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**PATIENTS' EXPECTATIONS' EFFECTS ON TREATMENT OUTCOME IN MAJOR
DEPRESSIVE DISORDER (MDD) IN INTENSIVE SHORT-TERM DYNAMIC
PSYCHOTHERAPY (ISTDP)**

by

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Abstract

Existing research has supported the influence of patients' expectations on symptom reduction in both antidepressant trials and cognitive behavioral therapy (CBT) for individuals suffering from major depressive disorder (MDD). Intensive short-term dynamic psychotherapy (ISTDP) is effective in treating individuals with MDD, and its structured sessions, similar to the replicable format of CBT, offer a valid psychodynamic therapy that can be compared to past CBT research. This study will attempt to examine whether patients' expectations will affect equal or greater symptom reduction when being treated with ISTDP than if treated with CBT. It will also examine whether patients' expectations affect the strength of the therapeutic alliance between clinician and patient, and whether therapeutic alliance acts as a moderator for the relationship between expectations and symptom reduction. Four hundred and fifty participants previously diagnosed with major depressive disorder will be assigned to an ISTDP group or CBT group. Results will indicate that participants undergoing ISTDP will experience significant symptom reduction of equal or greater value compared to participants undergoing CBT. Results will also show that the ISTDP group will experience greater long-term symptom reduction than the CBT group. Therapeutic alliance will act as a moderator, further promoting expectations' efficacy on symptom reduction.

Keywords: depression, ISTDP, CBT, expectations, therapeutic alliance

Introduction

Upwards of 300 million people worldwide, including children and adults, have experienced depression, making it one of the most common mental disorders and the most common cause of disability in the world today (“Major Depression,” n.d). In the United States, 17.3 million adults experienced at least one episode of major depression in 2017 alone (“Depression,” 2018). Mental health disorders commonly include depressed affect as a symptom, and Major Depressive Disorder (MDD) is uniquely characterized by ongoing or recurring severe depressed moods (Maj, 2002). An MDD diagnosis is typically treated using medication, therapy, or a combination of the two (Town, Abbass, Stride, & Bernier, 2017). Treatment is not always effective for those suffering with MDD, as 50% of patients experience an unsatisfactory response, and 20% of patients do not experience advantages from more than one treatment (Kubitz et al., 2013). When typical medication or therapeutic treatments produce unsatisfactory responses, patients are diagnosed with Treatment Resistant Depression (Town et al., 2017). This additional diagnosis reflects failed treatments and often results in a worsened long-term prognosis (Town et al., 2017).

Depression can be characterized by many symptoms including guilt, pessimism, persistent sadness, apathy, and suicidality. Before being diagnosed with a depressive disorder, patients are typically asked about medical history, family’s medical history, when symptoms started, and the severity of symptomology (Maj, 2002). Patients with depressive disorders can also experience comorbidity of anxiety disorders which can be characterized by symptoms such as persistent nervousness, restlessness, inability to relax, sweating, and trembling (Maj, 2002).

The effects of antidepressants as medication treatments for patients with MDD has been extensively studied, yet medical placebos often perform similarly well as antidepressants when

measuring symptom reduction. Because placebos contain no real treatment, patients' expectations and biases towards medication or those administering them has been theorized to affect symptom reduction such that higher expectations are correlated with decreased symptom distress (Colloca & Miller, 2011). Research on expectations has shifted from exclusively medication trials to therapy research, to evaluate how expectations can affect treatment outcome in therapy. Exploring expectations for treatment has typically been conducted within Cognitive Behavioral Therapy (CBT) research (e.g. Seligman, Wuyek, Geers, Hovey, & Motley, 2009), 2009), though psychodynamic therapies often show good results in symptom reduction with patients with an MDD diagnosis (Abbass, Town & Driessen, 2012). Research on expectancies equivalent to that of CBT-based studies may be difficult to mirror a psychodynamic therapy as this group of interventions is hard to reproduce due to a less directive approach. However, Intensive Short-Term Dynamic Psychotherapy (ISTDP) is a short-term, manualized psychodynamic therapy that does have a structured format that can be reproduced among therapists and is a promising foundation for the continuation of expectations' research. The current study will examine the effects of patients' expectations on treatment outcome in patients with MDD undergoing ISTDP.

Expectation Theory and Neurobiology

According to the theoretical model proposed by Rief and colleagues (2015), expectations are developed and maintained through a combination of individual characteristics, societal influences, and learning processes. When people experience an event that contradicts their expectations, expectations will either change or remain the same. Typically, people are prone to maintain their self-concept by seeking out feedback that confirms their upheld self-concept and

by denying experiences that challenge this self-concept (Kube, Rief, & Glombiewski, 2017). This so-called “immunization process” that is developed from confirmation biases affects how expectations are more likely maintained when self-concept is not confronted. According to social and personality psychology, people strive to maintain their self-concept, so it is easier to reappraise an experience to uphold current expectations than to change expectations and thus adjust one’s self-concept (Kube et al., 2017). Those suffering from MDD are more likely to seek out information that maintain their self-concept and thus are less likely to change their expectations when confronted with an expectation-violating experience. This ongoing cognitive restructuring is a main motivation for using CBT as a therapeutic treatment for those suffering from MDD in order to address when experiences are being inaccurately or negatively reappraised (Kube et al., 2017).

Neurobiologically speaking, expectations were evidenced to affect symptom reduction in those with depression rather than the originally believed hypothesis that expectations simply affected the reporting of subjective experience (Rutherford, Wager, & Roose, 2010). Those with depression have decreased striatal response to experiences that engender positive expectations and bilateral decreased activation in the nucleus accumbens, which plays a role in the reward circuit and dopamine and serotonin activation, when responding to experiences that confirm one’s positive expectations. This reduced responsivity to positive experiences is therefore thought to be mediated by increased positive expectations (Rutherford et al., 2010).

Regarding the placebo effect, cognitive psychology asserts that the effects of placebo occur because the patient expects an effect. The term “response expectancies” originated as the anticipation of an effect that is not a matter of free choice (Colloca & Miller, 2011). There has been extensive research on the mechanisms by which the placebo effect operates in medication

treatment (e.g., Rutherford et al., 2010; Bowling et al., 2012), but the theoretical model of expectations has only scarcely been applied to therapy.

Expectations and Therapy

Intuitively, the process of entering therapy to treat a mental illness evokes a sense of expectation for a client. Expecting whether or not the treatment is going to be successful, what their role is in the therapeutic relationship, and how to present themselves are all common thoughts at the onset of treatment. There are two types of distinguished expectations: outcome or prognostic expectations, and treatment or participant role expectations (Constantino, Amertrano, & Greenberg, 2012). Outcome expectations are defined by the patient's own expectations of the efficacy of treatment and their own prognostic anticipations. Individuals with positive outcome expectations may believe that by the end of therapy, they will experience a reduction in their depressive symptoms while those with negative outcome expectations may believe that therapy will have no effect on their depressive symptoms. Treatment expectations are the patients' anticipations for the specific therapeutic process; they encompass the role expectations for themselves and their therapist, their expectations for their experience in therapy such as what exactly will transpire, and treatment specifics such as duration and number of sessions (Constantino et al., 2012).

The effects of outcome expectations on symptom reduction have been the recipient of a heavier focus in research than the effects of treatment expectations. Meta-analytic findings, for example, have been used to demonstrate a significant positive effect that suggests the higher a patient's outcome expectations, the greater the symptom reduction (Constantino et al., 2012). Type of therapy, diagnosis, treatment modality, and study design were found to have no

moderating effects (Constantino et al., 2012), suggesting the critical role of individuals' treatment expectations. Outcome expectations have also been evidenced to change throughout treatment on the basis of familiarity with treatment and potential decrease in symptomology (Piper, 2011). Therefore, the initial outcome expectations may be more predictive of posttreatment symptom reduction because they exclusively illustrate the patient's assumed benefit from treatment and attitudes towards their involvement (Piper, 2011). This kind of expectation, if increased, could therefore be an important factor in increasing symptom reduction.

Studying the link between expectations for therapy, however, has taken place almost exclusively within CBT intervention studies. The reproduceable format of CBT lends itself to simplified study design and ease of isolation when determining the direct effects of patient expectations. Interestingly, the public knowledge of CBT is less developed than traditional psychodynamic therapies (Seligman et al., 2009). Therefore, when research has been conducted, patients were found to have inaccurate treatment expectations that, if not addressed, affected treatment outcome. A lack of knowledge of treatment processes has been found to prolong recovery time in surgical patients, and inaccurate expectations in therapy similarly affect symptomology (Seligman et al., 2009). Accurate treatment process expectations are therefore influential in facilitating a more comfortable therapeutic environment and in equipping patients with beneficial knowledge that can ultimately lead to increased symptom reduction.

The research on treatment expectations has been mainly examined through the lens of therapeutic alliance, perhaps in part because the alliance is a robust predictor of change in therapy (Horvath, Del Re, Flückiger, & Symonds, 2011). Therapeutic alliance is the quality of collaboration and bond between patient and therapist (Constantino et al., 2012). The quality of

the therapeutic alliance is an established mediator for expectations and treatment outcome in past literature (Munder, T., Wilmers, F., Leonhart, R., Linster, H. W., & Barth, J. R., 2009).

Oftentimes, the more positive a patients' expectations, the stronger the therapeutic alliance, and therefore the more effective the treatment, though a patient's expectations of session comfort and similar treatment expectations were found to have an independent effect on treatment outcome (Seligman et al., 2009). Initial treatment expectations may also affect treatment outcome by way of ruptures or rifts in the therapeutic alliance (Constantino et al., 2012). Because of the natural projection of the patient onto the therapist, and the sensitivity of emotions and information conveyed through therapy, ruptures in therapeutic alliance are prevalent, and initial expectations of the patient may affect how quickly and effectively these ruptures are traversed (Constantino et al., 2012). Patient characteristics can also mediate the relationship between expectations and treatment outcome. General hopelessness is correlated with more negative outcome and treatment expectations and is thus a consideration for patients with MDD (Constantino et al., 2012). There are two elements of hope that are essential to the cognitive framework. Hope is evaluated by the successful determination in achieving set goals, and the belief in ability to make plans to achieve those goals (Snyder, Harris, Anderson, Holleran, & Al, 1991). Hope also encompasses feelings of optimism, self-efficacy, helplessness, and resourcefulness that are typically also distorted within a depressive episode (Snyder, Irving, & Anderson, 1999). Because all these mechanisms are negatively affected by those suffering from depression, addressing how a patient's hopelessness affects their initial expectations is a realm in research that needs further attention in order to produce effective interventions to bolster and maintain positive expectations in those suffering from MDD. Limited research has attempted to develop intervention scales that address negative expectations, promote self-efficacy, provide positive feedback, and overall

encourage positive expectations in patients, but this research has been exclusively conducted within CBT treatment (Constantino et al., 2012).

MDD, Short-Term Psychotherapies, and ISTDP

Short-term psychodynamic psychotherapies (STPPs) are based in drive, ego, attachment, self, and object relations psychology that pertain to psychoanalytical theories (Driessen, Cujpers, Maat, Abbas, Jonghe, & Dekker, 2010). These therapies work to uncover the unconscious personality structure that underlie the maintenance and development of disorders with symptoms characteristic of depression. Unlike other psychodynamic therapies, these therapies are short by comparison, but still emphasize the effects of unconscious thoughts and desires on patients' relationships and self-concept development (Driessen et al., 2010). There is typically a general focus on creating awareness of the unconscious processes that affect symptomology, and session frequency and number are determined at the onset of treatment by both patient and therapist. Like other short-term psychotherapies, including CBT, STPP's main measurement of treatment efficacy is symptom reduction (Abbass, Hancock, Henderson, & Kisely, 2004).

There are many different STPPs, but one, Intensive Short-Term Dynamic Psychotherapy (ISTDP; Davanloo, 1990), has been extremely effective in treating those with persistent depressive disorders. ISTDP, created by Habib Davanloo in the 1970s, is a rapid process that uncovers unconscious feelings and thoughts and confronts the patient with the awareness of these emotions while simultaneously educating the patient on their defense mechanisms that keep these unconscious motivations out of conscious awareness. This process of clarifying and confronting defenses is completed through the transference experienced by the patient onto the therapist, an unconscious therapeutic alliance. When the defenses are lessened, the patient and

therapist can then discuss unresolved feelings that have been repressed or otherwise not brought into conscious awareness (Davanloo, 1990). Davanloo determined that by targeting the defenses that patients use to avoid consciously feeling unconscious emotions, complex feelings of appreciation and anger directed towards the therapist occur. This transference reflects the ruptures in alliance with key figures to whom the patient has previously been attached. When these complex feelings move towards conscious awareness, defense mechanisms activate to prevent them from fully actualizing consciously. Challenging this resistance and encouraging the patient to recognize the efforts of these defenses, at culmination, allows the patient to genuinely feel the unconscious emotions with no anxiety or defense. Davanloo found that this “unlocking of the unconscious” through an arc of increasing anxiety, genuine emotion, and lack of anxiety and defense produced deep healing in his patients because of an understanding into how these unprocessed feelings affect the patient and ultimately leads to symptom reduction (Abbass, Town, & Driessen, 2012).

Through years of videotape-based research, Davanloo developed the structure of ISTDP sessions and created the “graded format.” The graded format is a process that strengthens anxiety tolerance in those with typically low anxiety tolerance, which is often characteristic of the depressive population, in order to broaden the applicability of ISTDP (Abbass, Sheldon, Gyra, & Kalpin, 2008). ISTDP is broadly inclusive and cost-effective for patients because of its time-limited duration of treatment. One study found that there was an approximate decrease of \$402,523 in pharmaceutical, insurance, hospital and doctor visit expenditures (Abbass, 2002). Therefore, the attention directed towards ISTDP is growing among those with treatment resistant depressions. Additionally, the finding that ISTDP can simultaneously reduce depressive symptoms and interpersonal problems advocates that treatment resistant depression necessitates

personality change to reduce depressive symptomology (Abbass, 2006). Finally, STPPs have been proven effective in immediate posttreatment symptom reduction, but ISTDP particularly has been evidenced to produce long-term posttreatment symptom reduction (Driessen, Cuijpers, Maat, Abbass, Jonghe, & Dekker, 2010).

MDD and Expectations

The research on the relationship between expectations and MDD has mainly been limited to placebo studies in medication trials, and symptom reduction in CBT treatment (e.g. Seligman et al., 2009; Colloca & Miller, 2011). The effects of MDD on expectations also requires further research. It has been established that patients with MDD maintain dysfunctional expectations that have been manipulated by depressive core attitudes and beliefs (Kube et al., 2016). Those suffering from MDD also tend to maintain their distorted expectations even when confronted with expectation-violating experiences (Rief & Glombiewski, 2016). Therefore, research that only contains CBT as a treatment for MDD is limited in that CBT techniques primarily target the cognitive structures of present thoughts and do not address techniques that evaluate future-directed expectations. Self-efficacy expectations, anticipated global expectations, and outcome expectations are known to have predictive power over depressive symptomology, but more research is needed to develop interventions that address this breadth of potential distortion and tendency for persistence of negative expectations in MDD (Kube et al., 2017).

Expectation research has not been applied to psychodynamic psychotherapies, and yet these therapies have been proven to be instrumental and effective in reducing symptomology in those with MDD. Expectations have been shown to aid in symptom reduction in CBT research, so it is important to generalize this research as broadly as possible and determine if the benefits

in CBT can be translated to ISTDP and other psychodynamic psychotherapies. Once researched, there would be a foundation on which to develop interventions to increase and maintain positive expectations to increase symptom reduction. The nature of MDD, being defined as recurrent depressive episodes, is a disorder that is detrimental to an individual's ability to function, interact, and emote, and researching the relationship between a variable that may increase symptom reduction is imperative to help those who have not yet benefited from treatment.

Current Study

This study will be a quasi-experimental design. The predictor variable is patients' expectations that will be measured before and throughout therapy. The dependent variable will be symptom reduction in MDD according to the Beck Depression Inventory-II. There will be two groups; the first group for comparison will undergo CBT treatment, and the second group will undergo ISTDP treatment. Both groups will complete the BDI-II and MPEQ questionnaires before treatment begins, they will complete the WAI-SR questionnaire after session 1, and then all three questionnaires at the end of treatment at session 15. Each will also complete the BDI-II six months after treatment has concluded.

Drawing from the literature, the following hypotheses are made:

- The ISTDP group will experience equivalent or greater symptom reduction than the CBT group, and will experience greater symptom reduction six months after treatment.
- Those with more positive expectations will experience greater symptom reduction, and stronger therapeutic alliance, and those with a stronger therapeutic alliance will experience greater symptom reduction.

- Therapeutic alliance will moderate the relationship between patients' expectations and symptom reduction, and antidepressant effects will not moderate the relationship between patients' expectations and symptom reduction.

Method

Participants

Participants will be individuals with a Major Depressive Disorder diagnosis between the ages of 18-65 that may or may not be currently receiving treatment for clinical depression. Participants will likely be majority women, ages 18-25, White, and not currently receiving medication or therapeutic treatment, though demographics may vary depending on the location where treatment is conducted. Participants will be communicating solely with a clinician administering talk therapy, and not with researchers during the study. Participants will only be contacted by researchers six months after treatment to take a questionnaire assessing depression symptomology. Clinicians and organizations providing therapy and diagnostic testing will be contacted to recruit participants, and participants will be assured that participation is voluntary and will not affect their current treatment. Once informed consent is obtained from the participants, they will be enrolled in one of two groups receiving therapy. There will be two clinicians, one administering CBT and one administering ISTDP. Both will have extensive experience in the respective therapies and hold a Psy.D. or Ph.D. credential. Clinicians will be given monetary compensation that reflects their hourly rate, and clients will be compensated in the form of receiving free therapeutic treatment. After completing a power analysis using G*Power, 450 participants will be needed to complete the study, so 550 participants will be recruited to account for potential dropout.

Measures

Depression. The Beck Depression Inventory- II (BDI-II) is a 21-item self-report measurement of severity of depression symptomology that allows for the quantification of a psychiatric diagnosis (Beck, 1961). This 1966 revision of the BDI was updated to reflect the changes in diagnostic criteria for Major Depressive Disorder in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Respondents answer items about how they have been feeling for the past two weeks on a four-point continuous scale ranging from 0 (not at all) to 3 (severe symptom) including symptoms and attitudes such as irritability and pessimism. Items are added into one score ranging from 0-63. Minimal depression is reflected by scoring in the range 0-13, mild depression at 14-19, moderate depression at 20-29, and severe depression at 30-63. Internal consistency of the scale is adequate (Cronbach's Alpha = .92). Test-retest reliability was assessed over a 1-week interval resulting in $r = .93$. BDI-II scores are highly correlated with the BDI-1A with $r = .93$, and with the Revised Hamilton Psychiatric Rating Scale for Depression with $r = .71$ (Beck, Steer, & Brown, 1996).

Expectations. The Milwaukee Psychotherapy Expectations Questionnaire (MPEQ) is used to assess both process and outcome expectations in therapy (Norberg, Wetterneck, Sass, & Kanter, 2011). The MPEQ is a 13-item self-report questionnaire measured on a 11-point continuous scale ranging from 0 (not at all) to 10 (very much so). Statements include expectations of client behavior (e.g. "I will be able to express my true thoughts and feelings"), therapist behavior (e.g. "My therapist will be sincere"), and anticipation (e.g. "I anticipate being a better person as a result of therapy"). Lower scores suggest negative expectations while higher

scores suggest positive expectations. The MPEQ is highly correlated with the Psychotherapy Expectancy Inventory-Revised (PEI-R) that measures process expectations and has high internal consistency and test-retest reliability and the Expectations About Counseling Scale (EAC) that measures outcome expectations. The MPEQ has sufficient internal consistency (Cronbach's $\alpha = .85$), and a test-retest reliability of $r = .83$ for process expectations factor and $r = .76$ for outcome expectations factor (Norberg, Wetterneck, Sass, & Kanter, 2011).

Therapeutic Alliance. The Working Alliance Inventory- Short Revised (WAI-SR) is a 12- item self-report questionnaire that assesses the patient's perception of their alliance with the clinician. Questions are measured on a five-point continuous scale ranging from 1 (seldom) to 5 (always) with statements such as "I believe the way we are working with my problem is correct." Lower scores suggest a weaker therapeutic alliance while higher scores suggest a stronger therapeutic alliance. The WAI-SR has sufficient internal consistency and test-retest reliability (Munder, Wilmers, Leonhart, Linster, & Barth, 2009).

Procedure

After obtaining informed consent, participants will be placed in either a CBT group or ISTDP group. Participants in both groups will undergo 15 weekly independent one-hour long sessions in a therapist's office. For both groups, therapy will be facilitated by a licensed Ph.D., or Psy.D. clinician with extensive experience administering CBT or ISTDP, explaining the basics of either CBT or ISTDP as per APA guidelines. After the brief information session, participants will complete the BDI-II and MPEQ before treatment starts. After participants complete the two questionnaires, the clinician will answer any questions the participant may have about the

treatment, and the participant will inform the clinician on their presenting problems and brief medical history. At the end of the first session the participants will take the WAI-SR. The second session will be the start of the therapeutic treatment.

As per the process of CBT, participants in the CBT group will work on addressing negative biases and will be assigned weekly homework to practice and observe techniques learned in session (Cully & Teten, 2008). All homework will be conducted using paper and pencil. As per the nature of ISTDP, the ISTDP group's sessions will be led according to the clinician's discretion with no homework required. CBT and ISTDP treatment will be administered following APA guidelines. After the last session, participants will again take the BDI-II, MPEQ, and WAI-SR. Participants will be contacted six months after treatment and asked to take the BDI-II. Participants will be debriefed after the last hour-long session, and again after the six-month post-treatment follow-up.

Ethics

ISTDP has been a researched treatment that is legitimate and beneficial for individuals with a Major Depressive Diagnosis. Participants will likely benefit from the study by undergoing ISTDP with the goal to reduce symptomology, which has been empirically evidenced to be effective in symptom reduction in this demographic (Davanloo, 1990). The available literature may benefit from this research by extending the knowledge from medication trial-based studies to therapeutic studies. This research will also fill the gap in expectations' research by using a psychodynamic therapeutic treatment rather than the primarily studied cognitive behavioral treatment. This study can benefit society at large because finding any mechanism that may assist therapy through reducing symptomology would help a large demographic that suffers from

depression or treatment resistant depression. The results of this study could suggest that addressing and monitoring expectations may produce a more effective course of treatment, and it may lead to further research examining interventions to increase positive expectations.

The study is slightly above the level of minimal risk because ISTDP necessitates uncovering repressed thoughts and feelings about significant people in the participants' lives. While the latter half of each session of ISTDP will work through these complicated emotions and hopefully end with a feeling of relief and understanding in each participant, the mere act of making unconscious thoughts conscious suggests potential risk because these thoughts and feelings could be potentially distressing. The risk will be minimized by employing a clinician with extensive experience in administering ISTDP to ensure accurate and effective debriefing and communication about what the participant is experiencing in session. Should a participant feel uncomfortable during or after a session, they will be reminded that they may stop the study at any time and their data will be shredded, thus study participation is purely voluntary.

Given the nature of research on individuals experiencing depression, the participant sample is a vulnerable population. This study involves this population due to the research question at hand that necessitates the study of individuals with a Major Depressive Disorder diagnosis. Each clinician will expressly state that inclusion in the study is voluntary and that the participants' current treatments will not be affected by their choice to participate in the study. There will be no deception in the study, so participants will be aware during each session about how ISTDP is administered and how the treatment works to reduce symptomology. The clinician administering ISTDP will follow current guidelines for treatment and will debrief the participants on the overall study at the end of treatment.

To ensure identity protection and security, participant information, therapist notes, and results of treatment will be confidential and only ever accessed by the clinician. All participant information gathered by the clinician will be coded by the clinician, so identities of participants will be unknown to researchers. Regarding the three questionnaires given to participants, the items on each questionnaire do include potentially sensitive information, as each scale measures levels of depression, nature of expectations, and nature of the therapeutic relationship. Divulging depression severity and perception of the therapeutic relationship may incite discomfort in patients who believe their scores will affect their clinician's perception of them. Participants will be assured that their clinician will not have access to the data pertaining to these questionnaires at any time during the study. Prior to researchers gaining access to participant data, the clinicians will have coded each individual numerically to ensure participant anonymity. Lastly, as per therapist-patient guidelines, participant data will be kept in a password-encrypted computer, and subsequent documents will be shredded.

The benefits of ISTDP far outweigh the potential risk to the patient because the purpose of ISTDP is to relieve the unconscious mind of repressed thoughts and feelings by bringing them to conscious awareness, allowing the participant to work through these emotions to make them fathomable and understood.

Results

Descriptive Statistics

Hypothetical data for participants' clinical characteristics for expectations, therapeutic alliance, and depression will be recorded over the duration of the study (sample sizes, means, and standard deviations). Participant outliers will be determined by boxplot and outlying means and

removed from the data. Outliers are expected to be participants with missing data or inaccurate completion of the questionnaires. Results are projected to indicate significant symptom reduction determined by BDI-II scores in both the ISTDP group and CBT group. However, this significant symptom reduction will be more greatly maintained six months post treatment by the ISTDP group.

Preliminary analyses of participants' characteristics such as gender, age, and race will show no relationship between or within the ISTDP group and CBT group.

Multiple Regression

A main effects test was conducted to determine the predictive power of patients' expectations and therapeutic alliance on symptom reduction. As single predictive variables, patients' expectations are a significant predictor of symptom reduction ($b = .008, p < .01$), and therapeutic alliance is a significant predictor of symptom reduction ($b = .003, p < .01$) both having positive regression coefficients.

An interaction test was conducted to determine whether therapeutic alliance moderated the relationship between patients' expectations and symptom reduction. As expected, therapeutic alliance did moderate the relationship between patients' expectations and symptom reduction ($R^2 = .66, F = .0004, p < .01$)

An interaction test was also conducted to determine whether antidepressant effects moderated the relationship between patients' expectations and symptom reduction. As expected, antidepressant effects did not moderate the relationship between patients' expectations and symptom reduction ($R^2 = .04, F = .35, p < .01$).

Simple Regression

A simple regression test was conducted to determine the relationship between patients' expectations and therapeutic alliance. As predicted, the more positive the patients' expectations, the greater the therapeutic alliance as seen in Figure 1.

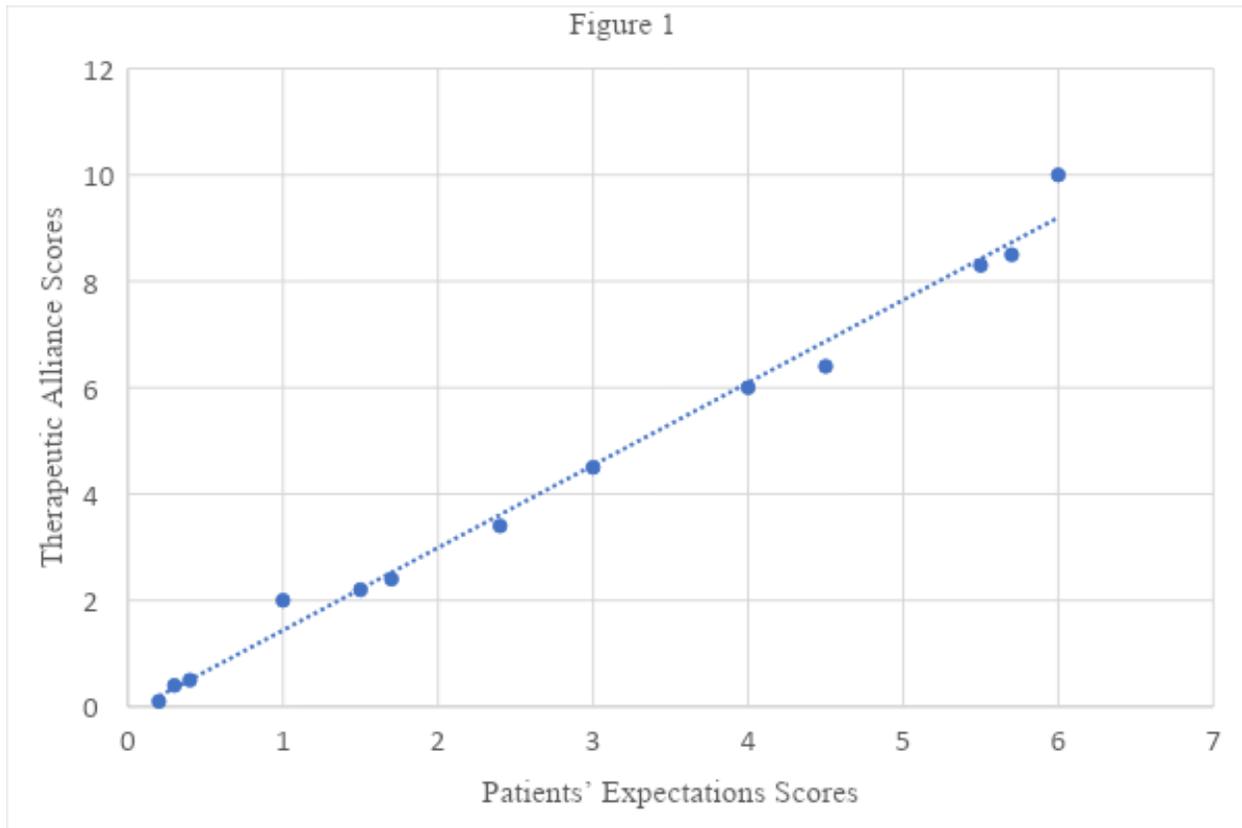


Figure 1. Scatterplot diagram displaying the positive correlation between therapeutic alliance and patients' expectations. Therapeutic alliance scores determined by using the WAI-SR and patients' expectations scores determined by using the MPEQ.

Independent Samples t-test

An independent samples t-test was conducted to determine the difference in symptom reduction between the ISTDP group and the CBT group after treatment. As predicted, the ISTDP

group showed significant difference in symptom reduction than the CBT group, ($M = 20$, $SD = 3.5$, $t(224) = 2.4$) and CBT ($M = 14$, $SD = 2.4$). Data displayed in Figure 2 below.

Mixed Model ANOVA

A mixed model ANOVA was conducted to determine the difference in long-term symptom reduction between and within the ISTDP group and CBT group six months after treatment. The difference in variance between the ISTDP group and CBT group at baseline, after treatment, and six months post treatment was significant, also displayed in Figure 2.

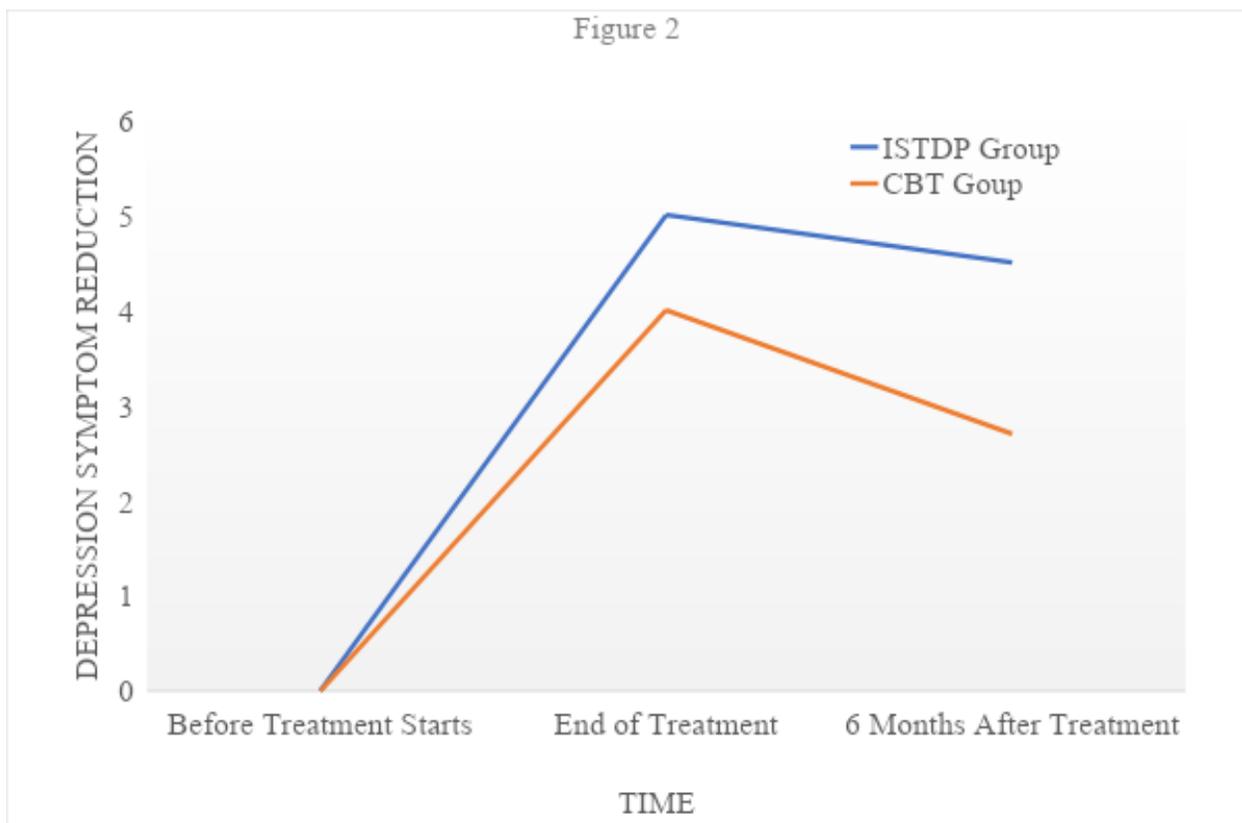


Figure 2. Line graph showing the difference in symptom reduction at baseline, end of treatment, and six months post treatment for the ISTDP group and CBT group. Symptom reduction scores were determined by using BDI-II.

Discussion

This current study examined the effects of patients' expectations on treatment outcome in MDD in ISTDP, to fill the gap in research that excluded expectations' analyses to CBT or antidepressant trials. This study also attempted to support previous research that therapeutic alliance and antidepressant effects moderated the relationship between patients' expectations and symptom reduction. Lastly, this study examined the efficacy of ISTDP in relation to CBT when studying patients' expectations predictive power for symptom reduction.

Patients' expectations were found to influence symptom reduction, such that greater expectations were associated with greater symptom reduction in both the ISTDP and CBT groups. This finding suggests that expectations are an important treatment process factor that can help supplement symptom reduction in patients with major depressive disorder as supported by Kube and colleagues' (2017) findings. Therapeutic alliance was found to moderate the relationship between patients' expectations and symptom reduction, and this finding also supports past research (Piper, 1991). Lastly, ISTDP was found to more greatly increase symptom reduction in patients with MDD than CBT, and this finding supports Driessen and colleagues' (2010) exploration of psychodynamic therapies vs. cognitive therapies.

A limitation in this study was the inability to control for individual patient characteristics such as resilience or helplessness. Patients with MDD are known to score lower in resilience and higher in helplessness, and factors such as these may influence overall symptom reduction at the end of treatment by positively or negatively influencing their expectations (Seligman et al., 2009). Another limitation of this study was that it did not account for therapist effects. More than one therapist would realistically be needed to conduct upwards of 400 participants' therapeutic treatment, and the individual differences between therapists may influence overall symptom

reduction, expectations, or therapeutic alliance scores. This study also did not control for the natural progression of depression symptom reduction that patients experience overtime. Lastly, this study requires that participants have no past therapeutic experience but finding a population with an MDD diagnosis and no therapeutic experience is rare.

This study acts as a foundation for future research on the effects of patients' expectations in talk therapy. Future research could develop interventions that increase patients' positive expectations and decrease their negative expectations, and tailor these interventions to patients with an MDD diagnosis as their expectations are likely more negative than other populations. Ultimately, the lack of research on expectations outside of antidepressant trials necessitates further attention to for research in talk therapy that distinguishes among individual clinical characteristics. Any treatment process factor that can aid in symptom reduction of those suffering from depression is worth researching.

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