# Acute Interpersonal Psychotherapy for Major Depressive Disorder: Predictors of Treatment Quality

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ACUTE INTERPERSONAL PSYCHOTHERAPY FOR MAJOR DEPRESSIVE DISORDER: PREDICTORS OF TREATMENT QUALITY

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*Background:* Psychotherapy treatment specificity is the degree to which therapists utilize specific factors and not others of an intended treatment during therapy sessions. In Interpersonal psychotherapy (IPT), increased specificity has been associated with greater efficacy. IPT, however, is a dyadic intervention, and little is known about the relationship between patients' pre-treatment characteristics and IPT specificity. Understanding patient characteristics that predict treatment specificity is crucial for treatment optimization.

*Methods:* Subjects meeting DSM-IV criteria for Major Depressive Disorder were randomly assigned to IPT or escitalopram. Data from a small sub-set of subjects were examined: 20 patients (8 males, 12 females), randomized to receive IPT from one of four study therapists. Subjects remitted with IPT alone. The following predictors were hypothesized to be associated with higher treatment specificity: a) treatment preference match (patients indicating a preference for psychotherapy) as opposed to non-match (patients indicating a preference for medication or no preference); b) lower baseline scores on anxiety spectrum assessments; and, c) higher severity baseline depression scores. Patient/ therapist gender match (female patient matched with female therapist) in comparison to non-gender match (male patient with female therapist) were predicted to produce negligible results.

*Results:* Higher baseline depressive severity predicted higher IPT specificity. Higher baseline depressive severity and preference for no therapy were highly correlated. However, patient treatment preference, therapist/ patient gender match, and anxiety spectrum scores were not related to treatment specificity.

*Implications:* Results suggest that specificity may act as mediator between baseline depressive severity and outcome. Further studies with larger samples are needed.

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# BACKGROUND

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### *Depression*

Depressive disorders are a major public health concern. Depression is among the most common of all psychiatric disorders, occurring 15-20 times as often as schizophrenia and at approximately the same rate as all of the anxiety disorders combined (Butcher, Mineka, & Hooley, 2007). Depression affects individuals from all countries, races, ethnicities, cultures, socio-economic statuses, education levels, and occupations (WHO, 2008). World Health Organization estimates suggest 121 million people suffer from depression globally (WHO, 2008).

*Distinguishing depression as a disorder.* It is crucial to distinguish depressive disorders from "normal" depressions, or feelings of sadness. People experience feelings of sadness throughout their everyday lives as they undergo common life events such as personal, interpersonal, and economic losses (Butcher, Mineka, & Hooley, 2008). Both severity and duration differentiate normal depressive feelings from depressive disorders. Severity is determined both by the number of symptoms experienced as well as by the level of impairment incurred; duration describes how long symptoms last (Butcher, Mineka, & Hooley, 2008).

Feelings of depression, which are not classified as a disorder, include “situational grief” and “postpartum blues”. “Situational” grief would include depression following the death of a loved one. While people responding to the death of a loved one may experience many symptoms of a major depressive disorder (MDD) and may even meet all the necessary criteria, this grief is not considered pathological unless symptoms have not resolved after two months. Postpartum blues are also very common, and are experienced by 50 to 70 percent of women following childbirth (Miller, 2002). While symptoms of depression may be present, absence of adequate severity and duration means that these episodes do not qualify formally as either postpartum depression or an episode of major depressive disorder.

*Types of depression.* Clinical depression can occur in both “bi-polar” and “unipolar” disorders. Bipolar episodes are defined by the presence of depressive, and manic, mixed, or hypomanic episodes. Unipolar disorders occur when an individual experiences only depressive episodes. The following discussion will involve unipolar disorders solely.

Two types of unipolar disorders are “dysthymia” and “major depressive disorder” (MDD). According to the Diagnostic and Statistical Manual of Mental Disorders, volume IV text revision (DSM-IV TR) (2000), dysthymic disorder occurs when an individual experiences a depressed mood for most of the day, for more days than not, for at least 2 years. While depressed, an individual must present with two (or more) of the following symptoms: poor appetite or over eating, insomnia or hypersomnia, low energy or fatigue, low self-esteem, poor concentration or difficulty making decisions, and/or

feelings of hopelessness. Persons experiencing dysthymic disorder do have periods of euthymic mood (i.e. an even mood without depression, hypomania or mania), however they never experience more than two months when criteria delineated above are not present.

Major depressive disorder, which is the focus of discussion hence forward, requires more symptoms than dysthymia with no intermittent periods of euthymia. DSM-IV TR's (2000) defines a condition as a Major Depressive Episode (MDE) when:

A. Five (or more) of the following symptoms have been present during the same two-week period and represent a change from previous functioning: at least one of the symptoms is either 1) depressed mood or 2) loss of interest or pleasure.

(1) Depressed mood most of the day, nearly every day, as indicated by either subjective reports or observation made by others.

(2) Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day.

(3) Significant weight loss (when not dieting) or weight gain.

(4) Insomnia or hypersomnia nearly every day.

(5) Psychomotor agitation or retardation nearly every day.

(6) Fatigue or loss of energy nearly every day.

(7) Feelings of worthlessness or excessive or inappropriate guilt nearly every day.

(8) Diminished ability to think or concentrate, or indecisiveness, nearly every day.

(9) Recurrent thoughts of death or suicide, or recurrent suicidal ideation without plan, or a suicide attempt or plan.

B. The symptoms do not meet criteria for a Mixed Episode.

C. The symptoms cause clinically significant distress or impairment.

D. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism)

E. The symptoms are not better accounted for by bereavement (i.e., after the loss of a loved one). The symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.

An individual is then diagnosed, as defined by the DSMIV TR (2000), with major depressive disorder (MDD) when they demonstrate:

A. Presence of (at least) a single (initial) Major Depressive Episode (MDE)
B. The Major Depressive Episode is not better accounted for by another disorder.
C. There has never been a Manic Episode or a Mixed Episode, or a Hypomanic Episode.

*Subtypes and course of major depressive disorder (MDD).* The course of MDD varies among individuals and includes subtype, recurrence, and the presence or

absence of double depression or a seasonal pattern. There are three subtypes of MDD: major depressive episode (MDE) with melancholic features, with psychotic features, and with atypical features. Each of these subtypes meets the criteria for a MDE, but with additional specifiers. A major depressive episode with melancholic features includes "anhedonia" and at least three of the following: early morning awakenings, diurnal variation (with worse depressive symptoms in the morning), psychomotor retardation or agitation, loss of appetite and weight, inappropriate or excessive guilt, and/or depressed mood markedly different than a non-melancholic depression. Major depressive episode with psychotic features occurs when an individual experiences a loss of contact with reality, hallucinations, and/or delusions. Major depressive episode with atypical features includes mood reactivity and two or more of the following: weight gain or increase in appetite, hypersomnia, leaden paralysis, and/or interpersonal sensitivity.

In addition to the three subtypes of MDD, "double depression" and/or a "seasonal pattern" is also very common. Double depression is present when an individual meets the symptoms for dysthymia while concurrently experiencing an episode of MDD superimposed on their chronic symptoms of dysthymia. On the other hand, seasonal affective disorder is recurrent depressive episodes in a seasonal pattern. When diagnosing MDD, recurrence is also specified. An episode of major depression is either referred to as an "initial" or a "recurrent" episode.

*Etiology of major depressive disorder (MDD).* The etiology of MDD includes only contributory causes of the disorder (or risk factors) which increase the likelihood of an individual experiencing MDD. There are no known necessary or sufficient causes of

MDD (i.e. there is no one cause that must exist for MDD to occur and no one cause that guarantees the occurrence of MDD) (Butcher, Mineka, & Hooley, 2008). Major depressive disorder is determined by multiple biological, psychosocial, and socio-cultural factors.

*Biological causal factors.* Biological causal factors of depression include: genetic influences, neuro-chemical factors, abnormalities of the hormonal regulatory system, neuro-physical and neuro-anatomical influences, and sleep and other biological rhythms. Many individuals suffering from depression have a genetic vulnerability to the disorder. In fact, the prevalence of MDD among first-degree relatives of an individual with MDD is three times higher than in the general population and 31 to 42 percent of the variance in liability for MDD is due to genetic influences (Sullivan, Neale, & Kendler, 2000). Another biological contributory cause of depression is altered neurotransmitter activity. Neurotransmitter activity has been found to play a role in MDD, especially as it interacts with other abnormal hormonal, neuro-physical, and biological rhythm patterns (Garlow & Nemeroff, 2003). Elevated cortisol, a hormone partly regulated by neurotransmitters, has been found in 20-40 percent of depressed outpatients and up to 80 percent of depressed inpatients (Thase et al., 2002). Several abnormalities in neuro-anatomy have also been found in depressed individuals. Depression has been linked to lower levels of brain activity in the left anterior and prefrontal cortex and increased activity in the right anterior and prefrontal cortex, low levels of activity in the anterior cingulated cortex, decreased volume in the orbito-frontal cortex and/or hippocampus, and increased activity in the amygdala (Davidson et al., 2002). Finally, disturbances in

biological rhythms are also a contributory cause to MDD. Approximately 80 percent of depressed inpatients and 50 percent of depressed outpatients experience a variety of sleep disturbances: early morning awakening, poor sleep maintenance, and trouble falling asleep (Butcher, Mineka, & Hooley, 2008). Thase et al (2002) found many depressed individuals demonstrate an increased level of REM sleep and subsequently a decreased amount of deep sleep. Howland & Thase (1999) also found that some depressed patients demonstrate dysfunction in other circadian rhythms, such as, body temperature, and secretion of cortisol, thyroid-stimulating hormone, and growth hormone. Research has also found variations in sleep, activity level, and appetite to be associated with seasonal patterns of light (Butcher, Mineka, & Hooley, 2008).

*Psychosocial causal factors*. In addition to the many biological factors associated with MDD, researchers have found at least as much variance in liability due to psychosocial factors including: stressful life events, various diatheses (vulnerabilities) and psychological theories of depression, indicating a strong gene-environment interaction (Butcher, Mineka, & Hooley, 2008). Severely stressful life events have been found to play a causal role in 20 to 50 percent of cases of MDD, including about 70 percent of initial cases and 40 percent of recurrences (Monroe & Harkness, 2005). Hammen (2005) also found chronic stress to be a contributory factor to MDD. Although independent life events (events not affected by the individual's personality or behavior) and dependent life events (events partially generated by the depressed individual) both precede major depressive episodes, dependent life events are more often attributed to the onset of MDD (Hammen, 2005).

Several protective factors have also been found to decrease the probability of developing MDD when faced with stressful life events or chronic stress including: the existence of an intimate interpersonal relationship, no more than three children at home, having a job outside the home, and being committed religiously (Brown & Harris, 1978). Factors that predispose individuals to depression include personality and cognitive diatheses, such as, neuroticism, introversion, and internal, stable, global attributions (Abramson, 2002; Watson, Gamez, & Simms, 2005). Severe early adversity and parental loss followed by poor parental care are also known risk factors for MDD. These diatheses interact with stress by increasing sensitivity to stressful life events (Bifulco, Brown, & Harris, 1987; Hammen, 2005).

There are also several psychosocial theories of how these risk factors interact with stressful life events to produce an episode of depression, including Beck's cognitive theory, psychodynamic theory, and interpersonal theories. Beck's cognitive theory and the reformulated helplessness and hopelessness theories stress dysfunctional beliefs and pessimistic attributional styles as a diathesis for MDD. On the other hand, psychodynamic and interpersonal theories emphasize early life experiences and interpersonal styles of interaction as diatheses for depression (Butcher, Mineka, & Hooley, 2008). Psychodynamic theories stress the role of anxiety, anger turned inward, and real or symbolic loss as risk factors for depression, while interpersonal theories of depression emphasize lack of social support, and social skill deficits as risk factors.

*Socio-cultural causal factors.* In addition to biological and psychosocial causal factors of MDD, the socio-cultural environment also plays an interactive role in the

development of MDD. Harmful societal influences—low socioeconomic status, unemployment, prejudice and discrimination, social change and uncertainty, and urban stressors, such as, violence and homelessness—are associated with higher levels of depression, largely due to the increasing levels of stress they cause (Caracci & Mezzich, 2001; Kessler et al., 1994; Seligman, 1990).

Although depression is a universal disorder, there are also cross-cultural differences in depressive symptoms and prevalence rates, as well as demographic differences within the United States. For example, Asian and non-developing countries often have lower prevalence rates and more somatic and vegetative symptoms (i.e. more health concerns and little or no physical activity) than developing countries. These differences are attributed to cultural values of collectivism versus values of independence and autonomy. Western values of independence and autonomy encourage internal attributions and correlate loss with helplessness and hopelessness, therefore, producing higher prevalence rates of MDD (Butcher, Mineka, & Hooley, 2008).

*Epidemiology of major depressive disorder (MDD).* Approximately 17 percent of the population in the United States will suffer MDD at some point in their lifetime, while the estimate of people who suffer from MDD within any one given year is about 7 percent (Kessler & Berglund, 2005). In addition, prevalence rates of MDD are much higher for women than men (2:1) (Kessler & Berglund, 2005). High prevalence rates are one reason MDD accounts for such extreme numbers of disability globally (Murphy, Laird, Monson, Sobol, & Leighton, 2000).

*Sequelae/burden of major depressive disorder (MDD): Disability.* When measured by years of living with a disability (YLDs), depression is currently the leading cause of disability in the United States and among the top five causes of disability worldwide (Ustun et al., 2004). In addition, the recurrent nature of MDD contributes to overall disability (Judd, Akiskal, Maser, Zeller, Endicott, Coryell, et al, 1998). Approximately 80 percent of those experiencing an episode of major depression will experience a recurrence at some time in their lifetime, and 90 percent of those experiencing a second episode will have subsequent recurrent episodes (Angst, 1992). Overall, the impairment caused by depression affects physical, psychosocial, and occupational functioning.

*Sequale/burden of major depressive disorder (MDD): Mortality.* In the general population, mortality rates are around 10 – 15 percent. However, major depressive disorder, with its subsequent association with suicide and medical co-morbidities leads to significantly higher mortality rates than those that exist in the general population (Coryell & Winokur, 1992). In fact, people with mood disorders have the highest risk of suicide (about 15 percent) among all people who experience psychiatric disorders. Forty to sixty percent of those who commit suicide have suffered or are currently suffering from a depressive episode. Hence, people suffering from depression are 50 times more likely to commit suicide than their non-depressed counterparts (Stolberg, Clark, & Bongar, 2002).

*Sequelae/burden of major depressive disorder (MDD): Economic/Societal Burden.* Significant societal and economic burden is also associated with this MDD. The economic burden of depression in the United States is estimated at 83 billion dollars annually (Greensburg, Kessler, et al., 2003). This figure represents treatment costs, lost earnings, and lost productivity associated with the illness. Moreover, depression affects not only the individuals suffering from the disorder, but also their family, friends, and communities. In fact, a statistically significant relationship exists between marital distress and one or both spouses suffering from depression (Butcher, Mineka, & Hooley, 2007). In addition, parental depression puts children who may already have a genetic predisposition for MDD at even greater risk for developing the disorder (Goodman & Gotlib, 1999).

*Treatments for major depressive disorder (MDD).* Several treatment modalities have been demonstrated as effective in treating MDD. In fact, these advances in treatment approaches to MDD have led to decreased hospitalization, reduced episode duration, and prevention of relapse and recurrence (Weissman, Markowitz, & Klerman, 2000). These treatment approaches fall into two broad categories, those that are biologically-based (or somatic) treatments, and psychotherapy.

Table 1. Treatments for Major Depressive Disorder (MDD)

| |
|---|
| Biologically Based Treatments |
| Antidepressants |
| Monoamine oxidase inhibitors (MAOIs) |
| Tricyclics (TCAs) |
| Selective serotonin reuptake inhibitors (SSRIs) |
| Atypical antidepressants |
| Electroconvulsive Therapy (ECT) |
| Transcranial Magnetic Stimulation (TMS) |
| Vagal Nerve Stimulation (VNS) |
| Bright Light therapy (Phototherapy) |
| Psychosocial Treatments |
| Cognitive Therapy (CT) |
| Interpersonal Psychotherapy (IPT) |

*Treatments for major depressive disorder (MDD): Biologically-based treatments.* Biologically based treatments, such as antidepressants, electroconvulsive therapy (ECT), transcranial magnetic stimulation (TMS), and vagal nerve stimulation (VNS) have been used most often with severe cases of MDD. Light therapy is usually used for seasonal patterns of depression. The most frequent class of prescribed medicine to treat unipolar MDD are the antidepressants (as summarized in Butcher, Mineka, & Hooley, 2008). Several classes of antidepressants exist including, monoamine oxidase inhibitors (MAOIs), tricyclic antidepressants, selective serotonin reuptake inhibitors (SSRIs), and new atypical antidepressants, all of which act through different neuro-chemical mechanisms, display various side effects, but are comparable in effectiveness.

The first class of antidepressants, MAOIs, developed in the 1950s, is especially effective in treating atypical depression. However, MAOIs have dangerous side effects

which may potentially result in death when foods and beverages with high tyramine content are consumed.

The next class of antidepressants, tricyclic antidepressants (TCAs) have side effects including dry mouth, orthostatic hypotension, double vision, constipation, and cardiac conduction delays (Furukawa, McGuire, & Barbui, 2002). As a result a significant number of patients choose to discontinue this medication without experiencing its full effects. TCAs are also potentially lethal in over-doses and, therefore, inappropriate to prescribe to any patients who presents with suicidal ideation.

Selective serotonin reuptake inhibitors (SSRIs) demonstrate comparable efficacy to TCAs and have fewer and less unpleasant side effects. They are also less dangerous in over doses. Other new atypical antidepressants have also been developed which also tend to have fewer side effects.

In general, antidepressants are found to demonstrate clinically significant responses in about 50 percent of patients. However, 50 percent of those who do not show a significant response to the first antidepressant will demonstrate a clinically significant response when prescribed another antidepressant or a combination of several (Hollon et al., 2002b). Disadvantages to the use of antidepressants include: three to five weeks delay prior to onset of effect, possible relapse if discontinued during remission, and the risk of recurrence (25 percent) even while taken in the maintenance phase of treatment (Solomon, Leon, et al., 2005).

Other biological treatments used in the treatment of unipolar MDD include: electro convulsive therapy (ECT), transcranial magnetic stimulation (TMS), vagal nerve stimulation (VNS), and bright light therapy (Butcher, Mineka, & Hooley, 2008). ECT is

used for severely depressed patients, especially those who present with suicidal risk, and those who are resistant to antidepressants. Patients using ECT normally show improvement within the first few treatments and demonstrate a complete remission within six to 12 weeks. However, ECT causes confusion and may result in short-term memory loss in a significant number of patients. In most studies, TMS has demonstrated effectiveness comparable to ECT and antidepressants and is as advantageous as ECT without adversely affecting cognitive functions or memory (e.g. Janicak et al., 2005; Schulze-Raushenbach et al., 2005). Vagal Nerve Stimulation (VNS) is another treatment option, which has demonstrated efficacy for treatment resistant depression (Groves, Duncan, Brown, & Verity, 2005). Bright light therapy, originally found effective in the treatment of seasonal affective disorder, has also demonstrated effectiveness in treating non-seasonal MDD (Golden et al., 2005).

*Treatments for major depressive disorder (MDD): Rationale for empirically supported treatments (ESTs).* While there are hundreds of psychotherapies used to treat major depressive disorder (MDD), this discussion will focus on empirically supported treatments (ESTs) for MDD. Empirically supported treatments can be defined as specific psychological treatments, which have demonstrated efficacy with a specific population in more than one randomized controlled trial (RCT) (Chambless & Hollon, 1998). Randomized controlled trials include an experimental design where patients are randomized to comparison groups. In order to demonstrate efficacy, a treatment must demonstrate superior results compared with no treatment and/or a comparison treatment, and the RCTs must be preformed by different research teams

(Chambless & Hollon, 1998). Moreover, the results of these RCTs must not be contradicted by other research. Empirically supported treatments (EST) inform clinicians and researchers as to which treatments are effective, within a controlled research setting, for which patients. Two empirically supported treatments for MDD include cognitive behavioral therapy (CBT) and interpersonal psychotherapy (IPT).

*Overview of Treatments for major depressive disorder (MDD): Cognitive behavioral therapy (CBT) and Interpersonal psychotherapy (IPT):* Cognitive Behavioral Therapy (CBT) is an empirically supported treatment (EST) for major depressive disorder (MDD) developed from the theories of A. T. Beck, A. J. Rush, B. F. Shaw, and G. Emery and based on techniques used in Behavior Modification, Cognitive Therapy, and Rational Emotive Behavior Therapy (Jacobson, Dobson, Truax, Adis, Koernu, Gollan, et al., 1996). CBT has demonstrated efficacy in the treatment of MDD in numerous clinical trials (Hollon et al., 2002a, 2002b, 2006; DeRubis et al., 1999). Cognitive behavioral therapy is a brief treatment, (10-20 sessions) focusing on problems of the "here" and "now". It is highly structured and aims to evaluate systematically a patient's negative attributions and self-schemas. The CBT therapist encourages the patient to challenge and test these negative beliefs about themselves and their environment, ultimately relating their negative emotions and beliefs to inaccurate appraisals of events. Theoretically, CBT posits thoughts, feelings, and behaviors are interconnected. CBT aims to change an individual's dysfunctional automatic thoughts, which, in turn, is thought to change the associated feelings as well as behavior.

Interpersonal Psychotherapy (IPT) was developed in the 1970s by Gerald Klerman, Myrna Weissman and colleagues in an effort to create a manualized psychotherapy comparison condition for an early randomized controlled trial (RCT) of pharmacotherapy. Interpersonal psychotherapy (IPT) is a time limited—12-16 weekly therapy sessions—structured, manualized, brief psychotherapy originally developed to treat major depressive disorder (MDD). It has subsequently been adapted to a variety of clinical applications. Fundamentally, IPT builds on the documented link between mood and interpersonal life events. This basic premise is rooted in the interpersonal school of thought, which has demonstrated empirically that interpersonal relations are linked to depressed mood and depressed mood impairs interpersonal functioning (Weissman, Markowitz, & Klerman, 2000). Three additional individuals within the interpersonal school who influenced the development of IPT were Adolf Meyer, Harry Stack Sullivan, and John Bowlby. Adolf Meyer introduced the psychobiological approach to psychiatric illness, in which the biological, psychological, and social context of the disorder was thoroughly investigated (Meyer, 1957). Harry Stack Sullivan focused on the interactional effects of psychiatric illness. Sullivan saw cultural and interpersonal sources as primary factors in the genesis of psychiatric illness and popularized the term, “interpersonal” (Sullivan, 1953). Finally, John Bowlby’s pioneering work in attachment theory led to the idea that attachment was crucial to survival and development. He highlighted the relationship between depressed mood and problems in interpersonal relationships or inadequate social bonding (Bowlby, 1969). Combined, these three perspectives provided a theoretical context for IPT.

Cognitive behavioral therapy (CBT) and interpersonal psychotherapy (IPT) have many similarities, yet contrastable differences. Both therapies are manual-based, empirically supported, time-limited brief psychotherapies originally designed and tested to treat major depressive disorder (MDD). CBT and IPT, however, differ in theory and procedure (Klerman & Weissman, 1993). CBT arises from a combination of behavioral modification techniques and cognitive therapy techniques, whereas IPT's origin's lie in the interpersonal school of thought. Therapists utilizing both approaches take an active role and collaboratively work with the patient. However, cognitive behavioral therapists encourage empirically testing negative maladaptive thoughts through homework, while IPT therapists focus on feelings and interpersonal relationships. IPT therapists typically assign interpersonal assignments to encourage the patient to re-engage in relationships and activities as well as practice interpersonal skills. Therefore, while both approaches utilize homework, IPT assignments are loosely defined and lack the systematic format of CBT's homework assignments. CBT challenges a person's self-image which is viewed as responsible for their continuing depression, while the IPT therapist views negative self-image as a component of symptom presentation and supports the hypothesis that negative self-images will naturally resolve as interpersonal problems are addressed and symptoms alleviate.

*Interpersonal Psychotherapy (IPT)*

IPT was developed by identifying and specifying particularly successful techniques in treating MDD (the “kind of therapy people do in real life”) (Weissman, Markowitz, & Klerman, 2000). In creating IPT, Klerman, Weissman, and colleagues codified psychotherapy techniques they saw clinicians performing effectively in community mental health settings. They created a manual outlining the specific steps involved in treatment, preserving clear guidelines that could be followed in subsequent research, while also maintaining enough flexibility to allow clinicians to individualize IPT.

IPT claims no direct causal explanation for depression. Instead, IPT maintains that depression is caused by multiple variables (both genetic and environmental) presenting heterogeneously within different individuals (Weissman, Markowitz, & Klerman, 2000). Approaching major depression as a medical disorder, IPT asserts that individuals who develop a major depressive episode were born with a biological vulnerability to depressive mood disorders. However, IPT maintains that interpersonal events are also linked to the development and maintenance of depressive episodes. In other words, interpersonal problems do not cause depression; however, they may interact with an individual’s predisposition to the illness to result in the genesis of mood episodes. The link between mood and interpersonal events is thought of as cyclical in IPT. A depressed mood can aggravate an already sensitive interpersonal relationship and stressful interpersonal relations can contribute to both the beginning of a depressive episode and its continuation.

IPT conceptualizes depression as containing three components: symptom formation, social functioning, and personality. IPT addresses symptom formation and social functioning, with the goal of reducing depressive symptoms and improving interpersonal relations, while clearly stating that it does not attempt to change personality (Weissman, Markowitz, & Klerman, 2000).

IPT may not suitable for all individuals affected by depression. Specifically, IPT is appropriate when the link can be made between the current depressive episode's onset and a life event. Suitability for IPT also may be contingent upon the availability of a social support network utilized to improve interpersonal functioning. In its original format, it is not appropriate for episodes of depression linked to substance abuse, a general medical condition, bipolarity or psychosis. Other indications that IPT may not be suitable include the presence of: *severe* suicidal or homicidal risk, cognitive deficits, or interpersonal deficits (Weissman, Markowitz, & Klerman, 2000).

Interpersonal psychotherapy conceptualizes the life events precipitating or exacerbating a major depressive episode within four problem areas. The four problem areas are: "grief", "role disputes", "role transitions", and "interpersonal deficits". Each problem area is associated with its own treatment goals and strategies (Henderson, 1977; Maddison, 1968; Maddison & Walker, 1967; Overholser & Adams, 1997; Paykel et al., 1969; Pearlin & Lieberman, 1977; Walker et al., 1977).

"Grief" is a complicated or prolonged bereavement period due to the death of a significant interpersonal relation (Weissman, Markowitz, & Klerman, 2000). When "grief" is selected as the IPT problem, the goals of treatment are to assist the mourning process and to aid the patient in re-establishing relationships and interpersonal

activities. This is done by reconstructing the relationship with the deceased person, eliciting details surrounding the death of the individual, highlighting both positive and negative aspects and feelings associated with the relationship, and re-engaging in relationships and activities.

"Role transition" refers to a recent change in an interpersonal role due to a significant life change (i.e., divorce, moving, changing jobs, becoming a parent, etc.) (Weissman, Markowitz, & Klerman, 2000). When a role transition is selected as the IPT problem area, the goals of treatment are to mourn and accept the loss of the old role, find positive aspects of the new role, and establish self-efficacy by mastering the new role. This is done by reviewing positive and negative aspects and feelings associated with both the old and new roles, and engaging in the new role by developing social supports and new skills.

"Interpersonal disputes" are marked by non-reciprocal role expectations between the patient and a significant other (i.e. a spouse, child, parent, boss, etc.) due to a recent dispute (Weissman, Markowitz, & Klerman, 2000). When an interpersonal dispute is selected as the IPT problem area, the goals of treatment are to identify the dispute and its current stage— renegotiation, impasse or dissolution—and develop a plan, which includes modifying expectations and communication patterns to reach a resolution. Strategies include: examining the role of nonreciprocal role expectations' contribution to the dispute and finding a common pattern in other relationships.

Lastly, "interpersonal deficits" are conceptualized to the patient as a pattern of interpersonal disappointments often due to social isolation and communication difficulties (i.e., the individual has a prolonged pattern of few to no significant

interpersonal relationships due mainly to their interpersonal style of interaction) (Weissman, Markowitz, & Klerman, 2000). Interpersonal deficits are considered a problem area of “last resort”—i.e. a therapist will preferentially select one of the other three problem areas whenever possible (even though most individuals with MDD have some degree of interpersonal deficits in addition to the other problem that serves as the explicit focus of treatment). In the event that interpersonal deficits is selected as the problem area, the goals of treatment will include: reducing social isolation and forming new relationships. Strategies used include: reviewing positive and negative aspects of past relationships, identifying relationship patterns, and utilizing the therapeutic relationship to distinguish parallels in other relationships.

IPT treatment involves three main phases: initial phase, middle phase and termination phase. Each phase of treatment has specific goals and utilizes various therapeutic techniques.

The initial phase of IPT lasts approximately three sessions and has five major goals. These goals include: diagnosing depression, completing an interpersonal inventory, identifying an interpersonal problem area, and setting a treatment contract (Weissman, Markowitz, & Klerman, 2000). When diagnosing the depression, the therapist reviews the patient’s symptoms, course of illness, and identifies any co-morbidity, while conducting a “history of depression timeline”. This timeline outlines the patient’s current and past episodes of depression (including severity and symptoms) and life events associated with each episode. Attention is focused on the present major depressive episode; however, patterns of interpersonal problems preceding the depressive episode are also noted. The therapist also uses psycho-education to

normalize depression to the patient. The patient is familiarized with the medical model of depression, where depression is conceptualized as a medical illness comparable to other medical conditions in course and treatment, such as, diabetes. Within this model, the patient is given the, “sick role” and encouraged to, “blame the depression” for their current impairments, thus temporarily excusing them from some social and occupational tasks in order to focus on treating and resolving their depressive symptoms. The interpersonal inventory is a comprehensive review of the patients past and current significant relationships. Both the depression timeline and interpersonal inventory are used to establish an interpersonal case formulation, identifying a primary and (occasionally) secondary problem area relating the current depressive episode to its interpersonal context. After the interpersonal case formulation the therapist explains IPT to the patient. Agreement is reached between therapist and patient on a primary problem area. A specific treatment contract delineating the amount, and length of sessions is also agreed upon (normally 12-16, 45-60 minute weekly sessions).

After presenting the interpersonal case formulation and agreeing on a treatment contract, the therapist–patient dyad move to the middle phase of treatment (approximately sessions four to 12). The middle phase is devoted to on resolving the interpersonal problem area. Each week the patient’s symptoms are assessed systematically with a standard depression measure [e.g. the Hamilton rating scale for depression (HRSD)]. The therapist and patient link current mood and interpersonal events to the identified problem area, focusing on the problem area’s goals and utilizing specific strategies described above.

Other specific techniques used in IPT, especially during the middle phase, include: exploration and clarification, encouraging and identifying affect, communication analysis, decision analysis, and role playing (Weissman, Markowitz, & Klerman, 2000). Exploration is construed as using open-ended questions followed by specific close-ended questions. Clarification entails rephrasing the patient's words focusing on the interpersonal elements and their connection to mood changes. Encouraging and identifying affect includes the therapist eliciting specific emotions related to interpersonal relationships and events, exploring how to use affect within interpersonal relationships, highlighting avoidance and facilitating the acceptance of painful emotions, and exploring emotion regulation, developing new skills. Communication analysis involves the therapist eliciting a detailed account—including tone, setting, affect, non-verbal behavior, and specific words used—of a specific conversation with a significant other. The therapist highlights ambiguous communication, identifies non-reciprocal role expectations, and assists the patient with communicating directly and effectively. Decision analysis necessitates identifying alternative courses of action when faced with a decision and highlighting the pros and cons of each alternative. Role-playing often follows communication analysis and involves the therapist taking the role of the patient or their significant other, while the patient demonstrates their communication patterns, and associated affect. Role-playing is used to identify effective and non-effective communication. Assertiveness and other communication skills are also rehearsed via role play. While some of these techniques are used more frequently in particular problem areas, they all can be utilized across problem areas.

The termination phase (approximately sessions 13-16) is the last phase of acute treatment in interpersonal psychotherapy (IPT). Termination involves reviewing therapeutic gains, identifying potential triggers of new mood episodes and developing a prevention plan, graduating from treatment, addressing non-response (if necessary), making appropriate referrals, and discussing the option and benefit of maintenance, continuation, or booster sessions.

*Interpersonal psychotherapy (IPT): Efficacy.* IPT has demonstrated efficacy in the treatment of outpatient MDD, comparable to that of antidepressants (Weissman, Markowitz, & Klerman, 2000). Unlike most psychotherapies, IPT has been rigorously evaluated in numerous clinical trials. Results of these trials suggest IPT is as efficacious as pharmacotherapy and other psychotherapies (Weissman, Markowitz, & Klerman, 2000) for the treatment of mild to moderate MDD.

Interpersonal psychotherapy (IPT) was first recognized as effective as a treatment for MDD when used as a treatment condition in the New-Haven-Boston Collaborative Depression Research Project. IPT was specifically evaluated as an acute treatment for depression after various replications of this study and when compared with no treatment or a comparison treatment condition (DiMascio, Weissman, Prusoff, Neu, Zwilling, & Klerman, 1979; Elkin, Shea, Watkins, Imber, Sotsky, Collins, et al., 1989; Klerman, DiMascio, Weissman, Prusoff, & Paykel, 1974). DiMascio et al. (1979) found that IPT and pharmacotherapy (amitriptyline) demonstrated comparable results, both showing greater efficacy than the control group (nonscheduled supportive psychotherapy). In addition, combined IPT and pharmacotherapy produced additive

effects with the most significant reduction in symptoms. Elkin et al. (1989) found comparable results for interpersonal psychotherapy (IPT), cognitive behavioral therapy (CBT), and pharmacotherapy (imipramine) plus clinical management, with greater effectiveness for IPT and pharmacotherapy plus clinical management when treating more severely depressed patients. These studies provided support for IPT as equally or more effective than “pharmacotherapy”, “other psychotherapies” and “no psychotherapy” conditions.

The focus on empirical support for the efficacy of CBT and IPT distinguishes these treatments from studies of psychodynamic psychotherapies where much of the focus has been on the process of psychotherapy with little attention paid to systematic measurement of outcomes in the disorder. More recently, however, both CBT and IPT researchers have turned their attention to the relation between psychotherapy process and outcome.

## Psychotherapy Process/Outcome Research

Psychotherapy process/outcome research is recognized as having three distinct periods during which research has grown immensely, and also attracted considerable debate (Maccarelli, 2001). The first period of psychotherapy outcome research was conducted during the 1950s through the late 1960s. Research during this period focused on the effect of psychotherapies on personality. However, significant problems in research

design and methodology are noted as occurring during this period (Drozd & Goldfried, 1996).

The second period of psychotherapy research, (circa 1970s) addressed many of the earlier concerns with research design and methodology and introduced the use of treatment manuals in order to standardize treatment (Drozd & Goldfried, 1996; Goldfried & Wolfe, 1998). This period focused on specific techniques found to be effective in the treatment of particular clinical disorders (Drozd & Goldfried, 1996).

The third period of psychotherapy research began in the 1980s and continues to develop today. This period has continued to focus on specificity, i.e. specific procedures effective in treating specific disorders. However, it is noted for the use of randomized clinical trials (RCTs) to determine which manual-based treatment model, [identified as an empirically supported treatment (EST)] is most effective in treating specific DSM Axis I disorders (Drozd & Goldfried, 1996). Throughout these three periods, concerns have been raised consistently about how to translate specific psychotherapies from a formal research setting to the mental health community.

Currently, research also focuses on the necessity of linking process and outcome (Hayes, Cantonguay, & Goldfried, 1996). Outcome research determines the impact of a specific psychotherapy in treating specific disorders. Existing research suggests certain psychotherapies produce favorable outcomes when used to treat specific clinical disorders (e.g. IPT is efficacious in the treatment of MDD). Process research examines specific techniques used within a particular treatment modality and the extent to which they are utilized as delineated in the treatment manual.

Moreover, existing research suggests that fidelity to treatment manuals are linked to positive outcomes (Luborsky, McLellan, Woody, O'Brien, & Auberach, 1985; Schulte, Kunzel, Pepping, & Schulte-Bahrenberg, 1992). However, which specific mechanisms within these treatments account for their positive outcomes? Psychotherapy process-outcome research combines the two approaches seeking to quantify specificity by identifying specific mechanisms within psychotherapy that account for positive outcomes. Process-outcome research seeks to identify appropriate measures to assess treatment fidelity in administering psychotherapy.

To understand the importance of adherence measures to empirically supported treatments (ESTs), the role of manual-based psychotherapy must be discussed. In order to enhance the validity of findings and demonstrate the value of psychotherapy to policymakers and third party payers, the past few decades have increasingly focused on psychotherapy research's imitation of drug efficacy studies (Addis, 1997). Psychotherapy research has focused on using structured and specified treatment manuals in an effort to homogeneously deliver differential treatment within the context of randomized controlled trials (RCTs) (Miller & Binder, 2002). However, homogenous treatment cannot be assured solely by the use of treatment manuals (Miller &Binder, 2002). Reliable and valid measurement of treatment fidelity is essential.

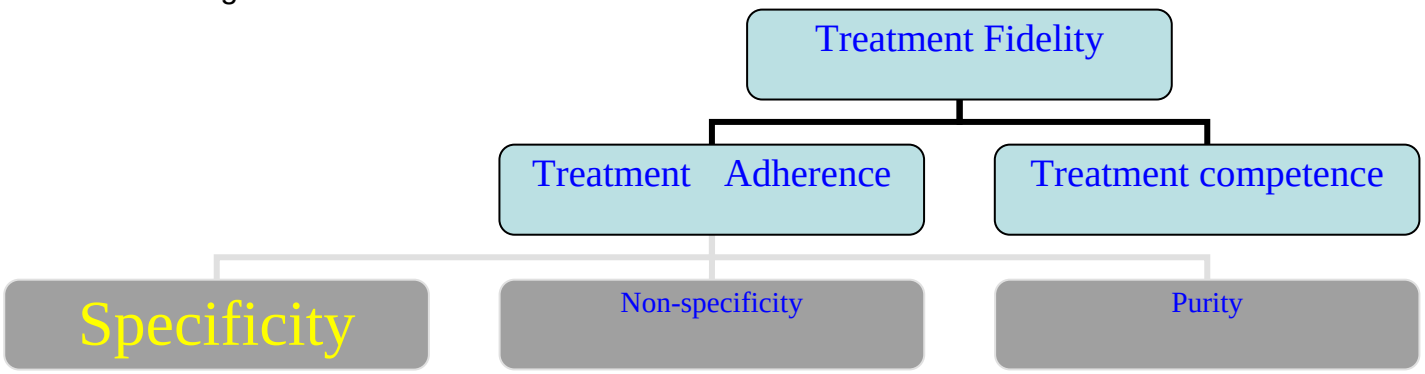
*Treatment fidelity*

"Treatment fidelity" is an encompassing expression, used inconsistently throughout literature. Treatment fidelity can be broken into two components (also used

interchangeably in the literature) “treatment adherence” and “treatment competence”. For the purposes of this discussion “treatment adherence” is defined as consisting of both the therapist’s and patient’s behaviors; it is an assessment of the extent to which elements specified for a particular treatment are present in the therapeutic encounter. Treatment competence (consisting only of the therapist’s behaviors) assesses the adequacy with which the therapist utilizes elements specified in the treatment manual (Santangelo, 1995). Therefore, while a therapist may be adherent without necessarily being competent, a therapist cannot be competent unless they are adherent. While the focus of this discussion is on treatment adherence, it is important to note that treatment competence has been found as a more comprehensive measure of treatment fidelity and more closely related to therapeutic outcome. However, few studies measure competence, because measuring competence demands significantly more time (therefore funding) to examine (Miller & Binder, 2002).

For the purposes of this discussion, treatment adherence is comprised of three measures: a) specificity, the extent to which the therapeutic encounter includes techniques specific to the treatment (e.g., communication analysis in interpersonal psychotherapy (IPT)), b) non-specificity, the extent to which essential techniques universal to therapeutic encounters are included (e.g., therapeutic alliance, healing context, empathy), and c) purity, the extent to which techniques specific to other treatments, but not the intended treatment are present (e.g., examining maladaptive self-schemas within the context of IPT, as opposed to, cognitive behavioral therapy (CBT)).

Figure 1.




There is considerable debate concerning which components of adherence account for positive therapeutic outcomes. Outcomes of some research suggest treatment specificity and purity are responsible for outcomes in efficacious treatments (e.g. Barber, Crits-Christoph, & Luborsky 1997; Crits-Christoph, 1997; De Rubis & Cris-Christoph, 1998; De Rubeis et al., 1990; De Rubeis & Feeley, 1990; Frank, Kupfer, Wagner, McEachran, & Cornes, 1991 Task Force on Promotion and Dissemination of Psychological Procedures, 1995; Waltz, Addis, Koerner & Jacobson, 1993; Wilson, 1996).

While the role of non-specific effects is not disputed in the present dialogue, the focus of this discussion is on treatment specificity. The studies discussing treatment specificity in relation to therapeutic outcome are limited in number and often produce inadequate findings and questionable methodology, Therefore studies analyzing any kind of treatment fidelity (i.e. treatment adherence, including specificity, and/or treatment competence) will be discussed, due to their conceptual similarity and the literature's tendency to use the two terms interchangeably. However, it is important to note there is a limited amount of evidence suggesting that treatment competence and

adherence can be collapsed into one measure or that treatment adherence can substitute for treatment competence measures (Miller & Binder, 2002).

To date, few studies have examined the relationship of treatment fidelity to treatment outcome in psychotherapy (Barber, Crits-Cristoph, & Luborsky, 1996; Frank, Kupfer, Wagner, McEachran, & Cornes, 1991; Luborsky, McLelland, Woody, O'Brien, and Auerbach, 1985; O'Malley et al., 1988; Shapiro & Firth, 1987; Sotsky, Elkin, Watkins, Collins, Shea, & Leber, 1990). In the following section, the vast majority of studies present evidence on the positive relationship between treatment fidelity and therapeutic outcome. This will be followed by a review of studies which have found inconclusive results or dispute this relationship. Criticism and limitations of studies will conclude this section.

Table 2. Treatment Fidelity Literature

| Author & Year | Study Hypothesis | Findings |
|---|---|---|
| Barber, Crits-Cristoph, & Luborsky, 1996 | Therapist competence is related to positive therapeutic outcome. | Positive outcome related to competence in Supportive-expressive dynamic therapy |
| Frank, Kupfer, Wagner, McEachran, & Cornes, 1991 | Patients experiencing higher treatment specificity will have longer survival rates without an episode of depression. | Patients with higher treatment specificity had longer survival rates in Maintenance Interpersonal Psychotherapy (IPT-M) |
| Luborsky, McLelland, Woody, O'Brien, and Auerbach, 1985 | Specificity and purity will be positively correlated with outcome. | Strong positive correlation between both specificity and purity with outcome in Supportive-expressive therapy |
| O'Malley et al., 1988 | Greater competence will be associated with greater patient improvement | Moderate positive relationship found between therapist competence and patient reported outcomes in Interpersonal Psychotherapy |
| Shaw et al., 1999 | Higher competence levels will be related to better treatment outcomes | Limited support for a relationship between therapist competence and better treatment outcomes |
| Shapiro & Firth, 1987 | Specificity will be positively correlated to outcome. | Specificity was not related to outcome in Psychodynamic Interpersonal Treatment and Cognitive Behavioral Therapy |
| Svartberg & Stiles, 1994 | Therapist competence and outcome will be positively correlated. | Negative relationship found between competence and anxiety-provoking therapy |

Several studies present evidence of the positive relationship between treatment fidelity on therapeutic outcome (Barber, Crits-Cristoph, & Luborsky, 1996; Frank, Kupfer, Wagner, McEachran, & Cornes, 1991; Luborsky, McLelland, Woody, O'Brien, and Auerbach, 1985; O'Malley et al., 1988). Luborsky, McLelland, Woody, O'Brien, and Auerbach (1985) examined treatment specificity and purity in relation to differential

treatment environments including: drug counseling, supportive-expressive therapy, and CBT. They found a positive correlation between specificity of supportive-expressive items and outcome, and a strong correlation between purity and outcome. That is, the more a therapist used mode-specific items uncontaminated by other therapeutic modalities' mode-specific items, the more positive the outcome for the patient. Elkin (1992), however, cited a lack of psychometric development and a small number of items as limitations in Luborsky et al. (1985) measure of purity. In a multisite outcome study of manual-based IPT, O'Malley et al., (1988) found a moderate relationship (r=.56) between therapist competence and patient-reported outcomes. Evidence supporting correlations between specificity and outcome were limited in the Treatment of Depression Collaborative Research Program (TDCRP), a randomized control clinical trial, where patients were randomized to interpersonal psychotherapy (IPT), cognitive behavior therapy (CBT), imipramine hydrochloride plus clinical management (as a standard reference treatment), or placebo plus clinical management. However, limitations in methodology—such as, adequacy of the design, relevance of measures and time of their application—undermine the reliability and validity of these findings (Sotsky, Elkin, Watkins, Collins, Shea, & Leber, 1990). In supportive-expressive (SE) dynamic therapy, positive outcome was significantly related to the competent delivery of expressive therapeutic techniques (Barber, Crits-Cristoph, & Luborsky, 1996). Thus several studies support the relationship between treatment fidelity and positive therapeutic outcomes, however, evidence and reliability and validity of methodology has varied.

Treatment specificity has also been associated with significantly increased survival time and prophylactic benefit in maintenance IPT (Frank, E., Kupfer, D.J., Wagner, E.F., McEachran, A.B., & Cornes, C., 1991). Frank et al. (1991) found that patients experiencing higher treatment specificity had increasingly longer survival rates. In relation to treatment purity, Frank et al. (1991) found patients with the longest survival time experienced treatment pure of somatic items, but not of cognitive items. They noted the cognitive items, which appeared in patients with the longest survival times, while not specific to IPT, were not contradictory to treatment manual guidelines. These findings relating treatment specificity to positive therapeutic outcome in maintenance IPT suggest similar findings would theoretically appear in acute IPT.

On the other hand, some studies have failed to find a positive correlation between treatment fidelity and positive outcomes (Shaw, et al., 1999; Shapiro & Firth, 1987). Analysis of the first Sheffield Psychotherapy Project—a crossover design in which participants diagnosed with depression or anxiety were treated with psychodynamic-Interpersonal treatment (PI) and cognitive behavioral therapy (CBT)—produced negligible correlations between treatment specificity and outcome (Shapiro & Firth, 1987). However, Stiles & Shapiro (1994) concluded the methodology in this study was flawed. Site and Shapiro stressed the importance of controlling for therapist and patient variables, concluding “paradoxically, finding flaws in the process-outcome correlation logic may restore confidence or at least, hope in the efficacy of process components. One cannot legitimately infer from the negligible correlations with outcome (found in the Sheffield Project) that they are inert ingredients,” (Stiles & Shapiro, 1994, p.947).

Two additional studies found a lack of a relationship or a negative relationship between therapist competence in manual-based cognitive therapy (CT) (Shaw et al., 1999) and anxiety-provoking psychotherapy (Svartberg & Stiles, 1994). However, the authors of both findings consider the lack of a positive relationship to be attributed to training or measurement deficiencies.

While some studies have found no relationship or a negative relationship between treatment fidelity and outcomes (Shaw et al., 1999; Svartberg & Stiles, 1994), these studies contained major limitations with their authors questioning the validity of their own findings. Yet, though evidence is limited and methodology is also criticized in studies supporting a positive relationship between treatment fidelity and therapeutic outcome, the majority of studies (Barber, Crits-Cristoph, & Luborsky, 1996; Frank, Kupfer, Wagner, McEachran, & Cornes, 1991; Luborsky, McLelland, Woody, O'Brien, and Auerbach, 1985; O'Malley et al., 1988) favor this positive relationship.

*Patient variables*

Inconsistency in study findings may be the result of the role of patient and therapist variables (Stiles & Shapiro, 1994). In fact, Bertman (2005) found that specificity of therapy accounts for 15% of therapeutic outcome, while 55% change in therapeutic outcome was due to patient variables. While therapist variables are an important factor when considering the relationship between treatment specificity and outcome, this discussion will be limited to the impact of patient variables.

In order to understand patients' differential response to various treatments, patient characteristics have been considered in relationship to outcome. Study of patient characteristics in relation to outcome, however, has resulted in inconsistent findings (Sotsky, Glass, Shea, Pilkonis, Collins, Elkin, et al., 1991). These inconsistent findings can be attributable to several factors. First, different patient characteristics could be predictive of response to treatment in general, therefore impacting non-specific aspects of treatments for depression. Second, some patient characteristics may predict differential response to various treatments, therefore indicating their relationship with treatment specificity (Sotsky, Glass, Shea, et al., 1991). Another reason for lack of consensus on the impact of patient characteristics is the use of inconsistent methodology. The predictive value of patient characteristics has generally been studied using various treatments, small heterogeneous samples, inconsistent measures and adherence to treatment models, variable inclusion/exclusion criteria, and differences in outcome measures and operations definitions (Sotsky, Glass, Shea, et al., 1991).

Limited literature exists suggesting the predictive value of patient characteristics to treatment specificity. Therefore, literature examining patient characteristic to both process and outcome of psychotherapy will be discussed. While the relationship of many predictors has been discussed in previous literature, the present dialogue is limited to the following predictors: a) treatment preference match (i.e. patients indicating a preference for psychotherapy) as opposed to non-match (i.e. patients indicating a preference for medication or no preference), b) patient/ therapist gender match c) presence of anxious depression, and d) severity in baseline depression scores.

*Defining risk factors.* The current discussion concerns proposed predictors of treatment specificity. However, the terms “predictor”, “moderator”, and “mediator” have been used interchangeably as well. Therefore, Kraemer et al. (2001; 2000)’s conceptualization and operational definitions delineating the difference between risk factors—treatment moderators, mediators, and predictors— will be used for the purposes of the current discussion. Proposed risk factors, including patient characteristics, can have four possible relationships with the dependent variable (i.e. treatment specificity) or treatment outcome. A) The characteristic can be irrelevant to outcome. B) The characteristic can moderate outcome and is, therefore, a moderator (i.e. the moderator is a pre-treatment/baseline characteristic, uncorrelated with treatment, and has an interactive effect [with or without a main effect] on the outcome). If this is the case, the interactive effect indicates that individual participants’ treatment effect depends on the moderator in question, and thus differs among treatment arms. C) The characteristic is a nonspecific predictor of outcome (i.e. the proposed risk factor is, a pre-treatment/baseline characteristic, is uncorrelated with treatment, and has a main effect but no interactive effect on outcome). And, finally, D) The characteristic in question may mediate outcome.

Overall the main difference between moderators, mediators, and predictors is that, a mediator is a variable occurring during treatment that is associated with the dependent variable, while moderators and predictors are pre-treatment characteristics with no association with the dependent variable. Moderators and predictors vary in that moderators have an interaction effect with outcome, whereas, predictors do not.

*Treatment Preference.* One potential predictor of interpersonal psychotherapy treatment specificity is treatment preference. No known studies have examined the effect of patient treatment preference on treatment specificity. A paucity of studies have analyzed the effect of patient treatment preference on therapeutic outcome, reporting mixed results. One review (Van Schaik et al., 2004) found six randomized or partially randomized trials which examined patient treatment preference within the primary care setting. These studies all demonstrated a majority of patients preferred psychotherapy/counseling compared to medication, however, the degree of difference was variable. The impact of these preferences has been ambiguous. Several studies reported treatment preference had no effect on differential therapeutic outcome (e.g. Kelly, Rucci, Boland, Maggi, Benvenuti, Cassano, et al., submitted; Lejkin, DeRubeis, Gallop, Amsterdam, Shelton & Hollon, 2007). However, a majority of studies demonstrated a positive relationship between patient preference match and patient adherence to treatment, increased therapeutic alliance, and/or improved clinical outcome (Chilvers, Dewey, Fielding, et al., 2001; Hermens, Van Hout, Terluin, et al., 2007; Iacoviello, McCarthy, Barrett, et al., 2007; Lin, Campbell, Chaney, et al., 2005).

*Therapist/patient gender match.* Therapist/patient gender match is another possible predictor of interpersonal psychotherapy (IPT) specificity. Although previous investigations provide some insight into this variable, research in this area has focused on the relationship between therapist/patient gender match and psychotherapeutic outcome as opposed to therapist/patient gender match and IPT specificity. It has been hypothesized that therapist/patient gender match, especially between female therapist

and female patients results in better therapeutic outcome, due to findings that female therapists demonstrate more empathy and are not as likely to disempower patients (Kaplan, 1985; Rice & Rice, 1973). Theoretically, it has been argued there are significant differences between men and women in psychological processing and growth (Miller, 1984), communication (Tannen, 1990), and intimacy in relationships (Belle, 1982). Some empirical evidence link therapist/patient gender match to process and outcome of psychotherapy (Cottone, Drucker, & Javier, 2002; Jones, Krupnick, & Kerig, 1987; Jones & Zoppel, 1982; Wintersteen, Mesinger, & Diamond, 2005). These studies have found that patient/ therapist gender match produces better outcomes, retention, and/or therapeutic alliance. Therefore, supporting a positive relationship between therapist/patient gender match and both therapeutic process and outcome. A majority of researchers, however, have concluded there is not significant evidence for a significant relationship (e.g. Beutler, Crago, & Arizmendi, 1986; Garfield, 1994; Parloff, Waskow, & Wolfe, 1978; Zlotnick, Elkin, and Shea, 1998). In addition, the literature consistently finds the therapist/patient gender match is more significantly linked to psychotherapy process and outcome in inexperienced to moderately experienced therapists when compared with highly trained and experienced therapists (Zlotnick, Elkin, and Shea, 1998).

*Baseline anxiety spectrum scores.* A further possible predictor of treatment specificity are baseline anxiety spectrum scores (i.e. subthreshold anxiety scores at a clinically significant level, although not necessarily meeting DSM-IV TR criteria for a specific co-morbid anxiety disorder, also known as anxious depression). Although no

studies have linked anxious depression to treatment specificity, there is evidence of a positive relationship between anxious depression and therapeutic outcome. One report cites half of outpatients with Major Depressive Disorder (MDD) have clinically meaningful levels of anxiety (Fava, Rush, Alpert, Balasubramani, Wisniewski, Carmin, et al., 2008). Fava et al., (2008) define clinically meaningful anxiety in this context as anxious depression (determined by the cutoff of the anxiety-somatization factor of HAM-D). The prevalence of anxious depression, defined as increased anxiety symptoms, was similarly 46 percent in a previous study (Fava, Alpert, Carmin, Wisniewski, Trivedi, Biggs, Shores-Wilson, et al., 2004). It has also been found that individuals with anxious depression have significantly poorer outcomes in treatment than individuals experiencing depression without a characterization of anxious depression (Clayton, Grove, Coryell, Keller, Hirschfeld, & Fawcett, 1991; Fava et al., 2008). Therefore, there is evidence of a high prevalence of anxious depression in individuals suffering from MDD with these individuals having been found to experience significantly poorer outcomes than individuals with MDD who are not anxiously depressed.

*Baseline depressive severity.* The final patient characteristic under discussion is baseline depressive severity. The literature suggests different effects in the relationship between baseline depressive severity and therapeutic outcome with modes of treatment delivery (Van, Schoevers, and Dekker, 2008).

A majority of studies using antidepressants concluded that increased baseline depressive severity correlated positively with improved outcome. (controlling for baseline depressive severity). In a meta-analysis of 45 studies, increased baseline

depressive severity was associated with better outcome (r = 0.45; p< 0.001) ( Kahn, Leventhal, Khan, & Brown, 2002). In addition, Woody, McClellan, Luborsky, et al. (1984) also found that more severely depressed patients had better outcomes. However, contrastingly, six studies found that baseline depressive severity and outcome were inversely related (Brown, Schulberg, & Prigerson, 2000; Hollon, DeRubeis, & Evans, et al.,1992; Joffe, Young, Levitt, MacQueen, Marriott, & Robb,1999; Simmons, Lustman, Wetzel, et al., 1985; Tedlow, Fava, Uebelacker, Nierenberg, Alpert, & Rosenbaum,1998; Trivedi, Rush, & Wisniewski, et al., 2006) and eight found no effect (Aberg-Wistedt, Agren, Ekselus, Bengtson, & Akerblad, 2000; Entsuah, Rudolf, & Chitra,1995; Lowe, Schenkel, Bair, & G¨obel, 2005).

With regard to psychotherapy, three studies found an inverse relationship between baseline depressive severity and outcome when using CBT (Elkin, Gibbons, & Shea, et al., 1995; Jarrett, Eaves, Grannemann, & Rush,1991; Thase, Reynolds, & Frank, et al.,1994), one study found a positive correlation (Hollon, DeRubeis, Evans, et al., 1992) and one study reported no correlation (Shapiro, Barkham, Rees, Hardy, Reynolds, & Startuo, 1994). When investigating the relationship between baseline depressive severity and outcome in IPT, one study found a positive correlation (Elkin Gibbons, Shea, et al., 1995) and three studies found no effect (Van, Dekker, Kool, Peen, de Jonghe, & Schoevers, on file with author; Brown, Schulberg, & Prigerson, 2000; Shapiro, Barkham, Rees, Hardy, Reynolds, & Startuo;1994).

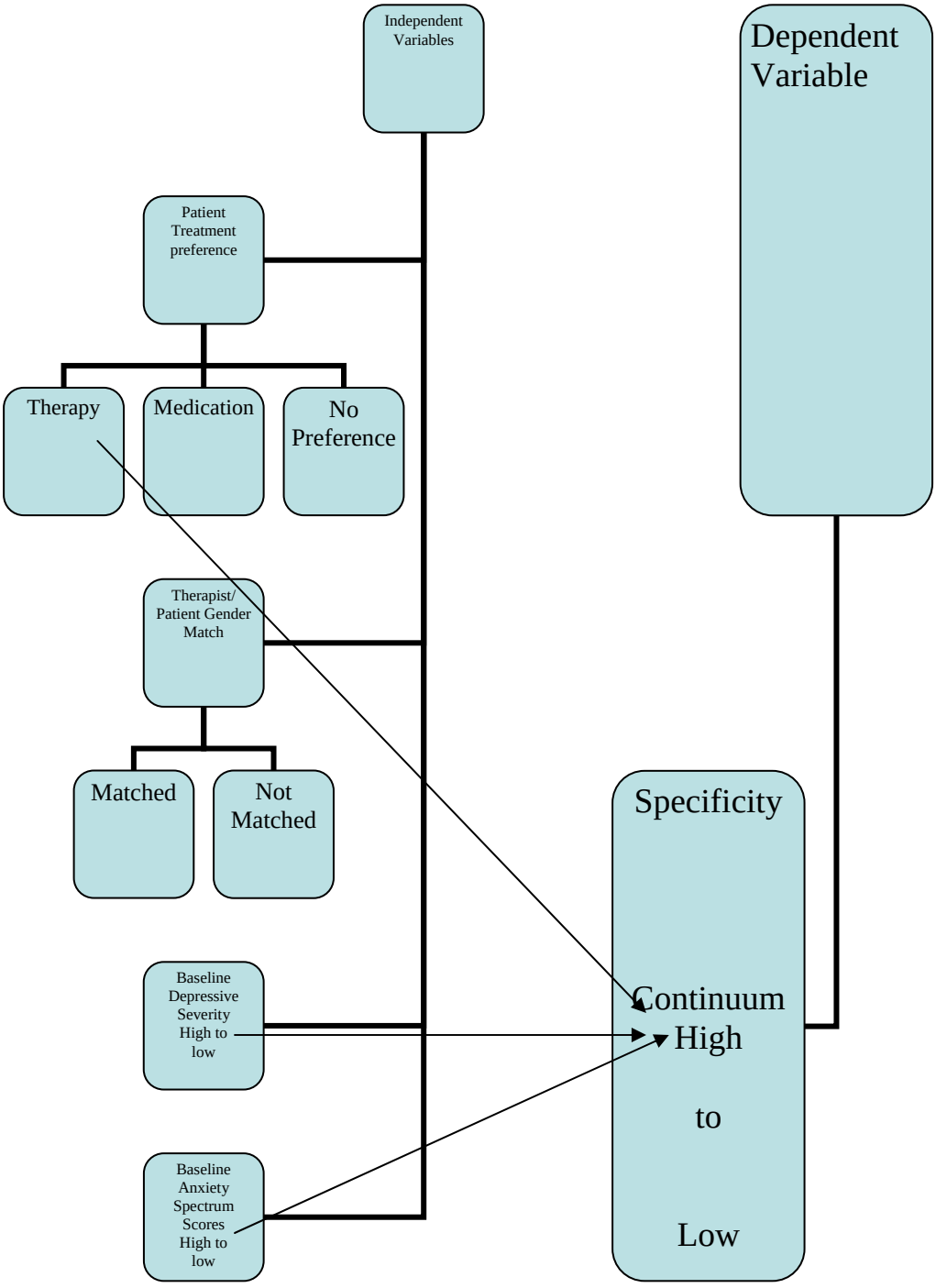
Therefore, while the majority of studies have investigated the possible effect of baseline depressive severity on outcomes with antidepressant treatment and not psychotherapy, most demonstrate a positive relationship. In other words, more severely

depressed patients experience more positive outcomes when compared to individuals with less severe depression at baseline when treated with antidepressants. Also the few studies examining the effect of baseline depressive severity on psychotherapies demonstrate a mainly a negative correlation when using CBT. No relationship is seen between IPT outcomes and baseline severity. Put another way, when treated with IPT the majority of studies show no correlation between severity of depression and outcomes, while contrastingly the majority of studies where the patient is treated with CBT, they experience better outcome when their baseline depressive severity is lower.

## Hypotheses and Rationale

Based on the aforementioned literature, this study aims to answer the following question regarding which predictors affect specificity of Interpersonal psychotherapy. Specifically, are patient treatment preference match; therapist/patient gender match; baseline anxiety score, and/or baseline scores in depression severity related to specificity of Interpersonal Psychotherapy?

Figure 2. Hypotheses



This study tests four hypotheses:

**H1:** Patients who are matched to their treatment preference will have higher specificity sessions of interpersonal psychotherapy than those who preferred pharmacotherapy or indicated no preference.

**H2:** Patients who are matched to a therapist of their same gender will experience equal specificity sessions of interpersonal psychotherapy to those not matched to their gender.

**H3:** Patients with higher baseline anxiety spectrum scores will experience lower treatment specificity than patients with lower baseline anxiety spectrum scores.

**H4:** Patients with lower baseline depressive severity will experience higher treatment specificity than patients with higher baseline depressive severity scores.

It is hypothesized that patients matched to their treatment preference—patients indicating a preference for psychotherapy and subsequently randomized to psychotherapy—will experience higher treatment specificity. Although no previous studies have tested this hypothesis, there is some indirect support. Several studies demonstrated the positive correlation between patient preference match and adherence, therapeutic alliance, and clinical outcome. A majority of literature, therefore, indirectly supports the above hypothesis (e.g. Chilvers, Dewey, Fielding, et al., 2001; Hermens, Van Hout, Terluin, et al., 2007; Iacoviello, McCarthy, Barrett, et al., 2007; Lin, Campbell, Chaney, et al., 2005). So although no prior studies have examined the relationship between patient preference match and treatment specificity, studies

indicating positive correlation between specificity and clinical outcome, as well as patient preference match and therapeutic process and outcome, provide support for the hypothesis that a patient matched to their treatment preference will also experience higher treatment specificity.

It is further hypothesized that therapist/patient dyads with gender match will experience no statistically significant difference in interpersonal psychotherapy specificity than those not matched by gender. Although no previous research has examined the relationship between therapist/patient gender match and treatment specificity, many studies have failed to find a significant relationship between therapist/patient gender match and therapeutic process and outcome. Of those that have found a correlation between gender match and therapeutic process and outcome, this result was found among inexperienced to moderately experienced therapists (Beutler, Crago, & Arizmendi, 1986; Garfield, 1994; Parloff, Waskow, & Wolfe, 1978; Zlotnick, Elkin, and Shea, 1998). Due to these inconclusive findings and the fact that therapists in the current study were highly trained and experienced, it is hypothesized that no relationship will be found between therapist/patient gender match.

Three, It is hypothesized that patients with higher scores on the anxiety spectrum instruments, measured as a continuous variable, will experience lower specificity sessions of interpersonal psychotherapy, than those who scored lower on the spectrum instruments. No previous studies have examined the relationship between scores on anxiety spectrum instruments and treatment specificity. However, the above hypothesis is indirectly supported by evidence that patients with anxious depression experience worse outcomes (Clayton, Grove, Coryell, Keller, Hirschfeld, & Fawcett, 1991;Fava et

al., 2008) and the evidence that specificity is positively related to outcome (Barber, Crits-Cristoph, & Luborsky, 1996; Frank, Kupfer, Wagner, McEachran, & Cornes, 1991; Luborsky, McLelland, Woody, O'Brien, and Auerbach, 1985; O'Malley et al., 1988). Therefore, it is hypothesized that patients with anxious depression will experience lower treatment specificity because both anxious depression and treatment specificity have been linked to outcome. This hypothesis is also based on evidence that CBT has been found effective for the treatment of anxiety and is often used with anxious patients. Therefore, it is hypothesized that patients with higher scores on anxiety spectrum instruments will experience lower specificity since therapists may incorporate CBT techniques with anxious patients, therefore potentially lowering the specificity of IPT treatment.

Finally, it is hypothesized that patients with lower baseline depressive severity will experience higher IPT treatment specificity. No studies to date have examined the relationship between baseline depressive severity and treatment specificity. Indirect support for this hypothesis is found in literature linking baseline depressive severity to outcome. Therefore, since specificity has been hypothesized to be linked to outcome it is assumed that baseline depressive severity's relationship to outcome will be similar to its relationship to specificity. Looking at the literature examining baseline depressive severity to outcome the majority of studies have investigated the outcome of baseline depressive severity on antidepressant medication not psychotherapy, with the most demonstrating a positive relationship. That is, more severely depressed patients experience more positive outcomes when compared with individuals with less severe depression at baseline. Also the few studies examining the effect of baseline depressive

severity on psychotherapy have suggested inconclusive results. That is, when treated with psychotherapy the majority of studies (using CBT) show patients with less severe depression experiencing better outcomes (Elkin, Gibbons, & Shea, et al., 1995; Jarrett, Eaves, Grannemann, & Rush,1991; Thase, Reynolds, & Frank, et al.,1994). And a majority of studies, using IPT, demonstrate no relationship between baseline depressive severity and therapeutic outcome (Van, Dekker, Kool, Peen, de Jonghe, & Schoevers, on file with author; Brown, Schulberg, & Prigerson, 2000; Shapiro, Barkham, Rees, Hardy, Reynolds, & Startuo;1994). Therefore, the hypothesis that patients with lower baseline depressive severity will experience higher IPT treatment specificity is based on evidence that studies linking baseline depressive severity to outcome when using psychotherapy have been inconclusive or demonstrated an association between lower baseline depression scores and better outcomes.

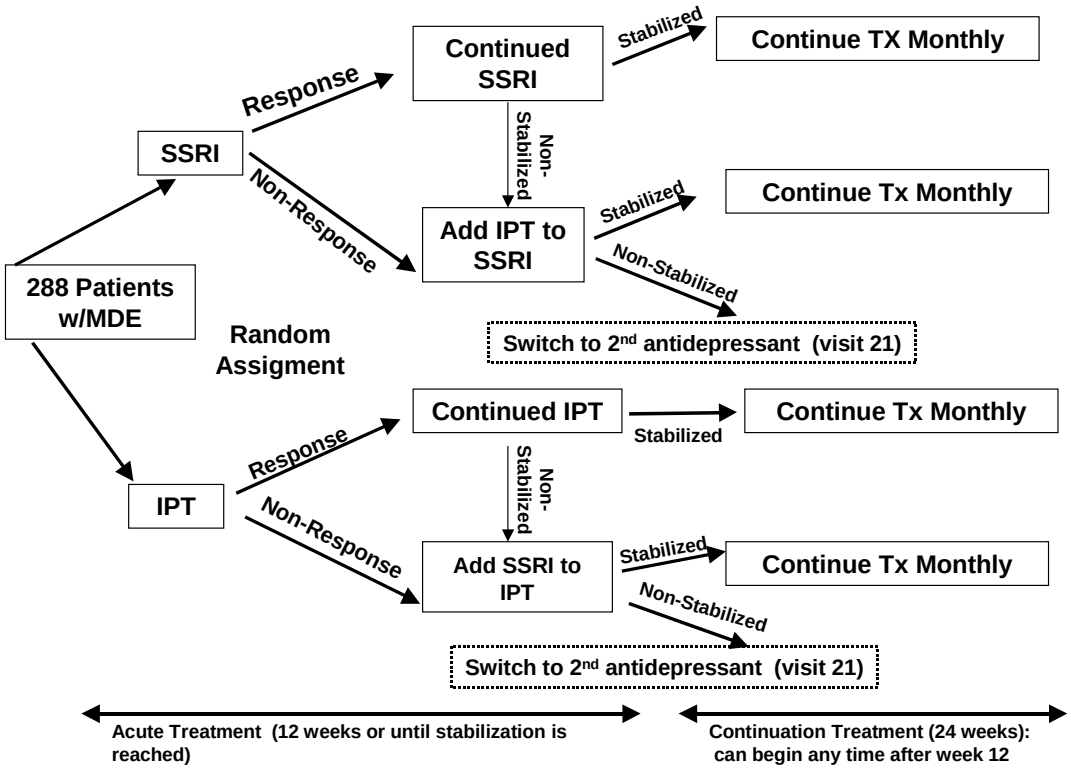
Hence, in so testing the four hypotheses, this study seeks to answer the main question, “what patient characteristics are associated with treatment specificity?”

# METHODOLOGY

The current study includes individuals with all subtypes of MDD, double depression, and seasonal affective disorder, excluding only MDD with psychotic features due to this subtype's poor long-term prognosis and the likelihood that this group will require anti-psychotic medications in addition to other treatment (Butcher, Mineka, & Hooley, 2008). Individuals with either first episode or recurrent type of MDD were included in the present study.

The data used for the current study were taken from a larger treatment study, Depression: The search for treatment-relevant phenotypes (Spectrum study), conducted at Western Psychiatric Institute and Clinic (WPIC) located in Pittsburgh, Pennsylvania. The author, a research assistant, oversaw training and maintained raters' reliability on the Therapist Rating Scale (TRS) while also managing the specificity database for the Spectrum study. Below, the sample and protocol for the larger study will be delineated followed by the sample and procedures in the current study.

Figure 3. Spectrum Treatment Protocol




Sample for Spectrum Study

Inclusion criteria for the larger study included men and women aged 18-66. These participants were required to meet criteria, defined by the DSM-IV, for a current non-psychotic major depressive episode. This diagnosis was verified using the Structured Clinical Interview for Axis I DSM-IV Disorders (SCID), and a score of 15 or higher on the Hamilton Rating Scale for Depression (HRS-D17) (Hamilton, 1960). Study participants were currently not receiving effective treatment and were willing and able to give informed consent. Females capable of childbearing were required to practice a reliable

form of birth control. Participants experiencing current suicidal ideation were included in the study as long as a study psychiatrist found outpatient treatment to be safe.

Exclusion criteria included any history of manic or hypomanic episodes, schizophrenia or schizoaffective disorder, antisocial personality disorder, or organic affective syndrome. Participants were also excluded if they had a current primary diagnosis of anorexia nervosa or bulimia nervosa, current psychosis, or met criteria for drug and/or alcohol dependence or abuse within the past three months. Other exclusion criteria included an uncontrolled medical illness determined by the study's investigators to interfere with participation or to forbid the use of study interventions, women planning on becoming pregnant, participants requiring inpatient treatment, or those with a documented history of an inability to tolerate study treatments. Investigators also excluded participants applying for disability benefits when they felt the process would interfere with obtaining accurate data. This study attempted to recruit a representative sample of the greater Pittsburgh metropolitan area population with respect to race, gender, and ethnic characteristics. No exclusion criteria were based on these characteristics. Children under the age of 18 were excluded from this study since outcome predictors have not been fully established for this population.

## Procedures for Spectrum Study

All protocols for the larger study were approved by the University of Pittsburgh Institutional Review Board. All participants who met inclusion criteria for the study were given a full description of the protocol and completed informed consent for participation.

Informed consent was completed at two stages, first for screening procedures and again if participants were eligible and interested in the research study.

In order to maintain confidentiality, all participants were given an initial telephone screening. Recruitment was completed through advertisement and referral, and potential participants were instructed to call the research clinic. No cold calls were made. All protected health information obtained from phone screening was stored in locked filing cabinets in locked offices. Only members of the research staff had access to these files. All telephone screens deemed ineligible were shredded. All assessment and treatment data were labeled with a study ID number also stored in locked file cabinets, separately filed from any patient's identifying information. All data entered into computers were entered via the participant's study ID number into password-protected databases. All audiotapes of psychotherapy treatment sessions were locked in file cabinets, identified only by the study ID number.

Participants were randomly assigned to either pharmacotherapy (escitalopram) or psychotherapy (interpersonal psychotherapy (IPT)). If the initial treatment was not successful in bringing about stabilization by visit 7—defined as a mean HSR-D 17 score of 7 less for three consecutive weeks— participants received augmentation of the alternative treatment (pharmacotherapy or psychotherapy).

The acute treatment phase of the study involved three assessment and triage points, at Visits 7, 13, and 21. At this point, the necessity of augmentation was determined. Participant's treatment was augmented by the alternative treatment if they did not evidence a response at Visit 7—defined as greater than or equal to a 50 percent reduction in baseline HRS-D17 score. Participants treatment was also augmented if

they worsened after Visit 7—defined as greater or equal to a 50 percent increase in HRS-D 17 scores sustained for two weeks and a HRS-D17 score of 12 or greater—or if they had not achieved a response at Visit 13. The Spectrum study included an acute treatment phase of 12-32 visits, and a six month continuation phase.

## Sample for Study Under Discussion

The sample of the current study consisted of 20 patients and four study therapists all living in the greater Pittsburgh area. All participants were volunteers recruited by advertisement or referral.

The study under discussion focuses exclusively on acute treatment of participants randomized initially to IPT and who continued with IPT successfully into continuation therapy without any pharmacotherapy augmentation. Participants who were initially randomised to IPT and later received an augmentation with pharmacotherapy were not included in the current analyses. Therefore the current study focuses on the 20 participants randomized to IPT, who successfully reached stabilization criteria after 12 visits, and then completed the continuation phase with IPT alone.

## Procedures for Study Under Discussion

Audiotapes of all interpersonal psychotherapy (IPT) sessions were made in the Spectrum study. Therapists in the study under discussion were trained to a

predetermined level of competence in interpersonal psychotherapy (IPT) before seeing patients in the study. Training consisted of completing one to three videotaped training cases to the satisfaction of research supervisors. The therapists in the study had been conducting therapy for a mean of 9 years. The audiotapes of the above sample were used in the study under discussion.

A seven minute segment of each audiotape starting at the fifth minute of the session was rated using the Therapy Rating Scale (TRS) designed to determine IPT specificity (Wagner et al., 1992). A pilot study conducted at Western Psychiatric Institute and Clinic (WPIC) determined that rating psychotherapy audiotapes beginning at the fifth minute and continuing for seven minutes was comparable to rating the entire psychotherapy tape. This study found a test-retest reliability of .90 (Wagner et al., 1992). The parameter of starting ratings five minutes into psychotherapy sessions was established due to the therapist's tendency to discuss symptoms and somatic complaints at the beginning of sessions, which would confound findings of IPT specificity.

Raters consisted of advanced undergraduate students in psychology or a related discipline. All raters were trained in the theoretical background of IPT and comparison psychotherapies (i.e. cognitive, psychodynamic, and somatic based therapies). Raters were also trained to rate IPT sessions using the Therapy Rating Scale (TRS). Inter-rater agreement was found by compiling two scores for each rater, the total score and the IPT score. All raters were required to obtain reliability within 10 percent of the gold standard’s total score and IPT score at least 80 percent of the time. The gold standard was an advanced undergraduate student who had an established reliability of .9 using

the above standard when compared with the primary investigator of the original study. All other raters demonstrated a reliability of at least .9 before rating audiotapes for the current study. All available sessions for each of the 20 patient/therapist dyads were rated. Some audiotapes were unavailable, for instance if they were lost, inaudible, or requested by the patient not to be taped. All patient/therapist dyads of the above sample had at least 50 percent of their tapes rateable; therefore, no participants were excluded from analyses.

## Measures

### *Therapy Rating Scale (TRS)*

The Therapy Rating Scale (TRS) was designed to measure IPT specificity and purity, distinguishing interpersonal interventions from contamination interventions (i.e. cognitive behavioural, psychoanalytic, or somatic based interventions). Support for the TRS and its use of an IPT score versus contamination score (i.e. cognitive, psychodynamic, somatic based interventions) can be found in factor analyses completed by Wagner and colleagues (1992). As summarized in Frank et al. (1991), interpersonal interventions assess the extent to which therapist/patient dyad discuss social relations and interpersonal concerns. Interpersonal items were rated when the therapist initiated discussions of an interpersonal context, or encouraged the patient to continue a discussion already consisting of interpersonal concerns. This discussion could focus on previous relationships or past relationships which gave insight into current interpersonal

patterns. Interpersonal items included an assessment of who was supportive to the patient, an analysis of communication or decisions, and discussions of how to change, develop, or resume interpersonal relationships or activities. Other interpersonal items included a discussion of past and future roles, important interpersonal events, specific interpersonal relationships, and feelings associated with interpersonal relationships or concerns. To maintain an interpersonal focus, therapists were expected to relate patients' somatic concerns to interpersonal ones, and redirect patients preoccupied with an intellectual or cognitive focus to discuss their associated feelings. Overall, the TRS is designed to assess the extent the therapist maintains or shifts the patient's focus to interpersonal concerns.

The original TRS contained 41 items. These items were compiled from a number of sources including:

- a scale used by DeRubeis and colleagues (1982) to discriminate between Cognitive Behavioral (CB) and IPT interventions
- the IPT therapist Strategy Rating Form used by Elkin and colleagues (1989) in the NIMH Psychotherapy of Depression Collaborative Research Program
- items taken directly from the IPT medication clinic treatment manuals
- CB and psychoanalytic items formulated by Wagner et al. (1992).

The original TRS was pilot tested and kept only those items which maintained an inter-rater agreement of .85 or greater were retained. These items formed the 27-item TRS, consisting of 11 interpersonal items, six somatic items, and 10 contamination items (i.e. CB or psychodynamic). The TRS used in the current study is an alternative form of this

27 item scale. It contains 14 interpersonal items, three somatic items, and 10 contamination items. These alterations were made in order to use the TRS only as an indicator of IPT specificity, instead of also using the scale as a discriminator between IPT and medication clinic as used in previous studies. Medication clinic was not used in the study under discussion, allowing for its exclusion. All TRS ratings are on a likert scale from one to five (1-5) with one specifying “not at all present” and five indicating that the “item is continuously present”. While the original 27-item scale used reverse coding on 13 items, the current TRS includes no reverse coding due to frequent errors made with the reverse coding scale (a recommendation made in the Spectrum study).

*Structured Clinical Interviews for DSM-IV Axis-I and Axis-II disorders and Hamilton Rating Scale for Depression*

Highly trained and reliable clinicians conducted the Structured Clinical Interviews for DSM-IV Axis-I and Axis-II disorders (SCID-I/P and SCID-II). These instruments were used to diagnose DSM-IV axis I and II disorders. The high reliability and validity of these instruments has been documented (Maffeci, Fossatia, Agostini, Barraco, Bagnato, Deborah, et al.,1997; Ventura, Liberman, Green, Shaner, and Mintz, 1998). Severity of depressive episode was assessed at baseline and at each visit throughout the study using the interview-based Hamilton Rating Scale for Depression (HRS-D 17). The HRS-D 17 has demonstrated excellent psychometric properties and has been considered the gold standard in assessing depressive severity in clinical trials for over 40 years (Hamilton, 1960; Bagby, Ryder, Schuller, & Marshall, 2004). Clinically, a score of seven

to 15 is generally considered mild depression, a score of 16 and above is considered moderate to severe depression. A score of seven or less is considered “not depressed”.

*Spectrum Assessments.*

One way to measure subthreshold symptomatology (not recognized by DSM-IV diagnostic criteria) hypothesized to impact course and response to treatment on the Spectrum instruments (Cassano et al., 1997). Specifically, in the current study, the author assesses the impact of subsyndromal anxiety symptoms on IPT specificity in individuals diagnosed with major depressive disorder. Frank, Cassano, and colleagues developed the anxiety Spectrum instruments to evaluate the presence of a broad array of manifestations of anxiety disorders, including their core and most severe symptoms, as well as a range of more subtle features, including prodromal, early-onset, attenuated, trait-like, and residual symptoms (Frank et al., 2000). The anxiety spectrum instruments include: Panic and Agoraphobia (PAS-SR), Social Phobia (SHY-SR), and Obsessive Compulsive (OC-SR). These instruments are lifetime self-report assessments of anxiety symptomatology. Although the Spectrum instruments were originally designed as structured clinical interviews, they have been converted to self-reports demonstrating a correlation of at least .96 between total scores of the structured clinical interview and total self-report scores (Rucci and Maser, 2000).

The Panic and Agoraphobia Spectrum Self-Report (PAS-SR) was designed to evaluate the lifetime presence/absence of behaviors considered to occur commonly with patients diagnosed with panic and agoraphobia disorders, as delineated by DSM-IV

criterion, sub-threshold symptoms, and interpersonal behaviors associated with panic disorder and agoraphobia (Cassano, Banti, Mauri, Dell'Osso, Miniati, Maser, et al., 1999). The PA-SR consists of 114 items coded as present or absent through the subject's lifetime collapsed into eight domains: 1) separation sensitivity, 2) panic-like symptoms, 3) stress sensitivity, 4) substance and medication sensitivity, 5) anxious expectation, 6) agoraphobia, 7) illness related phobias and hypochondrias, and 8) reassurance orientation. A total score of 35 is considered clinically significant. The PAS-SR has demonstrated excellent reliability and validity with an internal consistency of .47 -.94 and a test re-test reliability of .65 -.89. Criterion, discriminant, and concurrent validity have been documented (Cassano, et al., 1999).

The Social Phobia Spectrum Self-Report (SHYL-SR) was designed to evaluate the lifetime presence/absence of behaviors considered to occur commonly with patients diagnosed with social phobia, as delineated by associated DSM-IV criterion, subthreshold symptoms, and interpersonal behaviors (Dell'Osso, Cassano, Sarno, Millanfranchi, Pfanner, Gemignani, et al., 2000). The SHYL-SR consists of168 items coded as present or absent for one or more periods of at least 3-5 days through the subject's lifetime collapsed into five domains: 1) social phobic traits during childhood and adolescence, 2) interpersonal sensitivity, 3) behavioral inhibition and somatic symptoms, 4) specific anxieties and phobic features, and 5) appendix for substances. A total score of 59 is considered clinically significant. The SHYL-SR has demonstrated excellent psychometric properties with an internal consistency of .87 -.94 and a test re-test reliability of .97 -.99. Criterion, discriminant, and concurrent validity have been documented (Dell'Osso, et al., 2000).

The Obsessive Compulsive Spectrum Self-Report (OC-SR) was designed to evaluate the lifetime presence/absence of behaviors considered to occur commonly with patients diagnosed with Obsessive Compulsive disorder, as delineated by associated DSM-IV criterion, sub-threshold symptoms, and interpersonal behaviors (Dell'Osso, Cassano, Sarno, Millanfranchi, Pfanner, Gemignani, et al., 2000).The OC-SR consists of 183 items coded as present or absent for one or more periods of at least three to five days through the subject's lifetime collapsed into seven domains: 1) childhood and adolescence experience, 2) doubt, 3) hyper-control, 4) use of time, 5) perfectionism, 6) repetition and automation, and 7) specific themes. A total score of 59 is considered clinically significant. The OC-SR has demonstrated excellent psychometric properties with an internal consistency of .61 -.90 and a test re-test reliability of .97 -.99. Criterion, discriminant, and concurrent validity have been documented (Dell'Osso, et al., 2000).

## Data Analysis

The data collected in the present study were analyzed as indicated below by the Standard Package for the Social Sciences (SPSS-15). First, descriptive statistics were calculated and a bi-variate correlation was preformed to determine statistically significant correlations between the independent and dependent variables. Treatment preference was broken into preference one (those who preferred therapy as opposed to those who preferred medication or had no preference) and preference two (those who preferred medication as opposed to those who preferred therapy or had no preference). This was done in order to examine treatment preference in a bi-variate correlation.

Then, a simultaneous multiple regression was completed to assess the relationship of treatment predictors—patient treatment preference match, total scores on anxiety spectrum instruments, and baseline depressive severity— to interpersonal treatment specificity. The effect of therapist/ patient gender match on IPT treatment specificity was analyzed using a t-test. Next, a partial t-test was run to determine which individual predictors make a unique contribution when the other predictors are held constant. After that, a step-wise multiple regression was performed to determine which combination of predictors was most efficient and the best prediction of IPT treatment specificity from the smallest number of possible predictors. SPSS chose the predictors to include through an algorithm based on statistical criteria. Depressive severity was chosen as the first predictor followed by treatment preference two. After this an ANOVA was executed to determine if prediction of this model was greater than what could be expected by chance. In addition, a one way ANOVA was performed to determine if there was a statistically significant difference between the means of depressive severity for each treatment preference (medication, therapy, or no preference). Next, a post hoc test was run to follow up the one-way ANOVA to determine significance. Finally, a one-way was performed to determine if there was a difference between the means of IPT treatment specificity for each treatment preference.

# RESULTS

Table 3 summarizes participants' background characteristics. As displayed in Table 3, eight males and 12 females participated. Fifty percent (n =10) of the participants were between the ages of 50 and 60 with a mean age of 44 years within a range of 19 – 60 years of age. The majority of participants (85 percent, n = 17) indicated their race as white and their ethnicity as not Hispanic or Latino (95 percent, n = 19). Fifty percent (n =10) of participants indicated an income of below $35,000. 00 annually while 50 percent (n =10) of participants were also employed full-time. As can be seen form Table 3, 30 percent (n =6) of the participants were professionals and 45 percent (n = 9) were married.

Table 3. Background Characteristics of Study Participants

| Characteristic | Number | Percent |
|---|---|---|
| Gender | | |
| Male | 8 | 40 |
| Female | 12 | 60 |
| Age (at start of study) | | |
| 18-29 | 4 | 20 |
| 30-39 | 3 | 15 |
| 40-49 | 3 | 15 |
| 50 and up | 10 | 50 |
| Race | | |
| American Indian or Alaskan Native | 1 | 5 |
| Asian | 0 | 0 |
| Black/African American | 2 | 10 |
| Native Hawaiian or Pacific Islander | 0 | 0 |
| White | 17 | 85 |
| Do not wish to provide | 1 | 5 |
| Ethnicity | | |
| Hispanic or Latino | 1 | 5 |
| Not Hispanic or Latino | 19 | 95 |
| Income | | |
| No income | 0 | 0 |
| $7,5000 or less | 1 | 5 |
| $7,501 to $15,000 | 3 | 15 |
| $15,001 to $25,000 | 2 | 10 |
| $25,001 to $35,000 | 4 | 20 |
| $35,001 to $50,000 | 1 | 5 |
| $50,001 to $75,000 | 3 | 15 |
| Over $75,000 | 3 | 15 |
| Refused | 2 | 10 |
| Do not know | 1 | 5 |
| Employment | | |
| Full time | 10 | 50 |
| Part time | 1 | 5 |
| Homemaker | 1 | 5 |
| Student | 3 | 15 |
| Unemployed | 4 | 20 |
| Other | 1 | 5 |
| Occupation | | |
| Homemaker | 2 | 10 |
| Professional | 6 | 30 |
| Student | 3 | 15 |
| Other | 9 | 45 |
| Marital status | | |
| Never Married | 6 | 30 |
| Married | 9 | 45 |
| Separated | 1 | 5 |
| Divorced | 3 | 15 |
| Widowed | 1 | 5 |
| Living with partner | 0 | 0 |

Table 4 presents clinical characteristics of participants. Specifically, 65 percent of participants reported their first depressive episode occurring before they reached age 30 (range 10-50 years, $\overline{x}$ = 27 years). Also, Table 2 illustrates participants ranged between one and six previous depressive episodes with 65 percent of participants experiencing one to three previous depressive episodes ($\overline{x}$ = 2.94).

Table 4 displays Axis I and II co-morbidities. Seventy percent of participants had at least one Axis I disorder in addition to Major Depressive Disorder, and 50 percent had at least one Axis II disorder. The most prevalent Axis I co-morbidity was Generalized Anxiety Disorder (30 percent) and the most prevalent Axis II disorder was Avoidant Personality Disorder (30 percent). Also, significant to note is that 50 percent of participants had at least one co-morbid anxiety disorder.

Table 4. Clinical Characteristics of Study Participants

| Characteristic | Number | Percent |
|---|---|---|
| Age of First Depressive Episode | | |
| 10-19 | 6 | 30 |
| 20-29 | 7 | 35 |
| 30-39 | 4 | 20 |
| 40-49 | 2 | 10 |
| 50 and up | 1 | 5 |
| Number of Previous Depressive Episodes | | |
| 1 | 1 | 5 |
| 2 | 8 | 40 |
| 3 | 4 | 20 |
| 4 | 4 | 20 |
| 5 | 1 | 5 |
| 6 | 1 | 5 |
| Missing/Unknown | 1 | 5 |
| Axis I Co-morbidities | | |
| *Only* Major Depressive Disorder | 6 | 30 |
| Dysthymic Disorder | 2 | 10 |
| General Anxiety Disorder | 6 | 30 |
| Panic Disorder | 3 | 15 |
| Obsessive Compulsive Disorder | 1 | 5 |
| Social Phobia Disorder | 1 | 5 |
| Specific Phobia Disorder | 1 | 5 |
| Post Traumatic Stress Disorder | 2 | 10 |
| Binge Eating Disorder | 1 | 5 |
| Alcohol Use Disorder | 4 | 20 |
| Cannabis Use Disorder | 2 | 10 |
| Cocaine Use Disorder | 1 | 5 |
| Number of Axis I Co-morbidities | | |
| 0 | 6 | 30 |
| 1 | 7 | 35 |
| 2 | 3 | 15 |
| 3 | 1 | 5 |
| 4 | 2 | 10 |
| Axis II Co-morbidities | | |
| Avoidant Personality Disorder | 6 | 30 |
| Obsessive Compulsive Personality Disorder | 4 | 20 |
| Depressive Personality Disorder | 2 | 10 |
| Paranoid Personality Disorder | 1 | 5 |
| Narcissistic Personality Disorder | 1 | 5 |
| Borderline Personality Disorder | 1 | 5 |
| Antisocial Personality Disorder | 1 | 5 |
| Number of Axis II Co-morbidities | | |
| 0 | 10 | 50 |
| 1 | 4 | 20 |
| 2 | 5 | 25 |
| 3 | 0 | 0 |
| 4 | 1 | 5 |

Table 5 displays descriptive statistics concerning the independent variables of treatment preference and therapist/patient gender match. As illustrated in Table 3, half of the study participants (50 percent, n = 10) indicated a preference for therapy, and 60 percent (n = 12) of participants were matched with a therapist of their own gender. It is important to note that all therapists in this study were female. Hence, in order for patient/therapist gender to match, the patient must have been female.

Table 5. Predictors Descriptive Characteristics

| Characteristic | Number | Percent |
|---|---|---|
| Treatment preference | | |
| Medication | 5 | 25 |
| No Preference | 5 | 25 |
| Therapy | 10 | 50 |
| Therapist/patient Gender Match | | |
| Match | 12 | 60 |
| No Match | 8 | 40 |

In addition, the mean depressive severity of participants, as measured by the Hamilton Rating Scale for Depression (HRSD-17), was 19.25 with a standard deviation of 3.640, and a range of scores form 15 to 29. The mean score for Social Phobia spectrum (SHY-SR) scores was 47.05 with a standard deviation of 35.487 and a range of 0 to 110. As discussed above a score of 35 or above is considered in the clinically significant range. The mean score for Panic Spectrum (PAS-SR) scores was 26.20 with a standard deviation of 22.883 and a range of 2 to 81. The mean of Obsessive-Compulsive Disorder Spectrum (OC-SR) scores was 45.05 with a standard deviation of 26.197 and a range of 4 to 93. As indicated, a score of 59 or above is clinically significant for the PAS-SR and the OC-SR. All of these anxiety spectrum scores demonstrated a large range and therefore much variability.

In order to test the hypotheses, the mean interpersonal scores for all therapist/patient dyads were calculated to determine individual dyad interpersonal treatment specificity. These means were calculated by averaging the interpersonal treatment specificity scores indicated by the Therapy Rating Scale (TRS) for all sessions rated.

The mean interpersonal score for all therapist/patient dyads was 1.3779 with a standard deviation of .11027. These scores ranged from 1.19 to 1.58. While scores were evenly distributed the range and therefore variability of interpersonal scores were limited.

The primary research question was: "*what patient characteristics are associated with treatment specificity?"* A simultaneous multiple regression of treatment preference, therapist/patient gender match, anxiety spectrum score average, and depressive severity revealed that 41 percent of the variance in IPT treatment specificity was due to these predictors. This was not statistically significant at the .05 alpha level, though it trended in that direction ($p = .081$).

The first hypothesis concerned the association between patient treatment preferences and specificity of IPT. It was hypothesized that if a patient's treatment preference matched the condition they were randomized to, the therapist/patient dyad would demonstrate higher specificity of IPT. In order to analyze this hypothesis patient treatment preference was collapsed into two categories. Preference 1 indicated whether the patient preferred therapy as opposed to medication or indicating no preference, whereas preference 2 indicated whether the patient preferred medication as opposed to therapy or indicating no preference. Analysis of this hypothesis using a

Pearson Correlation demonstrated that the null hypothesis (no relationship between patient treatment preference and IPT specificity) could not be rejected. This Pearson Correlation revealed that patient treatment preference was not statistically significantly related to IPT treatment specificity [preference 1 ($r = -.226$, $p > .05$) and preference 2 ($r = .021$, $p > .05$).

The second hypothesis examined the relationship between therapist/patient gender match and specificity of IPT. Specifically, that therapist/patient gender match would not produce a statistically significantly different IPT specificity when compared to no therapist/patient gender match. A t-test for the equality of means confirmed the null hypothesis as predicted. Therapist/patient gender match did not impact IPT treatment specificity with statistical significance, $t(18) = -.298$, $p < .05$. That is, the mean IPT treatment specificity for patients whose therapist matched their gender ($\overline{x} = 1.3840$, SD = .11126) was not significantly different from the mean IPT treatment specificity of patients not matched to a therapist of there own gender ($\overline{x} = 1.3687$, SD = .11571). Therefore, as predicted, the study was unable to conclude that therapist/patient gender match is related to IPT treatment specificity.

The third hypothesis involved the relation of anxiety spectrum scores to IPT specificity. It was hypothesized that lower average score on anxiety spectrum instruments would correlate with higher IPT specificity. Analysis of this hypothesis using a Pearson Correlation again demonstrated that the null hypothesis (no relationship between average anxiety spectrum score and IPT specificity) could not be rejected. This Pearson Correlation revealed that the average anxiety spectrum score

was not statistically significantly related to IPT treatment specificity ($r = .070$, $p > .05$). Therefore, this hypothesis could not be accepted.

The final hypothesis sought to analyze the relationship of baseline depressive severity, as measured by the HAM-D 17, and IPT treatment preference. It was hypothesized that higher baseline depressive severity would indicate higher treatment specificity. In order to analyze this hypothesis, a Pearson Correlation was performed resulting in a statistically significant correlation between baseline depressive severity and IPT treatment specificity ($r = .478$, $p < .05$). Therefore the null hypothesis (that baseline depressive severity has no correlation to IPT treatment specificity) was rejected. This finding indicates that baseline depressive severity and IPT treatment specificity are in fact positively correlated.

Correlations were also performed to assess any significant relationships among independent variables. The only significant correlation ($r = .001$, $p < .05$) was between baseline depressive severity and treatment preference 2 (i.e. patients who preferred medication as opposed to those that preferred therapy or indicated no preference for treatment). This study found that participants baseline depressive severity was significantly correlated with whether or not participants preferred medication.

In addition to a simultaneous multiple regression, a partial t-test was run to determine which individual predictors make a unique contribution to specificity. This partial t-test indicated baseline depressive severity made a significant contribution ($t = 2.906$, $p < .05$) to the variance in IPT treatment specificity when all other predictors were held constant.

Following, a step-wise multiple regression was run to determine which combination of predictors was most efficient, that is the best prediction of IPT treatment specificity from the smallest number of possible predictors. Depressive severity was chosen as the first predictor followed by treatment preference 2. This indicated that baseline depressive severity and preference 2 accounted for 40.4 percent of the variance in IPT treatment specificity, which is a moderate effect.

After this an ANOVA was executed to determine if prediction of this model was greater than what could be expected by chance. Examining just baseline depressive severity, a statistically significant result was found ($F(1)= 5.333$, $p < .05$). Also, when examining baseline depressive severity and preference 2, a significant result was found ( $F(2) = 5.762$, $p < .05$). Therefore, baseline depressive severity in combination with participant preference for medication predict IPT treatment specificity greater than what can be expected by chance.

To determine if there was a statistically significant difference between the means of depressive severity for each treatment preference (medication, therapy, or no preference), a one way ANOVA was performed. This specified there was a difference between means of baseline depressive severity among treatment preferences (mean medication preference = 20.20, mean therapy preference = 17.00, and mean no preference = 22.80). A post hoc test revealed that mean therapy preference was statistically significantly different than the mean of participants indicating no preference (mean difference (-5.800), $p < .05$). Although the mean of patients preferring medication was not significantly different from the mean of participants preferring therapy (mean

difference = -3.200, p = .123) this relatively low alpha level may suggest a potential trend.

Finally, a one-way ANOVA was performed to determine if there was a difference between the means of IPT treatment specificity for each treatment preference. This revealed that the means of IPT treatment specificity for various treatment preferences (mean medication preference = 1.3358, mean therapy preference = 1.3801, and mean no preference = 1.4155) were not significantly different ($F(2) = .631$, $p > .05$).

# DISCUSSION

Generally, higher baseline depressive severity indicated higher treatment specificity. Moreover this study suggests that baseline depressive severity is correlated with treatment preference. Specifically, the higher one's baseline depressive severity, the more likely they are to not prefer therapy, indicating "no preference" instead. In addition, the results of the study under discussion suggest that therapist/patient gender match (at least when both patient and therapist are female) did not produce a significantly different IPT specificity when compared to no therapist/patient gender match— the therapist was female while the patient was male. However, when a patient's treatment preference matched the condition to which they were randomized, the therapist/patient dyad did not demonstrate higher specificity of IPT. Lower average score on anxiety spectrum instruments was not associated with higher IPT specificity.

## Methodological Limitations

It is important to consider this discussion keeping in light a number of limitations. First, the sample size in this study (n= 20) was very small and thus limited the power of these findings. In addition, the generalizability and inference of these findings is limited by the sample in that all participants remitted with IPT alone within 12-13 therapy sessions. Patients randomized to IPT and later receiving an adjunct of medication were not

included, nor were participants randomized to medication and either remitting with medication alone or receiving an adjunct of IPT. Use of this specific sample may have greatly limited the variance of findings.

## Interpretation of Findings

In review, the predictions that therapist/patient gender match is not related to IPT treatment specificity was upheld. However, baseline depressive severity was in fact positively correlated with treatment specificity. However, the hypotheses that patient treatment preference and IPT treatment specificity would be positively correlated and that baseline spectrum anxiety scores would be negatively correlated were not upheld. In addition, it was found that patients scoring higher on baseline depression severity were correlated with patients not preferring therapy (i.e. either indicating a preference for medication or no preference).

### *Therapist/patient gender match*

With regard to therapist/patient gender match, these data demonstrate no support of a relationship with treatment specificity. This finding supports prior research, in which a majority of researchers concluded that there was not evidence for a significant relationship between therapist/patient gender match and process or outcome correlations (e.g. Beutler, Crago, & Arizmendi, 1986; Garfield, 1994; Parloff, Waskow, & Wolfe, 1978; Zlotnick, Elkin, and Shea, 1998). In addition, these data support the

previous finding that therapist/patient gender match is less significantly linked to psychotherapy process and outcome when using highly trained and experienced therapists— as there were in this study (Zlotnick, Elkin, and Shea, 1998). A possible alternative explanation is that there would be differences in the treatment specificity of therapy conducted by male as compared to female therapists. This speculation has been supported previously by theorists (Belle, 1982; Kaplan, 1985; Miller, 1984; Rice & Rice, 1973; Tannen, 1990). As this study only evaluated female therapists, this question would be an opportunity for further investigation.

*Baseline depressive severity*

A significant proportion of patients with higher baseline depressive severity also demonstrated higher treatment specificity scores at the end of their treatment. In other words, patients who were more severely depressed entering the study also had greater adherence with their therapist to the IPT treatment manual (i.e. higher specificity), more of the time. There is no direct support for this finding, however, Elkin Gibbons, Shea, et al. (1995) did find a positive correlation between higher baseline depressive severity and outcome. Along with the studies positively linking treatment fidelity to outcome, (Barber, Crits-Cristoph, & Luborsky, 1996; Frank, Kupfer, Wagner, McEachran, & Cornes, 1991; Luborsky, McLelland, Woody, O'Brien, and Auerbach, 1985; O'Malley et al., 1988) this is indirect support for the findings in the current study. This indirect support also suggests that treatment specificity may be a mediator between baseline depressive severity and outcome. Therefore, pretreatment patient characteristics may

moderate specificity and specificity may mediate outcome. This speculation may form the basis of further research.

In speculating on possible reasons why more patients who were initially severely depressed would experience greater treatment specificity, one possible explanation may be that individuals who are more severely depressed at baseline present with more material to utilize within the IPT model. That is, the more depressed an individual is the more a therapist has to “work with” within the IPT model. Perhaps, more severe depression enables the therapist and patient to more fully engage in Interpersonal Psychotherapy, remembering that psychotically depressed individuals and those needing hospitalization were excluded from the current study? Or perhaps it is the case that more severely depressed individuals are able to commit more fully to working on their interpersonal relationships because they are unable to devote energy and time to other parts of their lives due to the severity of their depression? Perhaps time and energy, usually spent on a job and other life demands can be allotted to interpersonal behaviors which may seem less challenging to a severely depressed individual, while an individual with less severe depression may struggle to maintain their former commitments and have less time and energy to devote to therapy? Or perhaps, they are more committed to treatment in general and are focused on making necessary changes to improve? Again, these speculations have implications for further research.

*Treatment preference*

The results of this study suggest that treatment preference is unrelated to treatment specificity. No literature exists supporting this finding or not. This is the first study, albeit it small, of its kind testing the hypothesis that treatment preference is positively related to treatment specificity. Moreover, previous literature examining the relationship between treatment preference and process and outcome have generally been inconsistent. Perhaps this suggests that although there may be a proposed relationship between treatment specificity and outcome, if no relationship exists between a predictor (in this case treatment preference) and outcome, then there will be no relationship between the predictor and treatment specificity? Again, this suggests directions for future research.

Also of interest is the finding that the majority of participants preferred therapy as opposed to medication (or indicating no preference). This finding lends support to existing literature which suggests patients prefer psychotherapy (e.g. Van Schaik et al., 2004). One possible reason for this finding may be that depressed individuals prefer psychotherapy because of the human contact. Psychotherapy facilitates an environment in which someone will listen to you, validating and empathizing with your concerns. In addition, medication may carry stigma and apprehension among many individuals. Although psychotherapy has been known to have its own stigmas, medication can also be a problem for people with certain health concerns, those who are pregnant or planning to become pregnant as well as for people from certain cultures.

This study suggests that participants scoring higher on baseline depressive severity were correlated with participants not preferring therapy (i.e. either indicating a preference for medication or indicating no preference for treatment). Therefore, while the majority of participants preferred psychotherapy, participants with higher baseline depressive severity, did not prefer psychotherapy. It is interesting to speculate why participants with higher baseline depressive severity would not prefer therapy. Perhaps, due to the severity of their depression they are experiencing higher levels of apathy—a symptom of depression. Another possibility is that individuals who are severely depressed are pessimistic that psychotherapy (or anything for that matter) will work. Some of these individuals may feel that medication is a "quicker fix" than psychotherapy, or that psychotherapy will not be strong enough. Others may feel that neither psychotherapy or medication will effect their mood state. All these speculations provide the basis for further research.

*Baseline anxiety spectrum scores*

A surprise result of this study was the finding that no relationship exists between baseline anxiety spectrum scores and treatment specificity. No previous literature specifically supports or denies this finding. This finding, therefore, rejects the rational argued by the author that patients with anxious depression will experience lower treatment specificity because both anxious depression and treatment specificity have been previously linked to outcome. Perhaps while higher anxiety spectrum scores are

known to be linked to worse treatment outcome (Clayton, Grove, Coryell, Keller, Hirschfeld, & Fawcett, 1991;Fava et al., 2008) they do not affect treatment specificity?

## Alternative Explanations for Findings

Many other factors may have also produced the findings seen in this study. Both treatment specificity and patient characteristics linked to outcome are inconsistent and inconclusive, using varied methodology. In addition, little research exists specifically examining treatment specificity. Instead, the literature review looked at all levels of treatment fidelity in general relating to therapeutic outcomes in general. Furthermore, therapist variables were not evaluated and they very well may also have had an impact on specificity. Another consideration is that the sample preselected patients who remitted within a certain timeframe. Therefore, it can not be ruled out that the association between higher baseline depressive severity and higher treatment specificity was not due to a regression to the mean.

## Implications and Conclusion

The findings of this study suggest that patients with higher depressive severity at baseline experience sessions of Interpersonal Psychotherapy with therapists adhering more directly to the manual more of the time than the sessions of patients with lower depressive severity at baseline. Hence, it may be easier to engage more depressed individuals in Interpersonal Psychotherapy. With this knowledge, clinicians can develop

ways to engage less severely depressed individuals into the IPT model. For example, if an individual presents with mild to moderate depression a clinician may discuss with a supervisor the best way to engage this individual in Interpersonal Psychotherapy.

Furthermore, this study found patients scoring higher on baseline depressive severity do not prefer therapy. This suggests that clinicians may need to use more active and intense engagement strategies with individuals with a higher baseline depressive severity in order to engage them in therapy.

Further research should be directed at replication of the present study using a larger sample. A larger sample should also contain both participants who remitted with IPT alone and with an adjunct of medication. Further, the therapists should be both male and female. After replicating the current study in a larger sample the next step would be to examine treatment specificity as a mediator between baseline depressive severity and outcome.

This study assessed the question, "*what patient characteristics are associated with treatment specificity?"* Results from a study sample of 20 found that patients with higher depressive severity at baseline experienced higher treatment specificity. Further research with a larger study sample is needed to confirm this finding.

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