA analysis, sphericity could not be determined because there were only two repeated observations. This paper reported the Wilks’ Lambda with corrected degrees of freedom and significance. To control for familywise error rate, reported alpha levels were adjusted using the Holm’s modified Bonferroni procedure (see Tabachnick & Fidell, 2007). In accordance with Cohen’s suggestion (1988), partial eta squared ($\eta_p^2$) was adopted as a measure of effect size (large effect $> .26$ medium effect $= .13$ and small effect $= .02$). Finally, when appropriate, significant interaction effects were followed by comparisons using independent t-tests.
CHAPTER III

RESULTS

Hypothesis 1: All the participants will make significant improvements in overall psychological functioning from admission to discharge

Repeated measures ANOVA results indicated that all participants made significant improvements from admission to discharge. Table 2 shows the means and standard deviations of these results. There were significant reductions in the number of symptoms endorsed from admission to discharge on the composite OQ-45 variable (see Figure 1), Wilks’ Lambda = .45, \( F(1, 115) = 143.06, p = .00, \eta^2_p = .55 \) (large effect); however, there was no significant, between-subjects main effect on change in psychological functioning (OQ-45), Wilks’ Lambda = .99, \( F(1, 115) = 1.75, p = .19 \).

Similarly, the composite Basis-24R variable revealed that all participants made significant improvements from admission to discharge (see Figure 2), Wilks’ Lambda = .32, \( F(1, 115) = 245.41, p = .00, \eta^2_p = .68 \) (large effect). There was also a significant between-subjects main effect on psychological functioning (Basis-24R), Wilks’ Lambda = .97, \( F(1, 115) = 4.20, p = .04, \eta^2_p = .04 \) (small effect), which indicated that the SA group endorsed greater improvement in overall psychological functioning from admission to discharge when compared to the NSA group. The SA group endorsed more symptoms at admission than the NSA group, which indicated higher levels of
psychological distress, $t(115) = -3.06, p = .01$, however, this significant difference no longer existed at discharge, $t(115) = -1.04, p = .15$.

Due to the fact that each of the outcome variables, OQ-45 and Basis-24R, measures different constructs of a discrete subscale of psychological symptomatology, it is important to examine the changes in these discrete subscales for both groups. On the OQ-45 three subscale measures, there was a significant decrease in difficulties reported in the areas of symptom distress from admission to discharge, Wilks’ Lambda = .42, $F(1, 115) = 157.66, p = .00, \eta_p^2 = .58$; interpersonal relations, Wilks’ Lambda = .52, $F(1, 115) = 104.98, p = .00, \eta_p^2 = .48$; and social role performance, Wilks’ Lambda = .71, $F(1, 115) = 47.67, p = .00, \eta_p^2 = .29$. However, these significant decreases did not differ across the treatment groups, indicating that there were no significant mean group differences on these subscales.

When the individual subscales from the Basis-24R were examined, there were significant improvements in self-reported levels of distress from admission to discharge in the areas of depression, Wilks’ Lambda = .32, $F(1, 115) = 241.15, p = .00, \eta_p^2 = .68$; relationships, Wilks’ Lambda = .73, $F(1, 115) = 41.78, p = .00, \eta_p^2 = .27$; self harm, Wilks’ Lambda = .60, $F(1, 115) = 76.89, p = .00, \eta_p^2 = .40$; emotional lability, Wilks’ Lambda = .54, $F(1, 115) = 96.50, p = .00, \eta_p^2 = .46$; and psychosis, Wilks’ Lambda = .79, $F(1, 115) = 30.12, p = .00, \eta_p^2 = .21$. These significant improvements did not differ across the treatment groups, except emotional lability, Wilks’ Lambda = .96, $F(1, 115) = 4.28, p = .04, \eta_p^2 = .04$ (small effect). The SA group endorsed greater symptoms on the emotional lability subscale at admission when compared to the NSA group, $t(115) = -$
3.74, $p = .00$. Both groups reported significant improvements on this subscale at discharge, so that this significant group difference was reduced to a trend, $t (115) = -1.83$, $p = .07$. The substance abuse subscale on the Basis-24R was not analyzed because the two groups were analyzed separately using this criteria. In all subsequent analysis, composite variables for the OQ-45 and Basis-24R were used to examine changes in overall psychological outcome at discharge.

**Hypothesis 2: Readiness to change will predict a positive outcome for all the patients, but more strongly for the participants with substance abuse problems**

A repeated measures ANOVA was performed with the change in readiness to change levels from admission to discharge as the dependent variable, treatment group (two levels), marital status (three levels) were entered as between-subjects variables, and length of stay as a covariate. The results revealed that there were no significant changes in levels of readiness to change from admission to discharge, Wilks’ Lambda = .99, $F (1, 112) = .65$, $p = .42$. However, there was a significant main effect of treatment group on motivation, Wilks’ Lambda = .97, $F (1, 112) = 3.99$, $p = .05$, $\eta_p^2 = .03$ (small effect). Independent $t$ tests were performed to explore this interaction. The results revealed that the SA group endorsed higher levels of motivation at admission ($M = 10.74$, $SD = 1.34$) when compared to the NSA group ($M = 10.39$, $SD = 1.46$), although this difference emerged only as a nonsignificant trend, $t (115) = -1.33$, $p = .09$.

Because motivation levels did not significantly change over time, but yet there was a nonsignificant trend between group differences in motivation levels at admission, a multiple regression analysis was performed to explore the relationship between readiness
to change levels at admission and psychological functioning at discharge. All the variables were entered simultaneously psychological functioning at admission, treatment group, marital status, length of stay, and readiness to change at admission were held constant in this model. Psychological functioning at discharge was entered as the dependent variable. Two separate multiple regression analyses were performed for each of the criterion variables (composite scores Basis-24R and OQ-45). A significant model emerged for both the Basis-24R, $F(6, 110) = 3.35, p = .01$ and the OQ-45, $F(6,110) = 5.83, p = .00$. Both these models correspondingly accounted for $15\% (R^2 = .15)$ and $24\% (R^2 = .24)$ of the variance in psychological functioning (see Table 3). With other variables held constant, the size and direction of the relationship suggests that psychological functioning at discharge, based on the OQ-45 composite variable, was predicted by high levels of readiness to change at admission, $\beta_1 = -.19, t (116) = -2.19, p = .03$.

On the other hand, the level of readiness to change at admission did not predict psychological functioning at discharge on the Basis-24R, $\beta = -.09, t (116) = -.99, p = .33$. Treatment group, marital status, and length of stay did not significantly impact the patients’ psychological functioning at discharge. In contrast, readiness to change at discharge was not significantly related to psychological functioning at discharge for either the OQ-45, $\beta = -.03, t (116) = -.29, p = .77$ or the Basis-24R, $\beta = .09, t (116) = .97$.

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1 Beta reported in this section is the standardized regression coefficient
These results suggested that readiness to change level at discharge was not significantly related to psychological functioning at discharge.

Because the relationship between psychological functioning and readiness to change was unrelated to treatment condition, both treatment groups were collapsed and further analyses were conducted to examine the effect of the change in readiness to change from admission and discharge on the change in psychological functioning from admission to discharge. A repeated measures ANOVA was performed with change in readiness to change (2 levels: admission and discharge) and the change in psychological functioning (2 levels: admission and discharge) entered as within subjects variables; marital status (3 levels) was entered as between subjects variable and length of stay as a covariate. Using the OQ-45 composite variable, results revealed that there was a significant change in motivation from admission to discharge, Wilks’ Lambda = .86, $F(1, 113) = 19.12, p = .00, \eta^2_p = .15$. However, there was no significant main effect of change in readiness to change on change in psychological functioning from admission to discharge, Wilks’ Lambda = .98, $F(1, 113) = 2.15, p = .15$. Of note, there was a significant main effect of change in readiness to change on length of stay, Wilks’ Lambda = .91, $F(1, 113) = 11.89, p = .00, \eta^2_p = .10$.

The same analysis was performed using the Basis-24R composite variable, results revealed a significant change in readiness to change from admission to discharge, Wilks’ Lambda = .25, $F(1, 113) = 343.72, p = .00, \eta^2_p = .75$. There was a nonsignificant interaction trend between change in readiness to change and change in psychological functioning from admission to discharge, Wilks’ Lambda = .97, $F(1, 113) = 3.20, p = \ldots$
.08. Similarly, there was also a nonsignificant interaction trend between change in readiness to change and length of stay, Wilks’ Lambda = .97, $F (1, 113) = 3.32, p = .07$. Marital status did not have an effect on the above mentioned variables in either analyses. Overall, these results revealed that change in readiness to change did not significantly impact change in psychological improvement during hospitalization.

**Hypothesis 3: Alliance will predict a positive outcome for all the patients, but more strongly for the participants with substance abuse problems**

To determine whether there were significant group differences in alliance, a repeated measures ANOVA was conducted with alliance as the dependent variable, treatment group (two levels) and marital status (three levels) as the between-subject factors, and length of stay was entered as a covariate. The results revealed no significant mean changes in alliance from admission to discharge, Wilks’ Lambda = .99, $F (1, 110) = 1.15, p = .29$; and no significant interaction effects between change in alliance from admission to discharge and treatment group, Wilks’ Lambda = .99, $F (1, 110) = .24, p = .63$. Length of stay and marital status did not significantly impact the above mentioned variables.

Because both groups made significant improvements in psychological functioning and there were no between group differences in change in alliance from admission to discharge, alliance at discharge was included as an explanatory variable to explain psychological functioning at discharge (see Table 4). Two separate multiple regression analyses were performed for each of the criterion variables, Basis-24R and OQ-45, at discharge. Psychological functioning at admission, marital status, treatment group,
length of stay, and alliance at discharge were entered simultaneously and held constant in the model. The overall model was significant for the Basis-24R at discharge, $R^2 = .19$, $F(6, 110) = 4.25, p = .00$; and the OQ-45 at discharge, $R^2 = .28$, $F(6, 110) = 7.19, p = .00$; and they accounted for 19% (Basis-24) and 28% (OQ-45) of the variance (see Table 4). With the other variables held constant, the results showed that alliance at discharge was significantly related to psychological functioning at discharge using the Basis-24R, $\beta = -.20$, $t(116) = -2.36, p = .02$; and the OQ-45, $\beta = -.27, t(116) = -3.36, p = .00$. Marital status, length of stay, and treatment group did not contribute significantly to the models. Also alliance at admission was not significantly related to psychological functioning at discharge on the Basis-24R, $\beta = -.06, t(116) = -.65, p = .52$; or the OQ-45 $\beta = -.08, t(116) = -.97, p = .33$.

Because all patients made significant improvements in psychological functioning and there were no between group differences on these variables, the entire sample was included in a repeated measures analysis to examine the effect of alliance on outcome. A repeated measures ANOVA was performed with change in alliance (2 levels: admission and discharge) and the change in psychological functioning (2 levels: admission and discharge) entered as within subjects variables; marital status (3 levels) was entered as between subjects variable and length of stay as a covariate. Using the OQ-45 composite variable, results revealed a significant main effect of change in alliance from admission to discharge on length of stay, Wilks’ Lambda = .94, $F(1, 113) = 7.38, p = .01$; a nonsignificant interaction trend between the change in alliance and change in psychological functioning from admission to discharge, Wilks’ Lambda = .98, $F(1, 113)$
= 2.88, \( p = .09 \), and finally there was no significant change in alliance from admission to discharge, Wilks’ Lambda = 1.00, \( F (1, 113) = .01, p = .93 \). The same analysis was performed using the Basis-24R composite variable, the results revealed significant change in alliance from admission to discharge, Wilks’ Lambda = .56, \( F (1, 113) = 88.72, p = .00 \). However, there was no significant main effect of change in alliance and change in psychological functioning from admission to discharge, Wilks’ Lambda = .99, \( F (1, 113) = 1.69, p = .20 \). Marital status and length of stay did not significantly impact these variables. These results suggested that alliance did not significantly impact improvement in psychological functioning throughout hospitalization.

\textit{Hypothesis 4: Alliance will increase from admission to discharge for both groups}

Because previous research speculated that it is difficult to establish a therapeutic relationship with briefly hospitalized acute inpatients, the participants who remained hospitalized longer than a week and completed at least three alliance measures, one of which included the weekly reassessment (\( n = 58 \)) were analyzed for changes in alliance over time. A repeated measures ANOVA was conducted with alliance (3 levels) as the dependent variable, treatment group and marital status were entered as between subject factors, and length of stay was entered as a covariate. The results revealed that alliance increased throughout the patients' hospitalizations (see Figure 1 for detail), but there was no significant change in alliance from admission, to one week, and to discharge, Wilks’ Lambda = .92, \( F (2, 50) = 2.31, p = .11 \), and there was no significant group differences at those three time points, Wilks’ Lambda = .98, \( F (2, 50) = .55, p = .58 \). Similarly, length of stay and marital status had no significant impact on the change in alliance.
CHAPTER IV
DISCUSSION

The present study found that women in both treatment groups made significant improvements in psychological functioning from admission to discharge, but no significant group differences in psychological functioning were found. Results also revealed that high levels of readiness to change at admission and high levels of therapeutic alliance at discharge were linked to better overall psychological functioning at discharge for both treatment groups. However, there were no significant treatment group differences in the relationship between alliance and motivation on treatment outcomes. These findings will be discussed in greater detail below.

Readiness to Change and Treatment Outcome Across the Two Groups

For both groups, high levels of readiness to change at admission were significantly related to better treatment outcomes at discharge. The lack of observed group differences in treatment outcomes suggests that motivation at admission does not differentially influence treatment outcome for these groups. This finding is similar to Project Match research, which found that readiness to change at the start of treatment was a significant predictor of abstinence or reduced drinking post treatment (Project MATCH Research Group 1997).

A few plausible explanations for the significant relationship between readiness to change at admission and psychological functioning at discharge are that the more
motivated the patient is at admission, the more likely she is to fully adhere to and engage in the treatment process from the beginning (Pitre et al., 1998). These patients are likely to obtain more benefits out of treatment, compared to those patients who are less motivated to change and, therefore, may be less likely to attend and comply with treatment (Heesch et al., 2005). For example, high levels of readiness to change at treatment entry among samples of polysubstance abusers and alcohol dependent patients were related to decreased alcohol and drug use and improvements in medical and psychiatric functioning (Henderson, Saules, & Galen, 2004; Shen, McLellan, Thomas, & Merrill, 2000). Likewise, Wade, Frayne, Edwards, Robertson, and Gilchrist (2009) found that for a sample of hospitalized eating disorder patients, high baseline motivation predicted significant improvements in adaptive eating habits at discharge. Therefore, this present study adds to the existing literature by providing additional evidence that pre-treatment motivation plays an important role in treating inpatient women for their mental health problems, regardless of their comorbid substance use problems.

The substance abuse group endorsed significantly higher levels of readiness to change at admission compared to the non-substance abuse; however, this significant difference disappeared at discharge. One possible explanation for this significant difference at admission could be the perceived severity of psychiatric distress endorsed by the substance abuse group at admission. Similar studies have found a significant relationship between readiness to change at admission and perceived severity of substance abuse problems (Carpenter et al., 2002; Freyer et al., 2005; Miller, 1985; Zhang et al., 2006), physical health, and family concerns (Pollini et al., 2006). However,
this current study extends the literature by demonstrating this relationship for inpatient women with psychiatric disorders and comorbid substance abuse problems. Therefore, it appears that, for women with comorbid substance abuse problems, readiness to change is closely associated with the experience of any form of severe subjective distress that is relevant to her current personal values and concerns. These findings fit with the principles of operant conditioning, which highlight that the factors associated with the “drive/motivation” for behavior change are contingent on an increase in the negative consequences and a simultaneous decrease in positive reinforcements (Zhang et al., 2006). This is also similar to the Alcohol Anonymous literature, which posits that patients with abuse or dependence must “hit bottom” in order to engage in the recovery process (Carey et al., 1999). Overall, these theories suggest that aversive consequences can act as a protective factor by increasing motivation to change for patients with comorbid psychiatric and substance abuse problems (Blume, Schmaling, & Marlatt, 2001; Zhang et al., 2006). Therefore, with the absence of acute psychological distress it is expected that patients will endorse lower levels of readiness to change. Although the decrease in readiness to change was not statistically significant, this trend was observed for this group.

Compared to the participants with substance abuse, the non-substance abuse group endorsed significantly lower levels of readiness to change at admission. After a mean length of stay of 11 days, this group difference did not exist at discharge. Research has shown that, unlike the substance abuse group who may attribute their psychological distress to drugs and alcohol, the non-substance abuse group may attribute their
psychological distress more to internal, stable, and global deficits, which produces a significant sense of hopelessness, low self esteem, and low self efficacy (Sweeney, Anderson, & Bailey, 1986; Velasquez et al., 1999). These negative internal attributions combined with psychiatric symptoms can affect motivation levels at treatment entry. For example, approximately 50% of the sample were diagnosed with depression, therefore, it is possible that cognitive and affective symptoms, such as rumination, anhedonia, difficulty concentrating, and thoughts of suicide may adversely lead to lower levels of motivation at admission. Similarly, although very few of the women in this sample had schizophrenia, it is possible for that for these patients the symptoms of schizophrenia, such as symptom denial, lack of insight about their disorder, suspiciousness, grandiosity, and fear of others can disrupt the patient’s perception of the self, world, and others, to the point where she does not think she has a problem (Mulder, Koopmans, & Hengeveld, 2005; Wong, Chiu, Mok, Wong, & Chen, 2006).

It is interesting to note, that the OQ-45 and Basis-24R showed different results, with the treatment gains being more detectable with the OQ-45. This difference may be accounted for the fact that the OQ-45 loads heavily on mood symptoms, such as depression and anxiety, which were endorsed by more than 50% of the sample. On the other hand, the Basis-24R measures more acute symptomatologies, such as paranoia, hallucinations, and ideas of reference, which were mostly endorsed by patients diagnosed with schizophrenia, approximately 10% of the sample. The findings suggest that readiness to change at admission was significantly related to psychological functioning at discharge, as assessed by the OQ-45. Similarly, when the entire sample was collapsed,
there was a significant interaction between change in readiness to change and change in psychological functioning as assessed by the OQ-45; however these finding were not evident with the Basis 24R. It is possible that these significant results were found because the CBT skills emphasized during hospitalizations were primarily targeted to address mood symptoms and taught patients to incorporate adaptive coping strategies when experiencing negative affect that his triggered by stressful situations. Therefore, by discharge patients may have felt more empowered to cope with significant stressors.

Although the mean levels of readiness to change from admission to discharge decreased for the substance abuse group and increased for the non-substance abuse group, these differences were not significantly different. One probable explanation for the lack of observed significant change in readiness to change from admission to discharge could be attributed to the fact that readiness to change at discharge was assessed during the patient's last 24 hours on the unit. Therefore, it is possible that patients may uniformly experience mixed feelings prior to discharge. More specifically, the protected setting of an acute inpatient hospital, which includes increased social support and constant supervision combined with the absence of environmental stressors, can induce conflicting emotions prior to discharge. On one hand, discharge from a hospital unit can give patients a false sense of confidence that they can maintain the changes on their own after discharge because they were taught coping skills and are stabilized on medications. On the other hand, it can intensify their anxieties and fears that they will not be able to maintain the changes on their own in outpatient treatment; because they are losing the 24-hour structure, support, and containment that facilitated
their progress, and are returning to the stressful environment that prompted their
decompensation (Norton, 2004). These conflicting emotions can impact patients’
readiness to change levels prior to discharge, which may account for the lack of
significant change noted for both groups throughout their hospitalization.

**Therapeutic Alliance and Treatment Outcome Across the Two Groups**

As anticipated, there were no between group differences found in the
development of alliance throughout the duration of hospital stay from admission to
discharge. This suggests that patients on an acute inpatient unit, regardless of a substance
abuse history, are able to form stable relationships with their treatment team throughout
their hospital stay. This directly contradicts the premise that it is difficult to establish and
maintain a therapeutic alliance with psychiatric patients during short hospital stays
(Clarkin, et al., 1987).

This study found that for both groups, a collaborative therapeutic alliance at
discharge was significantly related to psychological functioning at discharge after an
acute psychiatric hospitalization. The literature suggests that the relationship between
therapeutic alliance and outcome may vary depending on the presence of drug and
alcohol abuse (Clarkin et al., 1987); however, results from this study did not support this
notion. It is possible that no group differences were found because both groups received
the same type of treatment (CBT and pharmacotherapy) for similar lengths of time (Raue
et al., 1997). In addition, patients on an inpatient unit can compensate low-quality
alliances with members of their treatment team by forming helpful relationships with
other people on the unit. Therefore, all the patients on the unit have an equal opportunity to have a high quality alliance.

The relationship between alliance at discharge and treatment outcome at discharge has been previously demonstrated in outpatient settings (Klein et al., 2003). Moreover, previous research demonstrated that CBT has better alliance ratings when compared to interpersonal and psychodynamic psychotherapies (Raue et al., 1997). For example, Gaston and colleagues (1991) examined the therapeutic relationship in elderly depressed patients who participated in psychodynamic or cognitive behavioral therapy. Results showed that after controlling for therapy gains, alliance assessed at discharge accounted for 36-57% of the outcome variance in the CBT group.

Based on the findings from this current study, the significant relationship between alliance and treatment outcome may be extended to include psychiatric female patients, regardless of a substance abuse history, who receive CBT interventions in inpatient settings. It is possible that the significant relationship between alliance and treatment outcome at discharge might reflect the unique processes utilized in cognitive behavior therapy that was adapted primarily for these women. The adaptation may include teaching the patient about the nature of her disorder, active involvement of the patient in treatment planning, teaching techniques that can be utilized in stressful situations outside of therapy, communicating warmth, sincerity, respect, and nonjudgmental positive regard throughout the therapeutic process. Furthermore, women typically respond to treatment better when the clinicians utilize active therapeutic interventions within the context of an empathic counseling style (Meier et al., 2005). These findings are consistent with
Bordin’s (1975) conceptualization of alliance, in that, the therapeutic alliance seems to act as a medium that facilitates therapeutic collaboration on goals and tasks. For instance, Dunn and colleagues (2006) revealed that the better the quality of alliance the higher the ratings of patient homework compliance for a sample of patients diagnosed with schizophrenia. The therapeutic alliance also makes it possible for patients to trust, accept, and follow the suggestions of their treatment team, which in turn facilitates the essential work of techniques used in cognitive restructuring, behavioral modification, and relapse prevention (Saunders, 2000).

Unlike the varied results found for readiness to change and the Basis-24R and OQ, therapeutic alliance was uniformly significantly related to both outcome measures. This finding reinforces the important role of therapeutic alliance regardless of acute psychotic and mood symptomatologies. Therefore, it is more important for the patient to feel the support and collaboration from the treatment team in a hospital setting regardless of presenting problem, because this has shown to significantly lead to decreased self reported distress in the areas of depression, anxiety, interpersonal relationships, social role, mania, and psychosis.

The above mentioned findings must be interpreted with caution because the significant relationship between discharge alliance and outcome might have been confounded by therapy benefits. For instance, prior studies have found that the therapeutic alliance increased after sudden gains in treatment outcome (Horvath & Luborsky, 1993; Horvath & Symonds, 1991; Tang & DeRubeis, 1999). This means that alliance and outcome can be seen as synergistic; as the patient’s functioning improved in
the current study, she might have been more productively engaged in treatment, therefore, leading to a better outcome. To address this issue, future studies should measure alliance and outcome more frequently and examine whether changes in alliance predict changes in future outcome.

It is possible that the nonsignificant changes in alliance during hospitalization from admission, to week one, and to discharge may reflect the small sample size (n = 58), and hence the low statistical power of the analyses. Therefore, it may be premature to rule out the possibility of significant increases in alliance during hospitalization. Further studies need to examine the development of alliance with a larger sample size.

*Improvement in Overall Psychological Functioning Across the Two Groups*

Both groups made significant improvements in overall psychological functioning from admission to discharge. When compared with their admission scores, patients in both groups reported significantly less psychological symptomatology at discharge, such as depression, self harm, and psychosis. This finding provides compelling support that a manualized CBT protocol with concurrent pharmacotherapy can substantially decrease acute psychiatric symptoms in a relatively brief period of time for hospitalized women with and without a substance abuse history. Similarly, this study generated strong preliminary support that although patients with comorbid mental illness and substance abuse endorsed greater psychological symptom severity at treatment entry when compared to the non-substance abuse group, the comorbid group improved at a rate similar to those patients without a substance abuse problem. Therefore, women with comorbid substance use disorders experiencing more acute psychological distress seem to
benefit from an intensive, supportive, and structured CBT inpatient program just as much as their counterparts without a comorbid substance use problem. A few of the suggested underlying mechanisms of change associated with a CBT oriented inpatient unit are: a comprehensive and intensive model that utilizes cognitive behavioral techniques in individual and group therapy, high doses of therapy throughout the day that leads to frequent reinforcement of learned skills, and the extensive use of psychoeducation (Stuart et al., 1997; Wright, 1996).

The CBT treatment in this present study might have also helped the effectiveness of the overall treatment by improving patients’ adherence to prescribed psychotropic medications. Psychotropic medications are often avoided by patients because of the unpleasant side effects or the decrease in symptom severity (Barnes & Phillips, 1999). However, stressful life events often trigger a resurgence of acute symptoms in the absence of psychotropic medications. Given that medication noncompliance has been identified as one of the main reasons for admission and readmission to psychiatric hospitals (Sotiropoulos & Poetter, 1999), a CBT-oriented treatment directly addressing noncompliance during hospitalization may be one mechanism through which patients in both treatment conditions improved during hospitalization. For the inpatient women in this present study during hospitalization, a multidisciplinary team monitored patients on an hourly basis to ensure compliance with medications, assessed medication side effects, and frequently discussed with patients symptom improvement or lack thereof. Future studies should examine these factors to determine if they play a role in positive outcome at discharge.
Finally, the treatment literature suggests that, compared to mixed-gender treatment programs, female-only outpatient and long-term residential treatment programs have demonstrated positive results in terms of increasing retention rates and improving outcomes in substance abuse and mental health symptoms (Ashley, Marsden, & Brady, 2003). This present study demonstrated that women on a short-term inpatient unit also responded similarly. One possible explanation for the positive outcome for women-only programs could be the camaraderie and bond that develops between women because of their similar experiences, such as history of sexual and physical abuse and child care responsibilities. Unfortunately, this study did not compare women only programs with others, so this study does not establish the relative benefit of women-only programs.

Limitations/Future Research

It is important to take several methodological shortcomings of this present study into consideration to gauge implications of these findings. First, the present study was an uncontrolled and naturalistic study in which patients were not randomly assigned to two treatment conditions that involved different treatment protocols. In fact, participants’ substance use problems and general comorbidity were confounded with the type of treatment received in the present study. Although all patients received the same type of treatment (CBT), each patient’s medication regimen was different based on their diagnosis and most pressing problems. Thus, it is difficult to ascertain to what extent that the observed improvement could be attributed to each or some combination of the suggested mechanisms of the provided treatment: alliance, psychotropic medication,
and/or CBT. A controlled, dismantling study is necessary to provide clearer answers to this question.

Second, some of the utilized measures might not have been ideal. The measure of alcohol use, TWEAK (Russell 1994), demonstrated very low internal consistency (α = .38), which suggests that another measure might have better tapped into hazardous drinking and alcohol dependence among the women in this study. Although this measure was designed specifically for targeting alcohol use among women in various settings, such as primary care clinics; it is possible that the low reliability score was because the TWEAK might not have been sensitive to alcohol use in acute inpatient psychiatric women than in women in other medical settings. Another potential limitation to this study is that the alliance measure, I-TAS scale (Blais, 2004), used to assess the relationship between patient and treatment team, showed a censored response (i.e., a ceiling effect). This finding is disconcerting because it indicates that participants tended to rate alliance at the extremely high end of the scale. When the total sample was examined more closely, 7.7% received the highest score at admission which means that these patients could not have reported improvements in alliance even if their alliance improved in reality. This ceiling effect might have interfered with the ability to detect the group difference in the relationship between alliance and treatment outcome as well as the change from admission to discharge. Future research should consider options for minimizing this “restricted range” problem in the measurement of therapeutic alliance in hospitalized patients with and without a substance abuse history.
Finally, it is also possible that substance abuse severity might have acted as a confound that mediated the relationship between alliance, motivation and treatment outcome for the comorbid substance abuse and psychiatric groups. Research suggested that high levels of substance abuse severity are associated with increased therapeutic alliance and motivation for patients with substance abuse histories (Petry & Bickle, 1999; Velasquez et al., 1999). One possible explanation for this might be because patients who experience severe psychiatric and substance abuse symptoms are motivated for change and will adhere to professional recommendations because they are eager for symptom relief. If this present study had assessed and adjusted for substance abuse severity, then between group differences in psychological functioning might have been found. This study did not assess for substance abuse severity because it would require a face-to-face clinical interview and given the small sample size variations in severity is not expected to be reliably measured.

Future research would likely shed considerable light on the link between motivation, alliance, and treatment outcome for inpatient samples with and without substance abuse problems. Also, more research is needed to identify mediators and moderators that might play a role in alliance, motivation, and treatment outcome and how these relationships might affect both groups differently. For instance, psychiatric diagnosis, such as a phobic disorder and depression were associated with better outcomes among women with alcohol and substance abuse comorbid disorders (Compton, et al., 2003; Rounsaville, et al., 1987). It would also be interesting to determine whether the rate of patient improvement after discharge is determined by psychiatric diagnosis.
Therefore, future research might split the sample by diagnostic type in order to answer these questions.

**Implications**

Despite the noted methodological and clinical limitations of this present study, both groups significantly improved in psychological functioning from admission to discharge. We also found that high motivation at admission and high alliance at discharge were related to an improved outcome for both groups, and that there were no significant group differences in establishing and maintaining alliances with the treatment teams during an acute hospital stay. This gives credence to the clinical importance of examining alliance and motivation during treatment on a hospital unit. For instance, the comorbid and single diagnosed acute psychiatric patients would greatly benefit from clinicians learning specific techniques that can foster building an alliance and also learn strategies that can emphasize increasing motivation for non-substance abusing patients, and capitalize on the already high motivation levels that comorbid substance abusing patients typically endorse at hospital admission.

This study presents important evidence that contradicts the finding from previous research that it is difficult to develop a meaningful alliance with patients with comorbid mental illness and substance abuse histories (Clarkin, et al., 1987) and that it is difficult to develop and maintain an alliance with an inpatient population during a short term hospitalization because of the acute psychiatric symptom severity (Allen, et al., 1988). Therefore, clinicians may benefit from utilizing a cognitive behavioral treatment approach that focuses on symptom identification and relief to foster improving patient’s
perception of the alliance, which might impact treatment outcome on an acute inpatient unit.

Likewise, this study found that patients with comorbid substance abuse and mental illness typically enter treatment with higher levels of readiness to change compared to the non-substance abuse group. However, there were no significant changes in patient perceived readiness to change during hospital stay. This finding is disconcerting because of the high recidivism rate for relapse on alcohol and other drugs after leaving a structured inpatient setting, which can lead to psychiatric decompensation. Previous research has found that women on an inpatient unit may benefit from receiving combined cognitive behavioral and brief motivational interviewing (MI) interventions that are specifically targeted to increasing motivation during and after hospitalization (Carey et al., 2002). This is in keeping with the well known Project Match research, which showed that patients receiving motivational enhancement interventions and CBT had greater days of abstinence leading to better outcomes (Project MATCH Research Group, 1997). Therefore, it is imperative for future research to collect follow-up data to determine the rate at which patients relapse, which can be used to inform clinical discharge planning.
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Table 1

*Baseline Characteristics*²

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>SA (N = 50)</th>
<th>NSA (N = 67)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>32.5 (11.3 years)</td>
<td>35.6 (10 years)</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
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<tr>
<td>Caucasian</td>
<td>68%</td>
<td>70%</td>
</tr>
<tr>
<td>African American</td>
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<td>3%</td>
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<tr>
<td>Hispanic</td>
<td>18%</td>
<td>17.9%</td>
</tr>
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<td>Asian</td>
<td>2%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Mixed</td>
<td>8%</td>
<td>1.5%</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
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<td></td>
</tr>
<tr>
<td>Never Married</td>
<td>64%</td>
<td>49.3%</td>
</tr>
<tr>
<td>Married</td>
<td>22%</td>
<td>25.4%</td>
</tr>
<tr>
<td>Separated</td>
<td>10%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Divorced</td>
<td>4%</td>
<td>22.4%</td>
</tr>
<tr>
<td>Widowed</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td><strong>Level of Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th grade or less</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>Some High School</td>
<td>6%</td>
<td>-</td>
</tr>
<tr>
<td>High School or GED equivalent</td>
<td>12%</td>
<td>10.4%</td>
</tr>
</tbody>
</table>

² Numbers in parentheses indicate Standard Deviation
<table>
<thead>
<tr>
<th>Source of Income</th>
<th>Some College</th>
<th>44%</th>
<th>College graduate</th>
<th>28%</th>
<th>Graduate Degree (Masters, Phd)</th>
<th>8%</th>
<th>41.8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td></td>
<td>36%</td>
<td></td>
<td></td>
<td>6%</td>
<td></td>
<td>11.9%</td>
</tr>
<tr>
<td>Spouse/Partner</td>
<td></td>
<td></td>
<td>20%</td>
<td></td>
<td>20%</td>
<td></td>
<td>11.9%</td>
</tr>
<tr>
<td>Family/Friends</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22%</td>
<td></td>
<td>6.9%</td>
</tr>
<tr>
<td>SSI/Disability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16%</td>
<td></td>
<td>6.9%</td>
</tr>
<tr>
<td>Public Assistance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8%</td>
<td></td>
<td>1.5%</td>
</tr>
</tbody>
</table>

**Mean Length of Stay**

- Depression: 10 (6.8 days) 50% 55.2%
- Bipolar: 24% 16.4%
- Schizophrenia: 10% 7.5%
- Anxiety: 2% 1.5%
- Eating Disorder: 12% 17.9%
Table 2

*Means and Standard Deviations for Treatment Groups on OQ-45 and Basis-24R Subscales and Motivation and Alliance Composite Scores*

<table>
<thead>
<tr>
<th>Outcome Variables</th>
<th>SA (N = 50)</th>
<th>NSA (N = 67)</th>
<th>Total Sample (N=117)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Admission</td>
<td>Discharge</td>
<td>Admission</td>
</tr>
<tr>
<td><strong>Outcome Questionnaire-45</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Psych. Functioning</td>
<td>94.01 (20.41)</td>
<td>62.73 (25.02)</td>
<td>81.48 (23.05)</td>
</tr>
<tr>
<td>Symptom Distress</td>
<td>55.11 (13.31)</td>
<td>34.73 (16.23)</td>
<td>49.41 (15.58)</td>
</tr>
<tr>
<td>Social Role</td>
<td>16.34 (4.30)</td>
<td>12.26 (5.42)</td>
<td>13.64 (4.64)</td>
</tr>
<tr>
<td><strong>Basis-24R</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Psych. Functioning</td>
<td>2.21 (.68)</td>
<td>1.09 (.58)</td>
<td>1.85 (.60)</td>
</tr>
<tr>
<td>Depression</td>
<td>2.80 (.88)</td>
<td>1.30 (.77)</td>
<td>2.53 (.83)</td>
</tr>
</tbody>
</table>

3 Numbers in parentheses indicate Standard Deviation
<table>
<thead>
<tr>
<th></th>
<th>1.80 (.82)</th>
<th>1.11 (.79)</th>
<th>1.53 (.81)</th>
<th>1.06 (.85)</th>
<th>1.65 (.83)</th>
<th>1.10 (.80)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relationships</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self Harm</strong></td>
<td>1.05 (1.08)</td>
<td>.16 (.40)</td>
<td>1.06 (1.08)</td>
<td>.25 (.56)</td>
<td>1.06 (1.07)</td>
<td>.21 (.50)</td>
</tr>
<tr>
<td><strong>Emotional Lability</strong></td>
<td>2.52 (1.03)</td>
<td>1.39 (.91)</td>
<td>1.83 (.94)</td>
<td>1.09 (.82)</td>
<td>2.13 (1.04)</td>
<td>1.24 (.87)</td>
</tr>
<tr>
<td><strong>Psychosis</strong></td>
<td>1.01 (1.01)</td>
<td>.46 (.64)</td>
<td>.62 (.96)</td>
<td>.46 (.64)</td>
<td>.79 (1.00)</td>
<td>.37 (.62)</td>
</tr>
<tr>
<td><strong>Motivation</strong></td>
<td>10.73 (1.34)</td>
<td>10.53 (1.41)</td>
<td>10.38 (1.46)</td>
<td>10.63 (1.53)</td>
<td>10.53 (1.42)</td>
<td>10.59 (1.48)</td>
</tr>
<tr>
<td><strong>Alliance</strong></td>
<td>44.17 (13.95)</td>
<td>48.78 (13.45)</td>
<td>41.08 (12.54)</td>
<td>46.97 (14.19)</td>
<td>42.36 (13.20)</td>
<td>47.74 (13.85)</td>
</tr>
</tbody>
</table>
Table 3

*Predictors of Patient Self-Reported Psychological Functioning at Discharge*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Basis-24R at Discharge</th>
<th>OQ-45 at Discharge</th>
<th>basis-24R at Discharge</th>
<th>OQ-45 at Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>t</td>
</tr>
<tr>
<td>RTC (Admission)^4</td>
<td>-.04</td>
<td>.04</td>
<td>-.09</td>
<td>-.99</td>
</tr>
<tr>
<td>Treatment Group</td>
<td>-.02</td>
<td>.10</td>
<td>-.01</td>
<td>1.14</td>
</tr>
<tr>
<td>Psych. Func. at Adm^5</td>
<td>.32</td>
<td>.08</td>
<td>.39</td>
<td>3.85***</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- never married</td>
<td>.03</td>
<td>.12</td>
<td>.03</td>
<td>.23</td>
</tr>
<tr>
<td>- others^6</td>
<td>-.13</td>
<td>.15</td>
<td>-.10</td>
<td>-.90</td>
</tr>
<tr>
<td>Length of Stay</td>
<td>.02</td>
<td>.23</td>
<td>.01</td>
<td>.08</td>
</tr>
</tbody>
</table>

^4 RTC - Readiness to Change
^5 Psychological Functioning at Admission
^6 Never married and others groups were compared to the referent group married.

*p < .05, **p < .01, ***p < .001
Table 4

*Predictors of Patient Self-Reported Psychological Functioning at Discharge*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Basis-24R at Discharge</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>t</td>
<td>R²</td>
<td>F</td>
<td>df</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>t</td>
<td>R²</td>
</tr>
<tr>
<td>Alliance (Discharge)</td>
<td>-.01</td>
<td>.00</td>
<td>-.20*</td>
<td>-2.36</td>
<td>.19</td>
<td>4.25**</td>
<td>6, 110</td>
<td>-.50</td>
<td>.15</td>
<td>-.27***</td>
<td>-3.35</td>
<td>.28</td>
</tr>
<tr>
<td>Treatment Group</td>
<td>-.04</td>
<td>.10</td>
<td>-.004</td>
<td>-.04</td>
<td></td>
<td></td>
<td></td>
<td>1.48</td>
<td>4.45</td>
<td>.029</td>
<td>.34</td>
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</tr>
<tr>
<td>Psych. Func. at Adm.</td>
<td>.30</td>
<td>.08</td>
<td>.36</td>
<td>3.77***</td>
<td></td>
<td></td>
<td></td>
<td>.46</td>
<td>9.90</td>
<td>.04</td>
<td>.47</td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- never married</td>
<td>.03</td>
<td>.18</td>
<td>.02</td>
<td>.21</td>
<td></td>
<td></td>
<td></td>
<td>-.05</td>
<td>5.10</td>
<td>-.00</td>
<td>-.01</td>
<td></td>
</tr>
<tr>
<td>- others</td>
<td>-.14</td>
<td>.14</td>
<td>-.10</td>
<td>-.96</td>
<td></td>
<td></td>
<td></td>
<td>-.83</td>
<td>6.19</td>
<td>-.01</td>
<td>-.13</td>
<td></td>
</tr>
<tr>
<td>Length of Stay</td>
<td>.01</td>
<td>.22</td>
<td>.00</td>
<td>.03</td>
<td></td>
<td></td>
<td></td>
<td>4.61</td>
<td>9.90</td>
<td>.04</td>
<td>.47</td>
<td></td>
</tr>
</tbody>
</table>

* *p < .05, **p < .01, ***p < .001*
Figure 1. Between group differences in psychological functioning (OQ-45) from admission to discharge.
Figure 2. Between group differences in psychological functioning (Basis-24R) from admission to discharge.
Figure 3. Between group differences in alliance at admission, 1 week, and discharge.
APPENDIX A

Demographic Questionnaire

Patient Name: _______________________
(First Name and Initial of Last Name)

Subject #: _____________

Date: ______________

Date of Admission: ______________

1. Please circle the ethnicity that describes you best:
   1. Caucasian
   2. African American
   3. Native American
   4. Hispanic
   5. Asian
   6. Mixed
   7. Other: ___________________________

2. How old are you? ______________________

3. What is your marital status?
   1. Never married
   2. Married
   3. Separated
   4. Divorced
   5. Widowed

4. How much school have you completed? (Please circle the response that best describes your education)
   1. 8th grade or less
   2. Some High School
   3. High School Graduate/GED
   4. Some college
   5. College graduate
   6. Graduate degree (Masters/Ph.D./etc.)

5. Prior to being hospitalized, what were your living arrangements? (Please circle the response that best describes your living arrangements.)
   1. Apartment or house
   2. Shelter
   3. Residential Center/Halfway House/Group Home/Supervised Home
   4. Nursing Home/Assisted Living
5. Homeless

6. Prior to being hospitalized, did you live alone?
   1. yes
   2. no

7. During the 30 days prior to being hospitalized, did you work at a paying job? 
   (Please circle the response that best describes your recent employment.)
   1. no
   2. yes, 1-10 hours per week
   3. yes, 11-20 hours per week
   4. yes, 21-30 hours per week
   5. yes, 31-40 hours per week
   6. yes, more than 40 hours per week

8. During the 30 days prior to being hospitalized, were you a student at a job training program, college, or university?
   1. yes
   2. no

9. What is your primary source of income?
   1. Employment
   2. Spouse/Partner
   3. Family/Friends
   4. SSI/Disability
   5. Public Assistance

10. What is your estimated annual household income?
    1. $0 - $5,000
    2. $5,001 – $10,000
    3. $10,001 - $25,000
    4. $25,001 - $40,000
    5. $40,001 - $65,000
    6. $65,001 - $85,000
    7. $85,001 - $100,000
    8. $100,001+

11. Prior to this hospitalization, have you been a patient on the 6 South Women’s Unit since (after ) November 1, 2006?
    1. yes
    2. no

12. If yes to #11, how many times and what were your approximate length of stays?
    1. Number of admissions to 6 South: ______
    2. Approximate length of stays: __________________________
APPENDIX B

TWEAK Test

Name: _________________________ Date: ____________________

ID #: ___________________

Do you drink alcoholic beverages? If you do, please take our “TWEAK” test. Please circle the answer that best describes you.

T. Tolerance: How many drinks can you “hold”? __ __

W. Have close friends or relatives Worried or Complained about your drinking in the past year?

Yes No

E. Eye-Opener: Do you sometimes take a drink in the morning when you first get up?

Yes No

A. Amnesia (Blackouts): Has a friend or family member ever told you about things you said or did while you were drinking that you could not remember?

Yes No

K(C). Do you sometimes feel the need to Cut Down on your drinking?

Yes No
APPENDIX C

Drug Abuse Screening Test (DAST-10).

Name: ___________________________  Date: __________________

ID #: __________________________

Directions: Now I want to ask you some questions about drugs not including alcoholic beverages that some people use. When we talk about “drugs” and “drug use,” we mean the use of any street drugs or the use of prescribed or over the counter drugs in excess of the directions or for any non-medical use of the drugs.

In the past year:

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Have you used drugs other than those required for medical reasons?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Do you abuse more than one drug at a time?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Are you always able to stop using drugs when you want to?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Have you had “blackouts” or “flashbacks” as a result of drug use?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Do you ever feel bad or guilty because of your use of drugs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) Does your spouse or parents ever complain about your involvement with drugs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7) Have you neglected your family because of your use of drugs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8) Have you engaged in illegal activities in order to obtain drugs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9) Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10) Have you had medical problems as a result of your drug use (e.g. memory loss, hepatitis, convulsions, bleeding)?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D

The Inpatient-Treatment Alliance Scale (I-TAS)

Name: _______________  Date: _________  ID #: ___________________

Instructions: We are interested in hearing about how you feel your hospital treatment is going so far. We are particularly interested in knowing how well you feel you are working with your treatment team as a whole. What we mean by your treatment team is all the Unit staff members for example, psychiatrist and social worker, who work regularly with you during your stay here. We are collecting this information as part of a quality improvement process and your questionnaires will **not be reviewed until after you leave the hospital**. Please read the statements below and circle the number that best fits how you feel about your treatment team right now.

<table>
<thead>
<tr>
<th></th>
<th>False</th>
<th>True</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I feel I’m working well with my treatment team</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2) I feel that my treatment team has a good understanding of my problems</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3) I feel that my treatment team listens to my concerns</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4) I feel that someone from my treatment team will be available if I need them</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5) Feel that my treatment team wants me to participate fully in my treatment</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6) I feel that my treatment team wants to help me</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7) I felt like an active member of my treatment team.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8) I feel respected by my treatment team</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9) My treatment team and I agree about what needs to change so I can leave the hospital</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10) I feel that my hospital treatment will be successful.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
APPENDIX E

Stages of Change Scale (URICA)

**Patient Name:** __________________________  **Subject #: ____**
**(First Name and Initial of Last Name Only)**  **Date: __________**

This questionnaire is to help us improve services. Each statement describes how a person might feel when starting treatment or approaching problems in their lives. Please indicate the extent to which you tend to agree or disagree with each statement. In each case, make your choice in terms of how you feel right now, not what you have felt in the past or would like to feel. For all statements that refer to your “problem,” answer in terms of what you write on the problem line below. And “here” refers to the place of treatment, 6S The Women’s Unit of New York Presbyterian Hospital.

Problem: ________________________________________________________________

There are FIVE possible responses to each of the items in the questionnaire:

1 = Strongly Disagree   2 = Disagree   3 = Undecided   4 = Agree   5 = Strongly Agree

**CIRCLE THE RESPONSE THAT BEST FITS.**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1) As far as I am concerned, I don’t have any problems that need changing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2) I think I might be ready for some self-improvement.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3) I am doing something about the problems that had been bothering me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4) It might be worthwhile to work on my problem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5) I’m not the problem one. It doesn’t make much sense for me to be here.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6) It worries me that I might slip back on a problem I have already changed, so I am here to seek help</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7) I am finally doing some work on my problem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
8) I’ve been thinking that I might want to change something about myself.  

9) I have been successful in working on my problem but I’m not sure I can keep up the effort on my own.  

10) At times my problem is difficult, but I’m working on it.  

11) Being here is pretty much a waste of time for me because the problem doesn’t have to do with me.  

12) I’m hoping this place will help me to better understand myself.  

13) I guess I have faults, but there’s nothing that I really need to change.  

14) I am really working hard to change.  

15) I have a problem and I really think I should work at it.  

16) I’m not following through with what I had already changed as well as I had hoped, and I’m here to prevent a relapse of the problem.  

17) Even though I’m not always successful in changing, I am at least working on my problem  

18) I though once I had resolved my problem I would be free of it, but sometimes I still find myself struggling with it.  

19) I wish I had more ideas on how to solve the problem.  

20) I have started working on my problems but I would like help.  

21) Maybe this place will be able to help me.  

22) I may need a boost right now to help me maintain the changes I’ve already made.  

23) I may be part of the problem, but I don’t really think I
24) I hope that someone here will have some good advice for me.

25) Anyone can talk about changing; I’m actually doing something about it.

26) All this talk about psychology is boring. Why can’t people just forget about their problems?

27) I’m here to prevent myself from having a relapse of my problem.

28) It is frustrating, but I feel I might be having a recurrence of a problem I thought I had resolved.

29) I have worries, but so does the next guy. Why spend time thinking about them?

30) I am actively working on my problem.

31) I would rather cope with my faults than try to change them.

32) After all I had done to try to change my problem, every now and again it comes back to haunt me.
APPENDIX F

BASIS-24R

During the PAST WEEK, how much difficulty did you have...
1. Managing your day-to-day life?
   0 □ No difficulty
   1 □ A little difficulty
   2 □ Moderate difficulty
   3 □ Quite a bit of difficulty
   4 □ Extreme difficulty

2. Coping with problems in your life?
   0 □ No difficulty
   1 □ A little difficulty
   2 □ Moderate difficulty
   3 □ Quite a bit of difficulty
   4 □ Extreme difficulty

3. Concentrating?
   0 □ No difficulty
   1 □ A little difficulty
   2 □ Moderate difficulty
   3 □ Quite a bit of difficulty
   4 □ Extreme difficulty

During the PAST WEEK, how much of the time did you...
4. Get along with people in your family?
   0 □ None of the time
   1 □ A Little of the time
   2 □ Half of the time
   3 □ Most of the time
   4 □ All of the time

5. Get along with people outside your family?
   0 □ None of the time
   1 □ A Little of the time
   2 □ Half of the time
   3 □ Most of the time
   4 □ All of the time

During the PAST WEEK, how much of the time did you...
6. Get along well in social situations?
   0 □ None of the time
   1 □ A Little of the time
   2 □ Half of the time
3. Most of the time
4. All of the time

7. Feel close to another person?
0. None of the time
1. A Little of the time
2. Half of the time
3. Most of the time
4. All of the time

8. Feel like you had someone to turn to if you needed help?
0. None of the time
1. A Little of the time
2. Half of the time
3. Most of the time
4. All of the time

During the PAST WEEK, how much of the time did you...

9. Feel confident in yourself?
0. None of the time
1. A Little of the time
2. Half of the time
3. Most of the time
4. All of the time

10. Feel sad or depressed?
0. None of the time
1. A Little of the time
2. Half of the time
3. Most of the time
4. All of the time

During the PAST WEEK, how much of the time did you...

11. Think about ending your life?
0. None of the time
1. A Little of the time
2. Half of the time
3. Most of the time
4. All of the time

12. Feel nervous?
0. None of the time
1. A Little of the time
2. Half of the time
3. Most of the time
4. All of the time

During the PAST WEEK, how often did you...
13. Have thoughts racing through your head?
   0. Never
   1. Rarely
   2. Sometimes
   3. Often
   4. Always

14. Think you had special powers?
   0. Never
   1. Rarely
   2. Sometimes
   3. Often
   4. Always

15. Hear voices or see things?
   0. Never
   1. Rarely
   2. Sometimes
   3. Often
   4. Always

During the PAST WEEK, how often did you...
16. Think people were watching you?
   0. Never
   1. Rarely
   2. Sometimes
   3. Often
   4. Always

17. Think people were against you?
   0. Never
   1. Rarely
   2. Sometimes
   3. Often
   4. Always

During the PAST WEEK, how often did you...
18. Have mood swings?
   0. Never
   1. Rarely
   2. Sometimes
3. Often
4. Always
19. Feel short-tempered?
   0. Never
   1. Rarely
   2. Sometimes
   3. Often
   4. Always

20. Think about hurting yourself?
   0. Never
   1. Rarely
   2. Sometimes
   3. Often
   4. Always

_During the PAST WEEK, how often..._
21. Did you have an urge to drink alcohol or take street drugs?
   0. Never
   1. Rarely
   2. Sometimes
   3. Often
   4. Always

22. Did anyone talk to you about your drinking or drug use?
   0. Never
   1. Rarely
   2. Sometimes
   3. Often
   4. Always

23. Did you try to hide your drinking or drug use?
   0. Never
   1. Rarely
   2. Sometimes
   3. Often
   4. Always

24. Did you have problems from your drinking or drug use?
   0. Never
   1. Rarely
   2. Sometimes
   3. Often
   4. Always
### APPENDIX G

#### Outcome Questionnaire 45.2

**Name ___________________  Subject # ________________  Date ________________**

**INSTRUCTIONS:** Looking back over the last week, including today, help us understand how you have been feeling. Read each item carefully and circle the number which best describes your current situation. Circle only one number for each question and do not skip any. If you want to change an answer, please “x” it out and circle the correct one.

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

1. I get along well with others.  
2. I tire quickly.  
3. I feel no interest in things.  
4. I feel stressed at work/school.  
5. I blame myself for things.  
6. I feel irritated.  
7. I feel unhappy in my marriage/significant relationship.  
8. I have thoughts of ending my life.  
9. I feel weak.  
10. I feel fearful.  
11. After heavy drinking, I need a drink the next morning to get going (If you do not drink, mark “never”).  
12. I find my work/school satisfying.  
13. I am a happy person.  
14. I work/study too much.  
15. I feel worthless.  
16. I am concerned about family troubles.  
17. I have an unfulfilling sex life.  
18. I feel lonely.  
19. I have frequent arguments.  
20. I feel loved and wanted.  
21. I enjoy my spare time.  
22. I have difficulty concentrating.  
23. I feel hopeless about the future.  
24. I like myself.  
25. Disturbing thoughts come into my mind that I cannot get rid of.  
26. I feel annoyed by people who criticize my drinking (or drug use) (if not applicable, mark “never”).  
27. I have an upset stomach.  
28. I am not working/studying as well as I used to.  
29. My heart pounds too much.
30. I have trouble getting along with friends and close acquaintances.
31. I am satisfied with my life.
32. I have trouble at work/school because of my drinking or drug use (if not applicable, mark “never”).
33. I feel that something bad is going to happen.
34. I have sore muscles.
35. I feel afraid of open spaces, of driving, or being on buses, subways, and so forth.
36. I feel nervous.
37. I feel my love relationships are full and complete.
38. I feel that I am not doing well at work/school.
39. I have too many disagreements at work/school.
40. I feel something is wrong with my mind.
41. I have trouble falling asleep or staying asleep.
42. I feel blue.
43. I am satisfied with my relationships with others.
44. I feel angry enough at work/school to do something I might regret.
45. I have headaches.
APPENDIX H

CHART REVIEW: Information at Discharge

Subject Name _______________________                                       Subject # ______
(First name, last initial)

Diagnoses:

<table>
<thead>
<tr>
<th>Diagnosis Name</th>
<th>Diagnosis Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Axis I:

- ___________________ __________
- ___________________ __________
- ___________________ __________

Axis II:

- ___________________ __________
- ___________________ __________

Which diagnosis is the primary diagnosis (if indicated in the chart)? -
- __________________

What form of payment/financial coverage does the patient have?
___ HMO; if so, which provider: ____________
___ Medicaid
___ Medicare
___ No insurance

Initial:

Completed By _________  Date___________
Data Entered By _________  Date___________
Data Checked By _________  Date___________
APPENDIX I

Informed Consent Forms

THE NEW YORK-PRESBYTERIAN HOSPITAL-WEILL CORNELL MEDICAL COLLEGE
Consent Form for Clinical Investigation

Project Title: The Women's Inpatient Cognitive Behavioral Therapy Project

Research Project #: 0705009169

Principal Investigator: Katherine Lynch, Ph.D.

INSTITUTION: New York Presbyterian Hospital-Weill Cornell Medical College

INTRODUCTION
You are invited to consider participating in a research study. The study is called "The Women's Inpatient Cognitive Behavioral Therapy Project. Cognitive Behavioral Therapy is a relatively short-term form of psychotherapy that focuses on how your thoughts influence your feelings and behavior. You were selected as a possible participant in this study because all patients on The Women's Unit are being invited to participate in the research.

Please take your time to make your decision. It is important that you read and understand several general principles that apply to all who take part in our studies:

(a) Taking part in the study is entirely voluntary.

(b) Personal benefit to you may or may not result from taking part in the study, but knowledge gained from your participation may benefit others;

(c) You may decide not to participate in the study or you may decide to stop participating in the study at any time without loss of any benefits to which you are entitled.

The purpose and nature of the study, possible benefits, risks, and discomforts, other options, your rights as a participant, and other information about the study are discussed below. Any new information discovered which might affect your decision to participate or remain in the study will be provided to you. You are urged to ask any questions you have about this study with members of the research team. You should take whatever time you need to discuss the study with your physician and family. The decision to participate or not to participate is yours. If you decide to participate, please sign and date where indicated at the end of this form.

Katherine Lynch, Ph.D. is the primary investigator.
WHY IS THE STUDY BEING DONE?

The purpose of this study is to increase understanding of the effectiveness of cognitive behavioral therapy administered on an inpatient unit, and to increase understanding of how to help patients get the most out of the treatment offered.

HOW MANY PEOPLE WILL TAKE PART IN THE STUDY?

Participants in the study are referred to as subjects.

About 300 subjects will take part in this study.

WHAT IS INVOLVED IN THE STUDY?

If you take part in the study, you will have the following tests and procedures:

You will complete a number of study questionnaires and assessment materials. These are tests that involve you answering questions about your thoughts, behaviors, and feelings, as well as basic demographic data such as your age, gender, and marital status. You will complete most assessment materials two times: at the beginning of your treatment (within 72 hours of admission to The Women’s Unit) and at the end of your treatment (approximately 24 hours prior to your discharge from The Women’s Unit.) In addition, there will be brief (5-10 minutes) weekly assessments while you are in the hospital and a brief follow-up phone call at one month after discharge and again at three months after discharge.

All of your treatment as per the conditions of this study will occur while you are in the hospital. Participation in this research will in no way impact your treatment in the hospital. Even if you do not choose to participate in the study, you will still receive all services offered on The Women’s Unit. General practice on the unit includes participation in daily therapy groups in which cognitive-behavioral strategies for helping you to solve your problems and get what you want out of life will be discussed.

HOW LONG WILL I BE IN THE STUDY?

Your participation in this study will occur during your inpatient stay. In addition, you will be asked to participate in a brief follow-up telephone assessment at one and three months following your discharge from the hospital. Participation in the study will not increase or decrease your length of stay in the hospital.

You can stop participating at any time. However, if you decide to stop participating in the study, we encourage you to talk to the researcher and your doctor first.

There are no known serious consequences of sudden withdrawal from the study, and your access to treatment will not be affected in any way.
Withdrawal by investigator, physician, or sponsor

The investigators, physicians or sponsors may stop the study or take you out of the study at any time should they judge that it is in your best interest to do so, if you experience a study-related injury, or if you do not comply with the study plan. They may remove you from the study for various other administrative and medical reasons. They can do this without your consent.

WHAT ARE THE RISKS OF THE STUDY?

Risks related to the procedures we are studying include:

There is minimal risk that you may find the assessment package long or boring, or experience some small amount of anxiety. Additionally, there is risk from invasion of privacy. There is also a risk that you may find the questions or the experience of being asked personal questions to be stressful. We will provide assistance and support to you as needed, as well as breaks in the assessment process. Subjects do not have to answer a question that brings anxiety or stress to the subject.

ARE THERE ANY BENEFITS TO TAKING PART IN THE STUDY?

We cannot and do not guarantee that you will receive any benefits from this study.

WHAT OTHER OPTIONS ARE THERE?

You have the option of deciding not to participate in the study.

WHAT ABOUT CONFIDENTIALITY?

Efforts will be made to protect your medical records and other personal information to the extent allowed by law. However, we cannot guarantee absolute confidentiality. Medical records of research study participants are stored and kept according to legal requirements. You will not be identified personally in any reports or publications resulting from this study. Organizations that may request to inspect and/or copy your research and medical records for quality assurance and data analysis include groups such as:

New York Presbyterian Hospital-Weill Cornell Medical College Institutional Review Board (IRB) and all appropriate Federal oversight agencies may have access to the research records.

If information about your participation in this study is stored in a computer, we will take the following precautions to protect it from unauthorized disclosure, tampering, or damage:

All records will be stored in a locked filing cabinet in a locked office, kept under key by the Principal Investigator and available only to trained members of the research team. Once data collection is complete, subject information entered into the computer database will only be identified by the use of codes. The database will be password protected. Data analysis and findings will report on groups not individuals and will in no way include subject names or identifying information.
If we have concerns about your safety during the one or three month interviews following your discharge from the hospital, the researcher will need to attempt to contact your current treatment providers.

WHAT ARE THE COSTS?

Study subjects will not have to pay any costs due to participation in the study. You or your insurance company will be charged for continuing medical care and/or hospitalization that is not a part of the research study.

POLICY/PROCEDURES FOR RESEARCH RELATED INJURY

The Policy and Procedure for New York Presbyterian Hospital-Weill Cornell Medical College (“the Medical Center”) are as follows:

In accordance with Federal regulations, we are obligated to inform you about the Medical Center’s policy in the event injury occurs. If, as a result of your participation, you experience injury from known or unknown risks of the research procedures as described, immediate medical care and treatment, including hospitalization, if necessary, will be available at the usual charge for such treatment. No monetary compensation is available from the Medical Center. Further information can be obtained by calling the Institutional Review Board at (212) 821-0577.

PAYMENT FOR PARTICIPATION

You will not receive payment for participating in this study.

You should not expect anyone to pay you for pain, worry, lost income, or non-medical care costs that occur from taking part in this research study.

WHAT ARE MY RIGHTS AS A PARTICIPANT?

Taking part in this study is voluntary. You may choose to not take part in the study or to leave the study at any time. If you choose to not participate in the study or to leave the study, your regular care will not be affected nor will your relations with the Medical Center, your physicians, or other personnel. In addition, you will not lose any of the benefits to which you are entitled.

We will tell you about new information that may affect your health, welfare, or participation in this study.
WHOM DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?

For questions about the study or a research-related injury, any problems, unexpected physical or psychological discomforts, or if you think that something unusual or unexpected is happening, call Katherine Lynch, Ph.D. at 914 997 4348 or 914 321 7056.

If you have questions about your rights as a research participant, contact the Medical Center IRB Office.

Direct your questions to:

Institutional Review Board at:
Address: 425 East 61st Street, Suite 301
New York, New York 10021

Telephone: (212) 821-0577

RESEARCHER’S STATEMENT

I have fully explained this study to the subject. As a representative of this study, I have explained the purpose, the procedures, the benefits and risks that are involved in this research study. Any questions that have been raised have been answered to the individual’s satisfaction.

Signature of person obtaining the consent
(Principal Investigator or Co-investigator)  Print Name of Person  Date / Time

SUBJECT’S STATEMENT

I, the undersigned, have been informed about this study’s purpose, procedures, possible benefits and risks, and I have received a copy of this consent. I have been given the opportunity to ask questions before I sign, and I have been told that I can ask other questions at any time. I voluntarily agree to participate in this study. I am free to withdraw from the study at any time without need to justify my decision. This withdrawal will not in any way affect my future treatment or medical management and I will not lose any benefits to which I otherwise am entitled. I agree to cooperate with (name of principal investigator) and the research staff and to inform them immediately if (I / the patient name) experience any unexpected or unusual symptoms.

Signature of Subject  Print Name of Subject  Date / Time

Signature of Legally Authorized Representative
and Relationship to Participant (When Appropriate)

THE NEW YORK PRESBYTERIAN HOSPITAL  IRB #
45108  0705009169
Rev 04-07
APPENDIX J

HIPPA Consent Form

IRB No.: 0705009169

AUTHORIZATION TO USE or DISCLOSE
PROTECTED HEALTH INFORMATION FOR RESEARCH
An additional informed consent document for research participation is also required.

Title of Research Project: The Women’s Inpatient Cognitive Behavioral Therapy Project
Leader of Research Team: Katherine Lynch, Ph.D.
Address: 21 Bloomingdale Road, White Plains, NY 10605
Phone Number: 914 997 4345

Purposes for Using or Sharing Protected Health Information: If you decide to join this research project, the researchers would use your protected health information to examine the effectiveness of the cognitive behavioral treatment program administered on the inpatient unit. The research also aims to increase understanding of how to help patients get the most out of the treatment offered.

If you give permission, Weill Cornell Medical College (WCMC) and/or New York Presbyterian Hospital (NYPH) researchers led by Katherine Lynch, Ph.D. may use or share (disclose) information about you for their research that is considered to be protected health information.

Voluntary Choice: The choice to give WCMC and/or NYPH researchers permission to use or share your protected health information for their research is voluntary. It is completely up to you. No one can force you to give permission. However, you must give permission for WCMC and/or NYPH researchers to use or share your protected health information if you want to participate in the research. If you decline to sign this form, you cannot participate in this research study, because the researchers will not be able to obtain and/or use the information they need in order to conduct their research. Refusing to give permission will not affect your ability to get usual treatment, or health care from WCMC and/or NYPH.

Protected Health Information To Be Used or Shared: Government rules require that researchers get your permission (authorization) to use or share your protected health information. Your medical information may be disclosed to authorized public health or government officials for public health activities when required or authorized by law. If you give permission, the researchers could use or share with the people identified in this authorization any protected health information related to this research from your medical
records and from any test results which includes demographic and medication information, psychological questionnaires, self-report assessments of mood and functioning, personality assessment, intelligence screening, and follow-up questionnaires and telephone interview.

**Other Use and Sharing of Protected Health Information**: If you give permission, the researchers could also use your protected health information to develop new procedures or commercial products. They could share your protected health information with the WCMC-NYPH Institutional Review Board, inspectors who check the research, government agencies and research staff. The researchers could also share your protected health information with other members of your treatment team on the inpatient unit.

The information that may be shared with government agencies could include your medical record and your research record related to this study. They may not be considered covered entities under the Privacy Rule and your information would not be subject to protections under the Privacy Rule.

**Future Research**:
You may agree to allow your data to be used for future research either within or outside WCMC-NYPH. If information goes to an outside entity then the privacy rule may not apply.

**Confidentiality**: Although the researchers may report their findings in scientific journals or meetings, they will not identify you in their reports. Also, the researchers will try to keep your information confidential, but this cannot be guaranteed. The government does not require everyone who might see your information to keep it confidential, so it might not remain private.

**Canceling Permission**: If you give the WCMC and/or NYPH researchers permission to use or share your protected health information, you have the right to cancel your permission whenever you want. However, canceling your permission will not apply to information that the researchers have already used or shared.

**End of Permission**: Unless you cancel it, permission for WCMC and/or NYPH researchers to use or share your protected health information for their research will never end.

**Contacting WMC**: If you have questions about this research study or how your information will be used or disclosed, contact the ‘Leader of Research Team’ on page one of this form. If you wish to revoke your ‘Authorization to Use or Disclose Your Protected Health Information’ in this study you may do so at any time by writing to:
Access to Research Records

During the course of this research study, you will have access to see or copy your protected health information as described in this authorization form in accordance with Weill Cornell Medical College (WCMC) and/or New York Presbyterian Hospital (NYPH) policies. During your participation in this study, you will have access to your research record and any study information that is part of that record.

protected health information as indicated on this form for the research project called: The Women’s Inpatient Cognitive Behavioral Therapy Project.

Subject Name: __________________________________________

_________________________________________________________  __________
Signature of Subject  Date

or Parent if subject is a child

OR

_________________________________________________________  __________
Signature of Legally Authorized Representative**  Date

**If signed by a Legally Authorized Representative of the Subject, provide a description of the relationship to the Subject:

WCMC and/or NYPH may ask you to produce evidence of your relationship.

A signed copy of this form must be given to the Subject or the Legally Authorized Representative.