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Investigating the role of therapist-client discussion of illness beliefs on clients' treatment outcome expectancies and perceptions of working alliance

Sarah Davina Slotkin
University at Albany, State University of New York, sarah.slotkin@gmail.com

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INVESTIGATING THE ROLE OF THERAPIST-CLIENT DISCUSSION OF ILLNESS
BELIEFS ON CLIENTS’ TREATMENT OUTCOME EXPECTANCIES AND PERCEPTIONS
OF WORKING ALLIANCE

by

Sarah D. Slotkin

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Abstract

The working alliance, conceptualized as an emotional bond and client/therapist agreement on tasks and goals is considered integral to psychotherapy success. However, the mechanisms by which the working alliance develops are poorly understood. The Common Sense Model of Self-Regulation is well supported in understanding the role of patient illness beliefs in physical health management. The present study evaluated the role of discussion of psychotherapy clients’ illness beliefs in the development of working alliance in psychotherapy. Further, the contribution of client expectations for psychotherapy on treatment outcomes was investigated as the mechanism by which discussion of illness beliefs contributes to the working alliance. It was hypothesized that more discussion of client illness beliefs would increase clients’ perceptions of the working alliance, and that clients’ outcome expectations would mediate this relation.

A sample (N = 202) of adults was recruited via Amazon’s Mechanical Turk to respond to a questionnaire regarding perceptions of their current psychotherapy relationship. Participants were largely men who were employed full-time, and college-educated with a mean age of 30.67 years (SD = 8.3), who had attended an average of 15.83 (SD = 78.99) sessions with their current therapist.

Results indicated that participants recalled their therapists discussing most of the five categories of illness beliefs (identity, cause, consequence, timeline, control/cure) with them, and that more discussion of illness beliefs was associated with stronger perceptions of the working alliance. Outcome expectations mediated this relationship, as hypothesized.

Future research on this topic is suggested, including the development of instruments to measure discussion of illness beliefs in psychotherapy specifically, and identification of which
illness beliefs are most influential, for whom the discussion of illness beliefs is most important, and how this discussion affects clients.
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Introduction

The alliance between therapist and client has been considered integral to treatment outcomes by therapists and researchers since the beginning of modern psychotherapy (Horvath et al., 2011). The working alliance is commonly conceptualized as being comprised by three factors: an emotional bond, agreement on tasks, and agreement on goals (Lambert, 2013). It has been accepted as “an essential and inseparable part of everything that happens in therapy” (Horvath et al., 2011, p. 15).

Horvath and colleagues’ 2011 meta-analysis of 190 independent data sets found that the working alliance was significantly associated to outcome (\( r = .282, p < .001 \)) regardless of how or when either variable was measured. Other research supports the working alliance as one of the most well supported predictors of treatment success across presenting problems and treatment orientations (Wampold & Imel, 2015).

In contrast to the many studies that have documented the effect of the working alliance on therapy outcomes, there are relatively fewer studies on the factors that contribute to the development of the working alliance (Castonguay et al., 2006). One theory that may provide a means to understand how the working alliance develops is Leventhal’s (1980) Common Sense Model of Self-Regulation (CSM).

The CSM was first proposed by Leventhal et al. (1980) as the process by which individual’s beliefs about their illness (i.e., illness beliefs) influence how they manage their health. Research on physical health conditions indicates that explicit discussion and incorporation of patients’ illness beliefs into the treatment is related to improved doctor-patient relationship (Phillips et al., 2012), akin to the working alliance. It is also related to improved treatment adherence and health outcomes (Phillips et al., 2011). Given the association of the
explicit discussion of illness beliefs in physical health with doctor-patient relationship, it is reasonable to expect that explicit discussion of illness beliefs in mental health treatment may be associated with improved working alliance and client expectancies for treatment.

If the discussion of illness beliefs is found to be associated with working alliance, it is important to understand the mechanism by which this effect occurs. It is possible that the discussion of illness beliefs leads clients to have increased confidence in the outcome of therapy because this discussion signals that the therapist is seeking to understand their individual experience and plans to tailor the treatment accordingly. This is important because *outcome expectations*, or client predictions about the efficacy of treatment, are one of the best supported predictors of working alliance (Constantino et al., 2018). The present study was designed to test the theorized relationship between client-therapist discussion of mental health illness beliefs, outcome expectations, and perceptions of the working alliance.

**Development of the Working Alliance**

Previous literature has focused on understanding the association of the working alliance with clients’ and therapists’ characteristics as well as therapist behaviors. Clients’ characteristics, including sociodemographic factors (e.g., age, gender, socioeconomic status), symptoms, psychological mindedness, and motivation for therapy have been associated with the quality of the working alliance (Clarkin & Levy, 2003; Connolly Gibbons et al., 2003; Hersoug et al., 2002). In addition to therapist sociodemographic factors, therapist characteristics, including capacity to connect, dependability, benevolence, and responsiveness are related to a stronger working alliance (Ackerman & Hilsenroth, 2003). While it is important to understand client and therapist contributions to the alliance, personal characteristics are difficult to change.
Therapists’ in session behaviors also predict the working alliance and can potentially be taught to improve the working alliance. Negative reactions to clients and expressions of anxiety have a negative impact on client perception of working alliance (Nissen-Lie et al., 2014). Common therapeutic microskills, including reflection, understanding, facilitating expressions of affect and attending to the patient’s experience have been related to a stronger working alliance (Ackerman & Hilsenroth, 2003; Duff & Bedi, 2010). This association was supported by Solomonov et al. (2018) who found a bidirectional association between use of common factor techniques (including empathy, active listening, and instilling hope) and the working alliance among clients with depression. Some speculate that open-ended questions about the client’s beliefs about their mental health problems contribute to the working alliance (Hill, 2005).

Common Sense Model of Self-Regulation

The Common Sense Model of Self-Regulation (CSM; Leventhal et al., 1980), a model of how individuals self-manage chronic conditions, provides a theoretical framework to understand why asking clients about their beliefs about their mental health may contribute to a strong working alliance. In this model, people are assumed to develop illness beliefs in response to health threats, including beliefs about the identity, cause, timeline, consequence and control of the health condition (Leventhal et al., 1997). These illness beliefs are developed through each person’s unique lived experiences and reflect the person’s cumulative cultural background, health history, medical knowledge, and incorporation of lay beliefs (Leventhal et al., 1997). People then engage in a cycle of reappraisal in which they use information from their illness beliefs to construct a self-management strategy. Once the strategy is deployed, the effectiveness of the management strategy is evaluated in terms of its outcomes on symptoms, thus prompting possible changes in illness beliefs. Depending on the newly incorporated information from the
previous self-management attempt, the person may decide to try a new self-management strategy, continue using the same strategy, or cease management altogether because the symptoms have been alleviated (Leventhal et al., 1997).

For example, a person with depression is likely to have identity beliefs related to both the diagnosis and the symptoms that characterize it (e.g., “My irritability is a symptom of depression”). Beliefs about the cause can include biological, emotional, environment and psychological dimensions (e.g., “My depression was caused by a chemical imbalance in my brain”). Consequences refer to the impact of the diagnosis on global or acute functioning (e.g., “My depression makes it hard for me to get out of bed”). Timeline beliefs reflect the individual’s concept about the course of the illness (e.g., “I am going to have depression for the rest of my life”). Finally, cure or control beliefs refer to the individual’s perceptions of the utility of management strategies (e.g., “If I take medication, I will feel better”).

Theoretically, the cumulative effect of illness beliefs leads each individual to decide on a management strategy rooted in the “common sense” interpretation of the logical next step (Leventhal et al., 1997). The individual in the above example would be likely to self-manage by taking anti-depressant medication as prescribed by a physician. In contrast, another individual with depression who is experiencing the same symptoms but who holds a cause belief of “my recent breakup caused my depression” and a control/cure belief of “I will feel better if I can talk through my emotional pain with another person” may be more likely to seek psychotherapy than medication. As a result, these two clients’ self-management strategies and outcomes will most likely diverge from one another.

The CSM has primarily been evaluated in physical health conditions and has been used to explain variability in outcomes for patients with health conditions including: chronic obstructive
pulmonary disease (Zoeckler et al., Parkinson’s disease (Simpson et al., 2013), hypertension (Meyer et al., 1985), cardiovascular disease (Martin et al., 2005), and cancer (Kelly et al., 2005).

There are a few studies on the CSM and psychological symptoms that demonstrated a relation between illness beliefs and outcomes for several common psychological disorders, including posttraumatic stress disorder (Spoont et al., 2005), anorexia nervosa (Holliday et al., 2005), schizophrenia (Lobban et al., 2004), and depression (Fortune et al., 2004).

In healthcare settings, the CSM provides a framework for providers to use in conceptualizing their clients’ illness beliefs, self-management, and outcomes. According to McAndrew et al. (2017), a provider who is aware of their clients’ illness beliefs is better equipped to tailor the treatment approach to each client’s specific beliefs about their health threat. McAndrew et al. (2008) proposed that a provider who explicitly elicits a client’s illness beliefs is able to negotiate a shared set of illness beliefs that reflects both the client’s lived experience and the provider’s expertise. It is reasoned that by helping clients link their illness beliefs to effective self-management strategies, the clients’ expectations for a positive treatment outcome will be enhanced.

There is initial evidence that explicit discussion about illness beliefs improves treatment outcomes. A study examining physician and patient communication found that the more the patient perceived their provider explicitly discussing their problem and treatment in terms of the illness belief dimensions, the better the patient understood their problem, the more satisfied they were with the care they received, the more they adhered to the treatment protocol, and the more likely they were to experience symptom reduction or complete remission (Phillips et al., 2012).

The power of explicit query and discussion of patient illness beliefs has also been found to buffer the negative consequences of maladaptive illness beliefs in cardiovascular disease.
(Karademas et al., 2014). In a sample of veterans with medically unexplained symptoms, patient-provider discussion of illness beliefs was significantly related to both current treatment adherence and future adherence intentions (Phillips et al., 2017).

There has been very limited research on the explicit discussion of illness beliefs in mental health treatment. In one study, clients being treated for bipolar disorder worked with therapists who explicitly queried their illness beliefs and used that discussion to develop more concordant illness beliefs, resulting in significant increases from baseline to end of treatment in medication adherence (Scott & Tacchi, 2002). Psychotherapy researchers have postulated that querying clients about their problem-related beliefs can contribute to better outcomes due to a strengthening of the working alliance (Hill, 2005).

**Clients’ Outcome Expectations**

Given the established relationship between explicit discussion of patient illness beliefs and favorable outcomes in physical health treatment (e.g., Phillips et al., 2012), and initial support for this relationship in mental health care (Scott & Tacchi, 2002), further investigation about the mechanisms of explicit discussion of client illness beliefs in mental health treatment is warranted. Discussion of illness beliefs may help the provider link the patient’s illness beliefs to effective treatment strategies thus improving patient’s confidence in a positive outcome from treatment, termed *outcome expectancies* (McAndrew 2017).

Outcome expectancy is one of the one of the most influential common factors in psychotherapy (Lambert, 1992) and one of the best known predictors of the working alliance (Constantino et al., 2018). Clients’ outcome expectations for psychotherapy have been found to change as their experiences in therapy progress (Constantino et al., 2018), which reflects the learning feedback loop in the CSM. A number of studies have demonstrated a strong relation
between illness beliefs and expectancies for health management approaches (e.g., Griva et al., 2000; Lau-Walker, 2004; Tahmasebi et al., 2015).

Discussion of illness beliefs may improve outcome expectancies by allowing clients to believe that the plan of treatment will be tailored to their specific experiences. In turn, this belief is likely to increase clients’ expectation that the process of therapy will be appropriate and that the outcome will be favorable (McAndrew et al., 2017).

There is initial support for this reasoning. Among patients with depression, discussion of antidepressant medications in terms of the CSM illness beliefs categories improves patient’s confidence in their medication regimen (Glattacker et al., 2018). Among patients with medically unexplained symptoms, discussion of illness beliefs was associated with intentions to adhere to the provider’s treatment recommendations (Phillips et al., 2013).

Determining that discussion of illness beliefs predicts better outcome expectations is important because outcome expectations are a strong predictor of better working alliance across clients with multiple presenting problems and treatment approaches (Constantino et al., 2002). Clients’ outcome expectations at the beginning of treatment are positively associated with mid-treatment working alliance among participants in therapy for a variety of problems (Connolly Gibbons et al., 2003; Constantino et al., 2005). Joyce and Piper (1998) found that client outcome expectations accounted for 18% to 40% of working alliance variance, with positive treatment expectancy predicting better alliance. A recent meta-analysis of research on outcome expectations and psychotherapy treatment outcomes (Constantino et al., 2018) found that the quality of the working alliance significantly mediated that relation. Specifically, more positive outcome expectations were associated with a stronger perceived working alliance.

**Research Aims and Hypotheses**
The present study tested the association between the explicit discussion of client illness beliefs in therapy, working alliance, and client expectations. Extant literature on the discussion of illness beliefs indicated that as these discussions are associated with patient ratings of provider relationship in physical health care, the same association will be found in the context of mental health care. Additionally, the predictive value of client expectations for therapy on working alliance will be explored as an explanatory pathway for the contribution of discussion of illness beliefs to the working alliance.

Given robust support for the influence of client expectations on perceptions of the working alliance, it was reasoned that expectations may mediate the relationship between discussion of illness beliefs and working alliance. It seemed likely that an individual’s outcome expectations would be higher for an illness management strategy developed in part through discussion of the client’s illness beliefs, in that the client will likely have confidence that the strategy is designed to target their unique symptoms (as opposed to “one size fits all”). In turn, enhanced outcome expectations should contribute to stronger client perceptions of an agreement with the provider on the goals and tasks of therapy and a stronger emotional bond.

Based on the above reasoning, it was hypothesized that discussion of illness beliefs will predict clients’ perception of the working alliance (H1; Fig. 1). Further, client treatment expectations were expected to mediate the relation between discussion of illness beliefs and the working alliance (H2; Fig. 1).

**Method**

**Participants**

**Power Analysis**
An *a priori* power analysis was conducted to determine the number of participants required for power level of .80 and $\alpha = .05$. In order to determine effect size, previous research on the relationships between discussion of illness beliefs, client expectations, and the working alliance were consulted. Given the lack of research the discussion of illness beliefs in mental health care, the correlations of discussion of illness beliefs and patient agreement on goals and tasks ($r = .37$; Phillips et al., 2012), and patient perception of bond ($r = .23$; Phillips et al., 2012); $r = .62$; Phillips et al., 2017) in physical health care were used. Previous research on the association of expectations and alliance also indicated small effect sizes ($r = .27$; Joyce et al., 2003; $r = .13$; Joyce & Piper, 1998). Given these previous results, a small effect size according to Cohen’s (1992) standards was selected, $r^2 = .10$.

A power analysis using G*Power software (Faul, Erdfelder, Buchner, & Lang, 2013) using the aforementioned guidelines suggested a minimum sample size of 81. In order to retain sufficient power in the event of participant attrition, the target sample size was increased by 20% to 98.

**Inclusion and Exclusion Criteria**

The target population for this study was adults currently participating in voluntary individual outpatient psychotherapy. Eligible participants were 18 years of age or older, living in the U.S., and demonstrated adequate English-language proficiency by being able to respond to the informed consent. Outpatient psychotherapy was defined as any therapy conducted in a private practice, hospital outpatient department, or community clinic conducted by a professional with the appropriate license to provide such care (i.e., doctoral level psychologist or masters’ level therapist). Since valid measurement of the working alliance requires the completion of at
least three sessions (Hersoug et al., 2009), participants who attended fewer than three sessions with their current therapist were excluded.

**Demographics**

There were 470 potential participants who clicked through to the survey link hosted on Psychdata.com. Of this group, 230 either self-reported that they did not meet the criteria for the survey or did not respond to any questions beyond the informed consent and were removed from the sample. Responses from the remaining 240 participants were reviewed for missing values. Due to the brief nature of the scales used in this study, 37 participants who were missing more than one item response on the Discussion of Illness Beliefs scale and Working Alliance Inventory – Short Form Revised, or who were missing any items on the brief 4-item Outcome Expectations subscale of the Milwaukee Psychotherapy Expectations Questionnaire were excluded from analyses. One participant’s responses to the open-ended questions indicated that their data may be contaminated and was therefore removed. All remaining participants’ responses were checked regarding their response to a random response check question and that the minimum length of time taken to complete the survey was not consistent with automated “bot” respondents. None were identified using these two data purity methods, leaving a sample of 202 included in the analyses.

Participants reported a mean age of 30.67 years (SD = 8.30; see Table 1). A majority of the sample reported being male (60.9%), working full-time (86.1%) and having a bachelor’s degree (64.9%). Regarding their experience in therapy, participants reported a mean of 15.83 sessions with their current therapists (SD = 78.99; see Table 2) and attending an average of 3.70 sessions per month (SD = 1.02). Most of the sample reported having seen 2 or more therapists during their lifetime.
Instruments

*Therapist Discussion of Illness Beliefs*

Client perception of therapist discussion of CS-SRM-related illness beliefs was measured using Phillips et al.’s (2012) seven-item Discussion of Illness Beliefs scale (DIB; see Appendix A). The language of some of the items in this scale was adjusted to better capture issues relevant specifically to mental health therapy, as the original scale was designed for use in a physical healthcare setting. This scale asks participants to indicate via “yes” or “no” whether they recall their therapist discussing different domains of their illness beliefs at any time during treatment (e.g., “The therapist told me how long I could expect to have this problem”). The composite sum of responses to all seven items is summed with a range of 0 to 7, with higher scores indicating more discussion of client illness beliefs.

Confirmatory factor analysis indicate that this is a unidimensional scale with strong face and external validity, and there is initial evidence for convergent validity with patients’ understanding of their health (Phillips et al., 2012). Internal reliability has been found to be satisfactory (Kuder-Richardson 20 = 0.92; Phillips et al., 2017). Scores ranged from 0 to 7 with a mean of 5.7 and SD of 1.38. In the present study, internal consistency was acceptable (Kuder-Richardson 20 = 0.57).

*Outcome Expectations*

Clients’ outcome expectations were measured using the Milwaukee Psychotherapy Expectation Questionnaire (MPEQ; Norberg et al., 2011; see Appendix B), which captures client expectations for both therapy process (nine items about client beliefs about what happens during therapy) and treatment outcomes (four items about client expectations for improvement and how
helpful therapy will be) via a 13-item Likert-type scale from 0 (“Not at all”) to 10 (“Very much so”).

Since the process expectations and outcome expectations subscales are recommended to be interpreted separately from one another, the four-item outcome expectations scale was used. Participant responses to the four items in the outcome expectations scale were summed for a total score and then divided by 4 to yield the outcome expectations score, which could range from 0 to 10. Exploratory and confirmatory factor analysis supported the two-factor solution with good to excellent model fit across multiple samples (Norberg et al., 2011). The MPEQ demonstrates strong convergent and predictive validity, and reliability is sufficient, with Cronbach’s alpha of .85 or greater (Norberg et al., 2011). In the present sample, Cronbach’s alpha for the outcome expectations subscale was found to be .88 (DeVellis, 2017).

**Working Alliance**

The Working Alliance Inventory – Short Form Revised (WAI-SR; Hatcher & Gillaspy, 2006; see Appendix C) was used to capture clients’ perception of the therapeutic goals, tasks, and bond. This 12-item scale asks clients to evaluate on a 5-point Likert type scale from 1 (seldom) to 5 (always) the frequency with which they believe certain conditions are present in their treatment with their therapist (e.g., “What I am doing in therapy gives me new ways of looking at my problem”). The total score of all 12 items is used to measure the overall working alliance, with higher scores indicating stronger ratings of the working alliance (Hatcher & Gillaspy, 2006).

The WAI-SR is the short form of Horvath and Greenberg’s 36-item Working Alliance Inventory (WAI; 1989) and demonstrates a stronger fit to the three-factor structure as theorized by Bordin’s (1979) conceptualization of the working alliance. The measure demonstrates strong
Cronbach’s alpha estimates of reliability (.90) and cross-cultural validity (Hatcher & Gillaspy, 2006). In the present study, Cronbach’s alpha was .92.

Demographic Questionnaire

A demographic questionnaire was included in the study in order to describe the sample and test for possible covariates (Appendix D). The questionnaire asked participants to report their age, gender, race, ethnicity, socioeconomic status, education, and geographic location by region. Participants were also asked to provide information regarding their current therapy, including their primary presenting concern, their therapist’s profession, the treatment setting, the length of current treatment, the frequency of sessions, and the number of previous therapy experiences.

Procedure

Participants were recruited using Amazon’s Mechanical Turk (MTurk), an online platform that allows users to participate in surveys for which they meet inclusion criteria. Access to the recruitment materials was limited to MTurk users who reside in the United States and are over the age of 18. Recruitment materials included a brief description of the study, inclusion criteria, the payment for completion of the survey, researcher contact information, and the URL for the password-protected questionnaire (Appendix E). After following the link to the survey hosted on the psychdata.com website, participants entered the password and were directed to an informed consent page (Appendix F) with detailed information regarding inclusion/exclusion criteria, the voluntary nature of the study and their right to withdraw at any time without penalty, the steps taken to ensure their anonymity, potential risks and benefits of participation, the estimated amount of time to complete the survey (30 minutes), and contact information for the researcher and Office of Research Compliance.
Once informed consent was obtained, participants were asked to respond to a series of questions in order to determine if they meet the inclusion/exclusion criteria for the study (Appendix G). Any participant who did not meet the criteria was blocked from the remainder of the questionnaire, informed that they do not meet the criteria for the study, and thanked for their time.

Participants who met the inclusion criteria were presented with the questionnaire containing the measures and demographic questionnaire detailed above. Upon completion, participants were thanked for their participation and provided with a completion code to be entered into Amazon’s MTurk resulting in payment of $0.10 to participants’ Amazon Payments accounts or to an Amazon.com gift card balance. Participants were informed that their completion code was not connected in any way to their responses on the questionnaire. The completion code was changed at regular intervals to prevent the acquisition and redemption of completion codes by non-participants.

Results

Preliminary Analyses

Counterbalancing

Discussion of illness beliefs (DIB), the Milwaukee Psychotherapy Expectations Questionnaire (MPEQ), and the Working Alliance Inventory – Short Form Revised (WAI-SR) were presented in counterbalanced order to control for possible order effects. Participants were randomly assigned to one of six order permutations. Cell sizes were approximately equal across permutations (40, 28, 36, 32, 32, 34). One-way ANOVAS found no significant difference between the six permutations for the MPEQ ($F (5, 196) = 1.92, p = .093$) and the WAI ($F (5, 196) = 1.47, p = .203$), suggesting there were no order effects for these two measures. There was
a significant difference for the DIB ($F(5, 196) = 2.45, p = .035$) indicating the possibility of order effects on this measure. However, since the inclusion of counterbalanced groups in the main analyses as a covariate yielded no difference in the results, it was not included in the final model.

**Tests of Assumptions**

The data were analyzed to determine whether the assumptions underlying regression were met. Inspection of partial plots and residuals plots for each of the three paths of the predicted model were reviewed and indicated linearity. Residual plots and the Durbin-Watson values reflect independent errors and homoscedasticity. The absence of multicollinearity was established by a correlation matrix ($R < 0.90$), VIF values ($< 10$), and tolerance values ($> 2$).

The data were also examined for evidence of outliers using Mahalanobis distance, Cook’s distance, and centered leverage values. Nine possible outliers were identified by Mahalanobis and leverage values. When these items were excluded from the analyses, there were no meaningful differences in the results. Thus the 9 outliers were not removed from the sample.

**Descriptive Analysis**

The mean of the discussion of illness beliefs was 5.71 (SD = 1.38), indicating that participants reported on average that their therapist discussed most categories of illness beliefs about their mental health condition. Responses to individual items on the DIB were inspected to understand whether certain domains of illness beliefs were discussed more frequently than others (see Table 3). The most popular discussion domain was *cause*, with 92.5% of respondents reporting their therapist talking about what might be causing their presenting concern, followed closely by items regarding *control and consequences* (87.6%) and *identity and control* (87.6%).
The least frequently discussed domains of illness beliefs as reported by the participants were identity (71.3%) and timeline (69.3%).

The mean of the working alliance was 43.95 (SD = 8.91), reflecting participant perception of a moderately strong relationship with their therapist. The mean of outcome expectations was 7.72 (SD = 1.70), with participants reporting feeling it is very likely that they would have a positive outcome from current treatment.

**Bivariate Correlations**

Bivariate correlations were calculated for all measures and eligible demographic characteristics (see Table 4). Discussion of illness beliefs, outcome expectations, and working alliance were all positively correlated, *ps* < .01, with discussion of illness beliefs moderately correlated with both outcome expectations, *r* (200) = .39, and working alliance, *r* (200) = .37, and outcome expectations strongly correlated with working alliance, *r* (200) = .66. Client age was negatively and weakly correlated with discussion of illness beliefs (*r* (200) = -.19, *p* < .01) and working alliance (*r* (200) = -.20, *p* < .01). Number of therapy sessions per month was weakly and positively correlated with outcome expectations (*r* (200) = .16, *p* < .05) and working alliance (*r* (200) = .22, *p* < .01). Age and number of sessions per month were considered for inclusion in main analyses as covariates; however, since their inclusion did not meaningfully change the mediation analysis results and there was no a priori theoretical basis for these relations, these variables were subsequently excluded as covariates from the major analyses.

**Major Analyses**

A mediation regression analysis using Hayes’s (2013) PROCESS analysis method was conducted to test the hypotheses. This method is currently the preferred approach for testing mediation models due to its superior statistical power, ability to test data that does not meet the
assumption of normality, and ability to detect mediation whether or not a significant relationship exists between the independent variable and dependent variable (Hayes, 2013; MacKinnon & Fairchild, 2009). Previous literature suggests that 10,000 bootstrapped samples at 95% confidence intervals is sufficient to test the hypotheses based on sample size and power (Jose, 2013; Mallinckrodt, Abraham, Wei, & Russell, 2006). Consistent with current best practices in mediation analyses (Wen & Fan, 2015), the ratio of the indirect to the total effect was used to determine the effect size.

The PROCESS Macro for SPSS (version 3.5; Preacher & Hayes, 2005) was used to test the hypotheses. The total effect of the discussion of illness beliefs on the working alliance was calculated (H1), as well as the indirect effect of outcome expectancies on the working alliance in the model (H2).

The total effect of discussion of illness beliefs as a predictor of the working alliance (H1) was significant, $F(1, 200) = 30.90, p < .01, 95\% \text{ CI}[1.52, 3.20], R^2 = .13$. As hypothesized, more discussion of illness beliefs contributed to a stronger working alliance, $b = 2.36, t = 5.56, p < .01$. Discussion of illness beliefs also predicted the mediator outcome expectations, $F(1, 200) = 36.48, p < .01, 95\% \text{ CI}[.32, .64], R^2 = .15$. More discussion of illness beliefs contributed to better outcome expectations, $b = 4.8, t = 6.04, p < .01$.

As hypothesized, there was a significant indirect effect of discussion of illness beliefs on working alliance through outcome expectations (H2), $b = 1.57, \text{ BCa CI}[0.74, 2.41]$. The mediation was consistent with the predicted direction of the relationship and represents a large effect, with the ratio of indirect to total effect = .66, BCa CI [0.34, 1.01]. Table 5 presents these results.

**Discussion**
The working alliance, the collaborative aspect of the relationship between the client and therapist, is a critical component of effective psychotherapy (Horvath et al., 2011). Nonetheless, little is known about client/therapist behaviors factors that contribute to the working alliance.

Research in chronic physical conditions has found that discussion of the clients’ beliefs about their health condition predicts client-provider relationships (similar to working alliance). In line with this topic of inquiry, the present study assessed the role of the discussion of CSM-based client illness beliefs in psychotherapy in relation to clients’ outcome expectations and perceptions of the working alliance. The study further tested whether outcome expectations mediate the relationship between discussion of illness beliefs and working alliance.

Overall, participants reported frequently discussing illness beliefs with their therapist and a moderately strong working alliance with their therapist. Importantly, there was a moderate relationship between greater discussion of illness beliefs and a stronger working alliance. This finding is consistent with previous research on physical health conditions in which providers who discussed illness beliefs with their patients had stronger patient-provider relationships (Phillips et al., 2012). The effect size found in the current study (.66) is consistent with the effect size for discussion of illness beliefs and patient perception of agreement with provider on presenting problem and treatment ($r^2 = .14$), and greater than the effect size for discussion of illness beliefs and patient report of providers’ interpersonal skills ($r^2 = .05$) in physical health conditions (Phillips et al., 2012), suggesting discussion of illness beliefs is also important for mental health conditions.

The present study also tested the hypothesis that the relation between discussion of illness beliefs and the working alliance is due to an increase in client’s expectations for positive outcomes. Discussion of illness beliefs is thought to provide clients with increased confidence
that the treatment plan will be tailored to their specific experiences, thus increasing their prediction that the outcome of the treatment will be favorable. Consistent with this hypothesis, it was found, as predicted, that positive outcome expectations mediated the relationship with discussion of illness beliefs about working alliance. That is, positive outcome expectations accounted for 66% of the variance in the total effect between discussion of illness beliefs and working alliance. This finding is consistent with previous research on patients with depression that found initial support for the improvement of outcome expectations following discussion of illness beliefs with both physicians and psychologists (Glattacker et al., 2018). This study extends the empirical support for the link between these two factors for clients presenting with a wide range of problems other than depression.

Overall, this study provides initial support that discussion of illness beliefs may improve the working alliance. This finding is important since the working alliance is a key aspect of successful therapy (Horvath et al., 2011), however, little is known about the malleable factors that may improve the working alliance. Thus far, the extant research has examined personal characteristics of clients and therapists (e.g., Ackerman & Hilsenroth, 2003; Clarkin & Levy, 2003), factors that are not subject to change. Therapist behavior, on the other hand, can be changed to provide the most potential for active intervention. The present results suggest the importance of training providers to incorporate a discussion of patients’ illness beliefs as a transtheoretical approach to improving the working alliance.

While discussion of illness beliefs is not a primary aspect of any theoretical orientation, many treatment approaches do include some form of discussion of illness beliefs as psychoeducation during the intake process, suggesting that it is feasible to train providers to incorporate a more explicit query of client illness beliefs into their early sessions. Responses
from participants in this study support the claim that discussion of illness beliefs is already occurring in therapy with great frequency. *Cause, control in the context of consequences* and *identity beliefs in the context of control* were the most frequently reported domains of discussion, while *identity* and *timeline* were the least frequently reported, though still by more than two thirds of participants.

The information gleaned from discussion of illness beliefs will also provide the therapist with information that can help with case conceptualization and treatment planning. Additionally, doing so provides an opportunity to identify any inaccurate beliefs or gaps in the client’s knowledge that may negatively affect the successful engagement in treatment and/or symptom management.

In addition to longitudinal and experimental research to provide additional support for the importance of discussion of illness beliefs and the working alliance in psychotherapy, further inquiry into the contextual factors influencing these relationships is needed. Research should determine **which** illness beliefs to target, for **whom** discussions of illness beliefs are most relevant, and **how** discussion of illness beliefs impacts targets.

Which illness beliefs are most important to target may be different depending on the client’s presenting problem. Research has demonstrated that the strength of association of different illness beliefs domains with self-management and outcomes varies across different illnesses. For example, patients’ perception of greater control is associated with better outcomes in lung disease, psoriasis, and arthritis (Scharloo et al., 1998), and better health related quality of life in breast cancer and melanoma (Toscano et al., 2020). Perception of a longer timeline for the presence of an illness is associated with worse outcomes in lung disease, psoriasis, and arthritis (Scharloo et al., 1998), and depression (Elwy et al., 2011). For illness beliefs in the consequence
domain, problems that are perceived as “somewhat serious” are associated with better outcomes than those that are perceived as “not serious” or “highly serious” (Hagger & Orbell, 2003). Further research on which illness belief domains are specifically associated with different mental health conditions can aid in identifying specific relationships like those mentioned above, thus providing clinicians a guide to prioritizing the domains of illness beliefs that they inquire about with their clients.

For whom discussion of illness beliefs is most important is also a critical area of future research. It is possible that discussion of illness beliefs is particularly important for marginalized populations and/or when there are cultural differences between the client and therapist. Cultural norms and client identity are differentially associated with illness beliefs. One study showed that illness beliefs regarding perceptions of the cause of depression are different between white women and South Asian women (Karasz, 2005). Other research found that the beliefs of people from the Caribbean regarding the appropriate treatment of psychosis reflected a rejection of the western medical model in favor of spiritual care (Kirmayer et al., 2003). In addition to illness beliefs being influenced by culture, cultural biases influence how client’s communicate about illness beliefs. For example, women’s physical symptoms have long been categorized as somatization or hysteria rather than physical illness, and as a result of these biases women are less likely to communicate with their healthcare provider when they have cardiovascular events (Martin et al., 2005). Given this, it is important to understand the impact of therapist-led discussion of illness beliefs across clients with different cultural backgrounds and identities.

There is also a need for additional research on how discussion of illness beliefs affects outcomes and which outcomes are affected. Results from the current study suggests that discussion of illness beliefs may improve outcome expectations. It may also impact other
important psychotherapy process factors (e.g., therapist expression of empathy, dropout) and outcomes (e.g., symptom reduction, treatment “homework” adherence). Given what is known regarding the complex interrelationships of therapy process factors and outcomes, further research is needed to discover other ways in which discussion of illness beliefs is perceived by clients.

Because of the lack of quantitative research on the CSM and discussion of illness beliefs in psychotherapy, this study was designed to query a broad sample of clients using a cross-sectional method. However, the generalizability of the results is limited by the characteristics of the sample. This sample consisted of more men with higher employment and educational attainment than the general population. Participants chose to respond to a survey regarding experiences in therapy, and have attended an average of 15.83 sessions with their current therapist. It is possible that these participants who are actively engaged in therapy and interested in participating in research regarding their experiences may differ from individuals who have dropped out of therapy, do not participate in therapy-related research, or have not engaged in therapy altogether.

To participate in the study, all participants also had to be computer literate and users of MTurk, which limits the generalizability of the findings. While many efforts were made to ensure the data quality in this study before, (e.g., questionnaire design), during (e.g., random response check questions) and after (e.g., inspection of survey response duration for evidence of automated bot “participants”) data collection, online surveys are susceptible to intrusions by “data farmers” or “bots” that can contaminate the responses. Future evaluation of the variables in this study using in person data collection (e.g., questionnaires given in mental health clinic
waiting rooms) or more targeted recruitment strategies (e.g., surveys mailed to patients of a hospital clinic) can address these limitations.

Future research should also employ longitudinal or randomized control procedures so that the chronological and causal nature of the relationship of the variables of interest can be better understood. While the CSM proposes that discussion of illness beliefs influences outcomes, because the data was collected cross-sectionally, causal relations cannot be inferred. Indeed, given the structure of the CSM feedback loop of constant reappraisal, it is possible that the variables influence one another in a different manner than presented here. Future studies should investigate the temporal precedence of these relationships by using study designs in which measurements of the variables of interest are taken at multiple time points throughout the treatment. For example, collection of pre-therapy baseline measurements of client outcome expectations, and then discussion of illness beliefs, outcome expectations, and working alliance at several points throughout the treatment would allow for this comparison. This approach would allow for more nuanced understanding of the dynamic nature of the variables of interest, particularly of outcome expectations and working alliance, which are known to change over time throughout treatment.

All of the measures used in this study were client self-report, which introduces the possibility of mono-method bias study. While the method provided a foundational establishment of the presence of the theorized relationships, future research can build on this study by using dyadic client-therapist evaluation of procedures and observers’ ratings of sessions in order to reduce this effect.

The scale used to capture client perception of the presence of therapist-led discussion of illness beliefs was adapted from Phillips et al.’s (2012) scale created for physical health care
settings. While the reliability of the scale in this study was sufficient, there is room for improvement. Although this scale has been successfully used and adapted to fit different specific healthcare contexts in several studies (e.g., Phillips et al., 2012, 2017; Phillips, McAndrew, Laman-Maharg, & Bloeser, 2017) a scale that specifically captures the domains of illness beliefs as they present in psychotherapy should be considered in order to more reliably capture this construct.

**Conclusion**

The results of this study provide support for the applicability of the CSM in psychotherapy by demonstrating that the CSM-based discussion of illness beliefs was positively associated with the important psychotherapy factors of outcome expectations and working alliance. Explicit discussion of clients’ illness beliefs may be a brief, transtheoretical tool to increase working alliance via an increase in client outcome expectations. Additional research exploring the CSM in psychotherapy is needed to understand the longitudinal effects of the CSM discussion of illness beliefs and feedback loop in psychotherapy, and how discussion of illness beliefs can be used to improve treatment process and outcomes across clients with multicultural identities.
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https://doi.org/10.1016/j.pec.2017.03.011


https://doi.org/10.1177/1742395313478219


**Figure 1**

*Hypothesized mediation model for discussion of illness beliefs, treatment expectancies, and working alliance*

```
Discussion of Illness Beliefs
     \[a_1\]  \[c'\]
               Treatment Expectancies
               \[b_1\]
                      Working Alliance
```
### Table 1

**Participant Characteristics - Demographic Questionnaire Responses**

<table>
<thead>
<tr>
<th>Variable</th>
<th>( n )</th>
<th>%</th>
<th>( M (SD) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>202</td>
<td></td>
<td>30.67 (8.30)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>128</td>
<td>60.9</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>78</td>
<td>38.6</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>95</td>
<td>47.0</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>56</td>
<td>27.7</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>25</td>
<td>12.4</td>
<td></td>
</tr>
<tr>
<td>Native American</td>
<td>14</td>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Multiracial</td>
<td>5</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Middle Eastern</td>
<td>1</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time (40+ hours per week)</td>
<td>174</td>
<td>86.1</td>
<td></td>
</tr>
<tr>
<td>Part time (up to 39 hours per week)</td>
<td>18</td>
<td>8.9</td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>5</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Unemployed/Homemaker</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Annual Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $20,000</td>
<td>15</td>
<td>7.4</td>
<td></td>
</tr>
<tr>
<td>$20,000 to $34,999</td>
<td>39</td>
<td>19.3</td>
<td></td>
</tr>
<tr>
<td>$35,000 to $49,999</td>
<td>43</td>
<td>21.3</td>
<td></td>
</tr>
<tr>
<td>$50,000 to $74,999</td>
<td>61</td>
<td>30.2</td>
<td></td>
</tr>
<tr>
<td>$75,000 to $99,999</td>
<td>35</td>
<td>17.3</td>
<td></td>
</tr>
<tr>
<td>$100,000 or more</td>
<td>9</td>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school degree or equivalent</td>
<td>3</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>7</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>Associates degree</td>
<td>9</td>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>127</td>
<td>63.2</td>
<td></td>
</tr>
<tr>
<td>Master’s degree</td>
<td>52</td>
<td>25.9</td>
<td></td>
</tr>
<tr>
<td>Professional medical degree</td>
<td>3</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Geographic Region</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southwest</td>
<td>57</td>
<td>28.2</td>
<td></td>
</tr>
<tr>
<td>Southeast</td>
<td>49</td>
<td>24.3</td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>38</td>
<td>18.8</td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>34</td>
<td>16.8</td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>23</td>
<td>11.4</td>
<td></td>
</tr>
</tbody>
</table>
### Table 2

**Therapy Characteristics - Demographic Questionnaire Responses**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Sessions with Current Therapist</td>
<td>68</td>
<td>33.7</td>
</tr>
<tr>
<td>Average Number of Sessions per Month</td>
<td>60</td>
<td>29.7</td>
</tr>
<tr>
<td>Therapist Degree</td>
<td>37</td>
<td>18.3</td>
</tr>
<tr>
<td>Master's in counseling/clinical/MFT</td>
<td>34</td>
<td>16.8</td>
</tr>
<tr>
<td>Social Work</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Psychiatrist/MD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctorate in counseling/clinical psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Therapy Setting</td>
<td>83</td>
<td>41.1</td>
</tr>
<tr>
<td>Hospital outpatient clinic</td>
<td>80</td>
<td>39.6</td>
</tr>
<tr>
<td>Private practice office</td>
<td>31</td>
<td>15.3</td>
</tr>
<tr>
<td>College/university-based clinic</td>
<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>Primary Concern in Therapy</td>
<td>78</td>
<td>38.6</td>
</tr>
<tr>
<td>Depression</td>
<td>34</td>
<td>16.8</td>
</tr>
<tr>
<td>Anxiety</td>
<td>29</td>
<td>14.4</td>
</tr>
<tr>
<td>Physical complaints</td>
<td>26</td>
<td>12.9</td>
</tr>
<tr>
<td>Cognitive complaints</td>
<td>19</td>
<td>9.4</td>
</tr>
<tr>
<td>Social/Relationship concerns</td>
<td>16</td>
<td>7.9</td>
</tr>
<tr>
<td>Mania</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Lifetime Number of Therapists                                   | 197 | 2.95(1.10)
Table 3

*Frequency of Discussion of Illness Beliefs Domains*

<table>
<thead>
<tr>
<th>Domain(s)</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause</td>
<td>187</td>
<td>92.5</td>
</tr>
<tr>
<td>Identity</td>
<td>144</td>
<td>71.3</td>
</tr>
<tr>
<td>Timeline</td>
<td>140</td>
<td>69.3</td>
</tr>
<tr>
<td>Control and Timeline</td>
<td>163</td>
<td>80.7</td>
</tr>
<tr>
<td>Consequences and Identity</td>
<td>166</td>
<td>82.2</td>
</tr>
<tr>
<td>Control and Consequences</td>
<td>177</td>
<td>87.6</td>
</tr>
<tr>
<td>Identity and Control</td>
<td>177</td>
<td>87.6</td>
</tr>
</tbody>
</table>
### Table 4

*Intercorrelations Among Study Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DIB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Outcome Expectations</td>
<td>.37**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Working Alliance</td>
<td>.37**</td>
<td>.71**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Age</td>
<td>-.19**</td>
<td>-.03</td>
<td>-.20**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. No. of sessions</td>
<td>.03</td>
<td>.04</td>
<td>.04</td>
<td>.17*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Average sessions per month</td>
<td>.10</td>
<td>.18*</td>
<td>.22**</td>
<td>-.15*</td>
<td>.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. # Lifetime therapists</td>
<td>-.05</td>
<td>.03</td>
<td>-.05</td>
<td>.09</td>
<td>-.04</td>
<td>.31**</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* DIB = Discussion of Illness Beliefs scale (Phillips et al., 2012)

*p < .05. **p < .01.*
### Table 5

*Total, Direct, and Indirect Effects*

<table>
<thead>
<tr>
<th>Path</th>
<th>Effect</th>
<th>SE</th>
<th>LL</th>
<th>UL</th>
<th>R²</th>
<th>Ratio: Indirect to Total Effect&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Effect: Discussion of Illness Beliefs to Working Alliance</td>
<td>2.36**</td>
<td>.43</td>
<td>1.52</td>
<td>3.20</td>
<td>.13</td>
<td></td>
</tr>
<tr>
<td>Direct Effect: Discussion of Illness Beliefs to Working Alliance</td>
<td>.80*</td>
<td>.37</td>
<td>.07</td>
<td>1.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect Effect: Outcome Expectations</td>
<td>1.57**</td>
<td>.43</td>
<td>.74</td>
<td>2.41</td>
<td>.66</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* CI = confidence interval; LL = lower limit, UL = upper limit

<sup>a</sup> Estimate of effect size

*<sup>p</sup> = .03. **<sup>p</sup> < .01.*
Appendix A

**Discussion of Illness Beliefs Scale (DIB)**

*Instructions:* Please answer whether the following items are true of your experience with your therapist.

<table>
<thead>
<tr>
<th>“My therapist....”</th>
<th>Yes (2)</th>
<th>No (1)</th>
<th>Not Sure (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1… discussed with me what might be the cause of my presenting concerns</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2… told me what s/he was looking for during the intake session</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3… told me how long I could expect to have this problem</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4… gave me clear information about my therapy: what we will do, when, how often, and for how long</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>5… told me what I might expect during therapy</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>6… gave me some tips to help me work my therapy into my daily routine</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>7… told me how to monitor my problem to see if the therapy is working</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
Appendix B

Milwaukee Psychotherapy Expectations Questionnaire (MPEQ)

Instructions: Below is a list of statements describing expectations about therapy that you may have. These statements cover expectations regarding your own behavior in therapy, your future therapist, and the therapy setting. Some of these expectations you may not have considered previously, however we would like for you to think about them now. Read each statement carefully and select the number that indicates the strength with which you find yourself expecting what is described in the statement.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Very</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I expect my therapist will provide support</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. My therapist will provide feedback</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3. I will be able to express my true thoughts and feelings</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4. I will feel comfortable with my therapist</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5. My therapist will be sincere</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6. My therapist will be interested in what I have to say</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7. My therapist will be sympathetic</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8. I expect that I will come to every appointment</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>*9. Therapy will provide me with an increased level of self-respect</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>*10. After therapy, I will have the strength needed to avoid feelings of distress in the future</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>*11. I anticipate being a better person as a result of therapy</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>*12. After therapy, I will be a much more optimistic person</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>13. I expect that I will tell my therapist if I have concerns about therapy</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Note. Items with asterix make up the 4-item outcome expectations subscale.
Appendix C

Working Alliance Inventory – Short Revised (WAI-SR)

Instructions: Below is a list of statements and questions about experiences people might have with their therapy or therapist. Some items refer directly to your therapist with an underlined space – as you read the sentences, mentally insert the name of your therapist in place of ________ in the text. Think about your experience in therapy, and decide which category best describes your own experience.

Please take your time to consider each question carefully.

<table>
<thead>
<tr>
<th></th>
<th>Seldom (1)</th>
<th>Sometimes (2)</th>
<th>Fairly Often (3)</th>
<th>Very Often (4)</th>
<th>Always (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. As a result of these sessions I am clearer as to how I might be able to change.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. What I am doing in therapy gives me new ways of looking at my problem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I believe____likes me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. ____and I collaborate on setting goals for my therapy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. ____and I respect each other.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. ____and I are working towards mutually agreed upon goals.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I feel that____appreciates me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. _____and I agree on what is important for me to work on.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. I feel_____cares about me even when I do things that he/she does not approve of.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. I feel that the things I do in therapy will help me to accomplish the changes that I want.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. _____and I have established a good understanding of the kind of changes that would be good for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. I believe the way we are working with my problem is correct.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix D

Demographic Questionnaire

1. What is your current age? _____
2. What is your gender?
   a. Male
   b. Female
   c. Transgender Male
   d. Transgender Female
   e. Gender Variant/Non-Conforming
   f. Other
3. Are you of Hispanic, Latino/a or Spanish origin?
   a. Yes
   b. No
4. How would you describe your race?
   a. American Indian or Alaska Native
   b. Asian
   c. Black or African American
   d. Native Hawaiian or Other Pacific Islander
   e. White
   f. More than one
   g. Other
5. What is your yearly household income?
   a. Less than $20,000
   b. $20,000 to $34,999
   c. $35,000 to $49,999
   d. $50,000 to $74,999
   e. $75,000 to $99,999
   f. Over $100,000
6. What is your current employment status?
   a. Employed full time (40 or more hours per week)
   b. Employed part time (up to 39 hours per week)
   c. Unemployed and currently looking for work
   d. Unemployed and not currently looking for work
   e. Full-time Student
   f. Retired
   g. Homemaker
   h. Unable to work
7. What is the highest degree or level of school you have completed? (If you’re currently enrolled in school, please indicate the highest degree you have completed).
   a. Less than high school diploma
   b. High school degree or equivalent (e.g., GED)
   c. Some college, no degree
   d. Associate degree (e.g., AA, AS)
   e. Bachelor’s degree (e.g., BA, BS)
f. Master’s degree (e.g., MA, MS, MEd)
g. Professional degree (e.g., MD, DDS, DVM)
h. Doctorate (e.g., PhD, EdD)

8. Which region of the country do you live in?
   a. Midwest
   b. Northeast
   c. Southeast
   d. Southwest
   e. West

9. If you know, what degree does your therapist/counselor have?
   a. Social Work
   b. Master’s in counseling/psychology
   c. Doctorate in counseling/psychology
   d. Psychiatrist/MD
   e. Not Listed

10. Please select the response that best describes where you meet with your therapist:
    a. Private practice office
    b. Hospital outpatient clinic
    c. Community outpatient clinic
    d. College/university clinic
    e. Not Listed

11. Approximately how many sessions have you had with your current counselor/therapist (if you do not know, please guess)? _____

12. On average, how many times per month do you have a session with your therapist?
    a. Less than one
    b. 1
    c. 2
    d. 3
    e. 4
    f. 5 or more

13. Approximately how many therapists/counselors have you worked with throughout your life?
    a. 1
    b. 2
    c. 3
    d. 4
    e. 5 or more

14. Please select one of the following items that best describes your primary concern that led you to starting therapy with your current therapist:
    a. Difficulty thinking (cognitive problems, confusion, delusions)
    b. Depression (appetite changes, poor concentration feelings of worthlessness, decreased interest for usual activities, tearfulness)
    c. Mania (increased activity level, euphoric or irritable mood, decreased sleep, rapid speech, thoughts moving rapidly from one to another)
    d. Anxiety (chest pain, dizziness, compulsive behavior, nervousness, panic)
e. Physical complaints (headache, medically unexplained symptoms, physical health condition)
f. Social (job loss, marital or relationship conflict)
Appendix E

Recruitment Statement on Mechanical Turk

Survey Link Instructions (Click to collapse)

We are conducting an academic survey about experiences in therapy. You are being asked to participate because we are trying to learn more about the how the relationship between therapists and clients is associated with expectations for therapy. The current study aims to identify client treatment preferences and experiences in hopes of creating intervention strategies in the future.

In order to participate, you must be:

- age 18 or older
- currently live in the United States of America
- currently be in outpatient mental health therapy

Make sure to leave this window open as you complete the survey. When you are finished, you will return to this page to paste the code into the box.

Survey link:  http://example.comsurvey345.html

Provide the survey code here:

e.g. 123456
Appendix F

Informed Consent

Information about the Study

Introduction
Thank for your interest in this research study investigating therapist-client relationships and therapy process. You are being asked to participate because we are trying to learn more about the how the relationship between therapists and clients is associated with expectations for therapy. The current study aims to identify client treatment preferences and experiences in hopes of creating intervention strategies in the future.

Why is this study being done?
There is limited research available that examines how therapists and clients discuss the goals of therapy relate to treatment preferences. To develop client-centered interventions, we have to understand client perceptions of their relationships with their therapists and therapy process.

What are the study procedures? What will I be asked to do?
After you complete the consent form you will be directed to an online survey. You may skip any questions that you do not feel comfortable with answering at any time. Participation in this survey is completely voluntary.

How long will it take?
The questionnaire should take approximately 30 minutes.

What are the risks or inconveniences of the study?
The questions in this survey could be emotionally distressing. We have included the number for the Crisis Line below.

Phone Number: 1-800-273-8255
The survey will be completed on a site called Psychdata. We will not collect personal information about you and do not believe the answers to your survey questions can be linked back to you.
At the end of the survey you will be given a completion code to enter into Amazon’s Mechanical Turk. Amazon’s Mechanical Turk will keep a record that you entered that completion code. In other words, Amazon and Amazon’s Mechanical Turk site will be aware and keep a record of the fact that you completed a study on therapy. Amazon and Amazon’s Mechanical Turk will NOT have access to the answers to your survey questions completed on the Psychdata site. If you do not want a record of completing a study on therapy you should NOT complete this study.

What are the benefits of the study?
We do not expect any immediate personal benefits for participating in this study. However, we hope that the information that we gather through this research will be used to develop interventions that will eventually help therapists better serve their clients.

Will I receive payment for participation? Are there costs to participate?
There are no significant costs to participation, other than a small amount of your time. At the conclusion of your participation, you will be given a completion code to be entered into Amazon’s Mechanical Turk. If
you enter a valid completion code – you will be paid $5. Please note that the completion code changes regularly and you must enter a completion code that is valid for a specific time point.

**How will my personal information be protected?**

Surveys will be completed anonymously, and researchers will be blind to the identities of participants who complete the survey online.

At the end of the survey you will be given a completion code to enter into Amazon’s Mechanical Turk. Amazon’s Mechanical Turk will keep a record that you entered that completion code. In other words, Amazon and Amazon’s Mechanical Turk site will be aware and keep a record of the fact that you completed a study on therapy. Amazon and Amazon’s Mechanical Turk will NOT have access to the answers to your survey questions completed on the psychdata site. If you do not want a record of completing a study on therapy you should NOT complete this study.

All information obtained in this study is strictly confidential unless disclosure is required by law. In addition, the Institutional Review Board, the sponsor of the study (e.g., NIH, FDA, etc.) and University or government officials responsible for monitoring this study may inspect these records.

**Can I stop being in the study and what are my rights?**

Participation in research is entirely voluntary. Even after you agree to participate in the research, you may decide to leave the study at any time without penalty or loss of benefits to which you may otherwise have been entitled. Additionally, at his/her professional discretion the investigator has the right to withdraw any participant at any time.

**Whom do I contact if I have questions about the study?**

Take as long as you like before you make a decision. We will be happy to answer any question you have about this study. If you have further questions about this project or if you have a research-related problem, you may contact the principal investigator, Sarah Slotkin, M.A. at sslotkin@albany.edu.

**Whom do I contact if I have questions about my rights as a study participant?**

Research at the University Albany involving human participants is carried out under the oversight of the Institutional Review Board (IRB). This research has been reviewed and approved by the IRB.

**IRB contact about your rights in the study or to report a complaint:**

Research at the University Albany involving human participants is carried out under the oversight of the Institutional Review Board (IRB). This research has been reviewed and approved by the IRB. If you have any questions concerning your rights as a research subject or if you wish to report any concerns about the study, you may contact University Office of Regulatory & Research Compliance at 1-866-857-5459 or hconcerns@albany.edu.

Please print out a copy of this form for your records.
Appendix G

Inclusion/Exclusion Criteria Questions

Instructions: Please answer the following questions in order to determine whether or not you meet the participation criteria for this survey.

1. Are you age 18 or older?
   a. Yes
   b. No
2. Do you currently live in the United States of America?
   a. Yes
   b. No
3. Are you currently in outpatient mental health therapy? “Outpatient therapy” includes any therapy, treatment or counseling conducted in a private practice, hospital outpatient department, or community clinic conducted by a professional with the appropriate license to provide such care (i.e., doctoral level psychologist or masters’ level therapist)
   a. Yes
   b. No
4. Have you been in this outpatient mental health therapy for at least three months?
   a. Yes
   b. No