The Effect of Personality and Personality Disorders on Therapeutic Alliance in the Treatment of Depression

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By

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I am finally able to proudly say it is finished. How does it feel? Hang on, I have a meme for that.

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Abstract

The therapeutic alliance has been identified as the most consistent predictor of psychotherapy outcome. Therapeutic alliance is an interpersonal relationship between client and therapist. Interpersonal relationships can be influence by personality disorders as personality disorders affect how individuals form attachments and behave in relationships and are expected to disrupt the formation and maintenance of interpersonal relationships. Therefore, it is to be expected that personality disorders will have an influence on the formation and maintenance of the therapeutic alliance.

Limited research has investigated the extent to which client personality factors contribute to the quality and strength of the therapeutic alliance. To investigate potential predictors of the therapeutic alliance, associations between measures of personality pathology in a population of outpatients receiving psychotherapy for major depressive disorder (n = 99) and observer-ratings of audio recordings of therapy sessions were examined.

Pre-treatment assessments of temperament and character traits as measured by Cloninger's Temperament and Character Inventory and clinical characteristics of personality disorders as indicated by the SCID-II assessment were examined as predictors of the Revised version of the Vanderbilt Therapeutic Alliance Scale and Vanderbilt Psychotherapy Process Scale subscales.

Results of the current study found that Cluster C personality disorder diagnoses and the TCI-R character component of self-transcendence were found to positively predict the therapeutic alliance. Cluster A personality disorder symptoms, Cluster C personality disorder symptoms, and the TCI-R temperament component of novelty seeking were predictive of poor therapeutic alliance. These findings emphasise the importance of understanding clients' pre-treatment personality pathology so therapists can tailor psychotherapy to clients' individual needs facilitating better engagement during the treatment process.

Introduction

Major depressive disorder is the most commonly diagnosed psychological disorder (Tacchi & Scott, 2017). Major depressive disorder is a highly prevalent (Tylee & Gandhi, 2005) worldwide health and economic burden (Rehm, 2010), with 5.5% (Ferrari et al., 2013) of the global population receiving a diagnosis of major depressive disorder each year and 15% of the population experiencing an episode of depression during their lifetime. Fifty percent of those who experience a major depressive episode will have at least one further major depressive episode within five years of experiencing the first (Tacchi & Scott, 2017). Females have higher prevalence rates of diagnosis than males (Ferrari et al., 2013). Major depressive disorder is characterised by low mood and feelings of sadness or hopelessness, loss of interest or pleasure in all or almost all activities, accompanied by sleep disturbance, fatigue and lack of energy, changes to appetite and weight, and disruptions to concentration (American Psychiatric Association, 2013).

Why is the Treatment of Depression Important?

The biggest risk that accompanies a diagnosis of depression is the risk of suicidality (Tacchi & Scott, 2017). In 2016, 800,000 deaths were attributed to suicide by the World Health Organisation (World Health Organization, 2018). Suicide is the most tragic consequence to any psychological diagnosis, and as such should be prevented wherever possible (Glick, 1995; Tacchi & Scott, 2017). In order to prevent such an outcome, understanding variables that influence the treatment of a psychological disorder need to be understood. Stigmatisation of mental illnesses can make the discussion of psychological symptoms difficult for those affected by symptoms (Tylee & Gandhi, 2005). However, once this barrier to treatment is overcome, adhering to treatment, and reducing symptomatology are key goals of treatment.

Treatment of Major Depressive Disorder

A multitude of factors need to be considered when deciding to treat the disorder. These include the severity of the diagnosis, the onset of the disorder, family history, and prescribed medications that may influence the efficacy of treatment (Glick, 1995). There is no one right method to treat major depressive disorder, as it is not the same experience for all those diagnosed (Ingram, 2009).

There are several treatment methods that can be used to alleviate the symptoms of depression. Most commonly are psychopharmacologic medications and psychotherapy, and occasionally physical treatment methods such as shock therapy are used.

Antidepressant medications are currently the first line of major depressive disorder treatment (Blier & De Montigny, 1994; Dale, Bang-Andersen, & Sánchez, 2015; Fournier et al., 2010). Majority of patients receiving pharmacotherapy for the treatment of major depressive disorder are treated with selective serotonin reuptake inhibitors (Deacon & Baird, 2009). Antidepressant medications only alleviate depressive symptoms in approximately 70% of individuals with major depressive disorder (Blier & De Montigny, 1994). There is also an associated delay of several weeks between beginning antidepressant medication treatment and symptom relief (Blier & De Montigny, 1994). Rarer treatment methods include shock therapy and electro-convulsive therapy. Both of these treatment types can produce rapid improvement in symptoms, via the receptors in the brain being more sensitive to the neurochemicals (Tacchi & Scott, 2017).

Psychotherapy

Psychotherapy is an effective form of treatment for major depressive disorder (Barth et al., 2016; Driessen et al., 2015). Most commonly used psychotherapy treatments for depression include interpersonal therapy, cognitive behavioural therapy, and schema therapy.

Interpersonal therapy focuses on the present or "here and now" aspects of interpersonal relationships and current life events (de Mello, de Jesus Mari, Bacaltchuk, Verdeli, & Neugebauer, 2005; Neu, Prusoff, & Klerman, 1978). In interpersonal therapy, emotion is considered to provide vital and reliable information about interpersonal experiences, where the emotion is elicited, understood, and worked through (Coombs, Coleman, & Jones, 2002). Interpersonal therapy may not be a suitable treatment method if an identified cause of the depressive episode is not interpersonal in nature (Neu et al., 1978).

Cognitive behaviour therapy is an active and structured approach primarily established for the treatment of depression and now used in the treatment of a variety of psychological disorders (Beck, 1979). Cognitive behaviour therapy consists of key learning experiences such as identifying the connection between cognition, affect, and behaviour, and educating the client on how to monitor negative automatic thoughts. During the course of therapy, the client will examine evidence that supports and opposes automatic thoughts which in turn drive behavioural responses, replace biased cognitions with realistic interpretations, and learn to recognise and change dysfunctional beliefs which negatively alter the individual's experience (Beck, 1979; Beck, 2011). Automatic thoughts are a spontaneous and pervasive pattern of thinking that the individual has about themselves, the world, or the future (Beck, 1979).

Schema therapy is an adaptation of Beck's (1979) cognitive behaviour therapy with emphasis on exploring aspects of the childhood and adolescent origins of schemas that drive later psychological disorders. A schema is a cognitive framework that emerges to help explain and guide reactions to certain life experiences or events (Young, Klosko, & Weishaar, 2003). Maladaptive schemas are comprised of memories, emotions, cognitions, and sensations that are developed during childhood or adolescence and may evolve throughout one's lifetime (Young et al., 2003). This differs slightly from a schema mode

which incorporates schemas, coping responses, and behaviours that are present at any given time in response to an external trigger (Lobbestael, Arntz, Löbbes, & Cima, 2009; Young et al., 2003). Schema modes can be adaptive or maladaptive, and it is common for individuals to shift quickly from one mode into another. The primary goal of schema therapy is to increase personal psychological awareness to promote adaptive schemas or modes and to fully understand, identify, and reduce maladaptive schemas or modes increasing conscious control over schemas. This is achieved via two operations; schema perpetuation, and schema healing (Young et al., 2003) which is affected by the intensity of associated memories, the schema's emotional "charge", and the maladaptive cognitions (Young et al., 2003). Schema therapy has a focus on emotive techniques and on the therapist-client relationship in order to challenge and treat maladaptive coping styles (Young et al., 2003).

Therapeutic Alliance

The therapeutic alliance has been identified as an influential component in the treatment of major depressive disorder (Lorenzo-Luaces, DeRubeis, & Webb, 2014).

Therapeutic alliance is the way client and therapist work together (Green, 2009; Horvath, 2000, 2001; Hougaard, 1994; Shick Tryon, Collins Blackwell, & Felleman Hammel, 2007). The quality and strength of the therapeutic alliance involve affective bonds, tasks, and goals for therapy. Affective bonds include mutual trust, respect, and caring (Constantino et al., 2010; Horvath, 2001; Lambert & Barley, 2001), while tasks and goals capture the cognitive aspects of therapy which involve consensus about treatment structure, commitment to the treatment process, and objectives that both therapist and client strive to achieve (Horvath, 2001; Lambert & Barley, 2001).

The association between the quality of the therapeutic alliance and therapy outcome is determined by specific factors that influence the therapeutic alliance, such as the type of treatment, treatment length, and the phase of therapy at which the alliance is established.

Horvath (2001) identified that the level of therapist experience and severity of the impairment from the diagnosis are influential to the quality of the alliance.

Measurement of the Therapeutic Alliance

Therapeutic alliance can be measured using many instruments. The California Psychotherapy Alliance Scales, the Penn Helping Alliance Rating Scale, Vanderbilt Therapeutic Alliance Scale (VTAS), Working Alliance Inventory, which has three forms observer-, client- and therapist-rated. Tichenor and Hill (1989) determined that observer-rated measures had higher levels of inter-rater reliability and construct validity. The Vanderbilt Psychotherapy Process Scale (VPPS) is often used in conjunction with the VTAS to garner a more thorough understanding of the therapeutic alliance (Martin, Garske, & Davis, 2000; Suh, O'Malley, Strupp, & Johnson, 1989). Two key aspects of the VTAS are its use by independent observers to rate therapeutic alliance (Krupnick et al., 1994; Zuroff et al., 2000), and its use in depressed samples (Krupnick et al., 1994). Krupnick et al. (1996) found that the VTAS consistently predicts therapeutic alliance during cognitive behaviour therapy for depression. The VPPS measures features of the therapeutic relationship but not the therapeutic alliance itself (Suh et al., 1989) allowing independent observers to assess the global impression of the quality of the relationship. The VPPS is applicable to a wide range of therapeutic interventions (O'Malley, Suh, & Strupp, 1983).

Therapeutic Alliance and Outcome of Therapy

Therapeutic alliance is important to the outcome of treatment (Barber, Connolly, Crits-Christoph, Gladis, & Siqueland, 2009; Krupnick et al., 1996; Kushner, Quilty, Uliaszek, McBride, & Bagby, 2016; Martin et al., 2000).

Martin, Garske, and Davis (2000) performed a meta-analysis of 79 (58 published, 21 unpublished) studies examining the association of the therapeutic alliance with outcome and

associated variables. The results of this review indicate that alliance is moderately related to outcome and the association of alliance and outcome is consistent.

Krupnick et al. (1996) examined the relationship between therapeutic alliance and treatment outcome in a sample of 225 participants with major depressive disorder. Participants were randomised to receive interpersonal psychotherapy, cognitive-behaviour therapy, an antidepressant with clinical management, or a pill placebo with clinical management. Severity of depression was measured using the Hamilton Depression Rating Scale and the Beck Depression Inventory, and the therapeutic alliance was measured with a modified version of the VTAS. The authors found a significant association between therapeutic alliance scores and outcome.

In a sample of 209 outpatients with a primary diagnosis of major depressive disorder, Kushner et al. (2016) examined the influence that the therapeutic alliance has on the association between personality and treatment outcome. Participants were randomised to one of three treatment conditions: antidepressant medication, interpersonal therapy, or cognitive behavioural therapy. Depression severity was measured using the Hamilton Depression Rating Scale and the Beck Depression Inventory. Personality was measured using the NEO-PI-R. The California Psychotherapy/Pharmacotherapy Alliance Scales were used to assess the therapeutic alliance. The authors found that the therapeutic alliance mediated the association between agreeableness and treatment outcome. The authors also found that neuroticism was predictive of poor treatment outcome, as measured by post-treatment Beck Depression Inventory scores.

Barber et al. (2009) examined the relationship among the therapeutic alliance, treatment outcome, and in-treatment improvement of symptoms in a sample of 88 participants with generalised anxiety, chronic depression, or avoidant or obsessive-compulsive personality disorders. All participants received supportive-expressive dynamic

therapy, delivered weekly. The number of therapy sessions participants were to attend was determined by the primary diagnosis. Participants with generalised anxiety disorder received 16 sessions, participants with a diagnosis of major depressive disorder received 20 sessions, and patients with a personality disorder as the primary diagnosis had 52 sessions. The therapeutic alliance was measured with the California Psychotherapy/Pharmacotherapy Alliance Scales. In depressed participants, symptom relief during the early phase of therapy was found to influence the strength of the therapeutic alliance. The authors concluded that higher alliance scores are associated with greater symptom reductions between the commencement of therapy and the measurement of the therapeutic alliance.

Shick Tryon & Kane (1990) examined the relationship between strength of the therapeutic alliance and premature termination of therapy. Participants were 102 client-counsellor dyads comprised of 102 university students and five PhD psychologists. Participants were required to attend a minimum of eight counselling sessions, participants were not required to meet criteria for a primary diagnosis to be included in the study. The therapeutic alliance was measured by clients using the Penn Helping Alliance Questionnaire and by therapists using the Penn Therapist Facilitating Behaviours Questionnaire. Premature termination of therapy was defined as the failure of a client to schedule further appointments, or failure to attend scheduled appointments. The authors found that client ratings of the alliance were predictive of premature termination of therapy, but therapist ratings were not. The authors also found that clients who prematurely terminated therapy had significantly lower therapeutic alliance scores than clients who remained in therapy.

The therapeutic alliance has been demonstrated to have a consistently positive relationship with the outcome of psychotherapy (Constantino et al., 2010). High initial alliance ratings are associated with less severe symptomatology in clients, fewer interpersonal relationship difficulties, and overall improvement during cognitive therapy for adult clients

with moderate to severe diagnosis of major depressive disorder (Lorenzo-Luaces et al., 2014).

Addressing current stress in a therapeutic relationship has been found to improve the alliance and result in gains more than addressing out-of-therapy events (Lansford, 1986). Strength of the alliance was found to be most predictive of outcome. Lansford (1986) investigated how weakening and repair of the therapeutic alliance relate to change in therapy. Weakenings are a negative response to therapy, such as fear of the therapist's critical judgement or disapproval, difficulties coming to or talking during therapy sessions, or disruptions to the ongoing relationship or therapy. Repairs are the extent to which an identified weakening is addressed and resolved by client and therapist so that ongoing flow can continue. Repeated measures ANOVAs were used to assess the initial quality of the therapeutic alliance, therapist action after a decrease in the strength of the therapeutic alliance, and the client's ability to agree with the therapeutic stance. Discussions focusing on the weakening strength of the alliance and subsequent repair have been significantly correlated with outcome, as well as a significant positive correlation between the quality of the therapeutic alliance and therapy outcome (Lansford, 1986). Client contributions to repairing the therapeutic alliance were found to be more important than therapist interventions. A limitation of this study is the small sample size (n = 6) and lack of reporting of effect size, which means that the results may not be a reliable conclusion based on the sample which does not allow for a thorough interpretation of the results or the context of the study participants.

Therapeutic Alliance Over the Course of Therapy

Client ratings of the therapeutic alliance have been found to increase over the course of treatment, regardless of treatment condition (Lansford, 1986; Spinhoven, Giesen-Bloo, van Dyck, Kooiman, & Arntz, 2007). In the treatment of anorexia nervosa, clients who completed

therapy had significantly higher early ratings of the therapeutic alliance than clients who prematurely terminated therapy (Sly, Morgan, Mountford, & Lacey, 2013). Spinhoven et al. (2007) investigated therapeutic alliance quality and development as a mediator of change in two psychotherapies for borderline personality disorder. Individuals with a borderline personality disorder diagnosis were randomised to three years of schema-focused therapy, or transference-focused therapy, both with two sessions per week. Personality was assessed at baseline using the Inventory of Personality Organisation and therapeutic alliance was measured using the Working Alliance Inventory and the Difficult Doctor-Patient Relationship Questionnaire – 10 Item Version. The authors found that patient-rated strength of the therapeutic alliance increased over the course of treatment. The authors also found that clients with higher ratings of the therapeutic alliance were less likely to prematurely terminate therapy.

Reis and Grenyer (2004) examined attachment style, the therapeutic alliance, and treatment response. Fifty-eight participants with a primary diagnosis of major depressive disorder received 16 sessions of supportive-expressive dynamic psychotherapy. Depression severity was measured by the Hamilton Rating Scale of Depression. The therapeutic alliance was measured by the Working Alliance Inventory. Attachment style was measured using the Relationship Questionnaire, which is a self-report measure. The authors found that early ratings of the therapeutic alliance were stronger than mid-therapy ratings. The authors concluded that this was due mid-therapy ratings being confounded by stresses and strains of working through more challenging issues. Reis and Grenyer (2004) also concluded that assessment of the alliance from one time point, especially early time points, is not reflective of the actual strength of the alliance, due to the dynamic nature of the alliance which is expected to fluctuate over the course of therapy.

In a sample of 30 outpatients with a primary diagnosis of avoidant personality disorder or obsessive-compulsive disorder, Strauss et al. (2006) examined early alliance and rupture-repairs as predictors of the number of sessions clients attend and change in personality and depressive symptoms. Therapeutic alliance was measured using the California Psychotherapy/Pharmacotherapy Alliance Scales, and personality disorder symptoms were assessed using both the Wisconsin Personality Disorder Inventory, and the SCID-II. Rupture-repairs are the difficulty of therapeutic alliance maintenance or shifts in quality in a negative way. High early alliance scores were associated with the completion of more therapy sessions but were not associated with early symptom change. Strength of the alliance, measured during the early phase of therapy was found to influence client engagement in treatment, resulting in positive therapy outcomes. Lansford (1986) identified the middle phase of therapy – sessions six to 11 – as the phase of therapy with the highest frequency of weakenings and repairs in the therapeutic alliance. Early ratings of the alliance have been found to increase treatment engagement and provide a solid foundation for the course of therapy (Horvath & Luborsky, 1993; Strauss et al., 2006).

Ratings of the Therapeutic Alliance

The therapeutic alliance is viewed in different ways by the therapist and client (Shick Tryon et al., 2007). An unbiased measure of the therapeutic alliance should be taken or developed to further contribute to therapeutic alliance understanding in order to minimise rating discrepancies. Client ratings of the therapeutic alliance have been found to be more predictive of therapy outcomes such as the premature termination of therapy than therapist ratings (Tryon & Kane, 1990). Observer ratings of the therapeutic alliance are less prone to bias (Martin et al., 2000). Observer ratings have been found to be comparable to client and higher than therapist ratings of the therapeutic alliance (Horvath & Symonds, 1991). Therapist ratings of the alliance typically have a higher level of variance, while client ratings

are overinflated and rate therapist contributions highly (Martin et al., 2000), especially if dependent and submissive personality traits are present (Doran, 2016). Observer ratings of the alliance have consistently high reliability scores (Horvath & Symonds, 1991; Martin et al., 2000). High reliability scores for observer ratings of the therapeutic alliance are consistent across internal consistency measures such as Cronbach's alpha, test-retest reliability, and interrater reliability scores (Martin et al., 2000).

Factors Influencing the Therapeutic Alliance

Therapists have no control over client factors that influence therapy, however, they may be able to assist in addressing the level of motivation for therapy, encouraging behavioural change, reducing perceived pressure to attend treatment, and developing of the therapeutic alliance.

In a sample of 144 participants, Kokotovic and Tracey (1990) examined the relation of the therapeutic alliance to client variables during the early phase of counselling and premature termination of treatment. The therapeutic alliance was measured using the Working Alliance Inventory and client variables were assessed with the Interpersonal Relationships Scale. Premature termination status was defined as the counsellor and client meeting for fewer than four sessions, or the client failing to appear for scheduled sessions. The authors found that a weaker therapeutic alliance was associated with higher levels of client hostility, and poor interpersonal relationships. The authors did not find an association between strength of the therapeutic alliance and premature termination status. Clients experiencing greater levels of distress have been found to have more difficulty establishing the therapeutic alliance than clients with lower levels of distress (Kokotovic & Tracey, 1990; Kushner et al., 2016). Further factors that have been identified as influencing the therapeutic alliance are; client pre-treatment expectations of therapy, who measures the alliance, the level of cooperation between client and therapist, and client personality traits. Client traits such as

fearfulness and being dismissive, anxious or preoccupied have also been correlated with poor therapeutic alliance (Horvath, 2001).

Iacoviello et al. (2007) examined the effect patient treatment preferences had on the therapeutic alliance in a randomised controlled trial comparing supportive-expressive psychotherapy and sertraline with a pill placebo control for major depressive disorder. Treatment preference for 75 participants was measured with an item from the Attitudes and Expectations Questionnaire asking if participants would prefer to receive pharmacotherapy or psychotherapy. Pre-treatment expectations of therapy were found to influence the therapeutic alliance. Participants who were more reluctant to engage in therapy were subsequently reluctant to form an alliance with the therapist when expectations were not met (Iacoviello et al., 2007). This is an issue in randomised controlled trials, where the client is randomly assigned to a treatment type, meaning that some clients will receive their treatment preference while others will not. Reluctance to engage in therapy can lead to the formation of a weaker therapeutic alliance (Iacoviello et al., 2007).

Kokotovic and Tracey (1990) suggest that clients and therapists can both assess the therapeutic alliance accurately as early as the first therapy session. However, the perceived strength of the therapeutic alliance is affected by who is rating the alliance. Tryon and Kane (1990) demonstrated that there are differences between how the client and therapist view the therapeutic alliance. Client ratings were predictive of premature termination of therapy, whereas therapist ratings were not. Client ratings were also found to be more positive than therapist ratings, even when therapy was terminated prematurely.

Individual factors of the client or therapist contribute to the formation and strength of the therapeutic alliance (Kushner et al., 2016; Muran, Segal, Samstag, & Crawford, 1994; Sly et al., 2013; Tichenor & Hill, 1989). Client factors include the motivation to overcome the problem (Sly et al., 2013), ability to follow instruction and insight from the therapist,

willingness to cooperate, and sense of helplessness (Tichenor & Hill, 1989). Therapist factors include the level of understanding and insight about the client's problem, and the therapist's attitude towards the client such as being empathetic, straightforward, and non-judgemental (Tichenor & Hill, 1989).

Personality

Factors pertaining to the development or formation of the therapeutic alliance have been investigated and personality traits have been identified as influencing the quality of the therapeutic alliance, or the ease of formation of the alliance early in therapy (Kushner et al., 2016). Client personality traits have been identified as influencing quality of the therapeutic alliance, or ease of formation of the alliance early in therapy (Kushner et al., 2016). Submissive and non-assertive personality traits positively predict therapeutic alliance formation, whereas dominant or hostile traits negatively predict therapeutic alliance formation (Lorenzo-Luaces et al., 2014; Muran et al., 1994).

Cloninger's psychobiological model (Cloninger, Thomas, & Dragan, 1994; Svrakic, Whitehead, Przybeck, & Cloninger, 1993), measured by the Temperament and Character Inventory (TCI) and the five-factor model of personality, measured by the Revised Neuroticism Extraversion Openness Personality Inventory (NEO-PI-R) (Costa & McCrae, 1995; Trull & Widiger, 2013; Widiger & Trull, 2007) are two models that conceptualise personality as traits. The TCI was developed to associate character and temperament traits with specific DSM diagnoses of personality disorders (Svrakic et al., 1993).

Correlations have been found between TCI components of harm avoidance and novelty seeking and the NEO-PI-R components of neuroticism and extraversion, respectively (De Fruyt, Clercq, Wiele, & Heeringen, 2006; Garcia, 2012; Hansenne et al., 1999). De Fruyt et al. (2006) assessed overlap between the TCI and the NEO-PI-R and found both models adequately described personality, although the NEO-PI-R lacked the ability to distinguish

between personality disorders, other psychological diagnoses, and individuals with extreme temperaments (Costa & McCrae, 1995). Character dimensions of the TCI that are associated with personality disorders are self-directedness and cooperativeness (Svrakic et al., 1993), regardless of the presence of other psychological diagnoses. Temperament dimensions of the TCI (novelty seeking, harm avoidance and reward dependence) allow distinction between personality disorder clusters and subtypes (Svrakic et al., 1993).

Lorenzo-Luaces et al. (2014) examined variability between alliance ratings and symptom change in a sample of 60 clients receiving cognitive therapy for major depressive disorder. The therapeutic alliance was measured using the observer-rated version of the Working Alliance Inventory, and symptom change was assessed using the mean scores from the Beck Depression Inventory. The authors found that the number of prior major depressive episodes and Working Alliance Inventory scores were predictive of change in symptoms. The therapeutic alliance predicted a decrease in symptoms for individuals with 0-2 prior major depressive episodes, but not for individuals with three or more prior major depressive episodes. Conscientiousness and anxiety were also identified as characteristics moderating the alliance-outcome association in cognitive therapy sessions for depression.

Shahar, Blatt, Zuroff, and Pilkonis (2003) explored the influence that trait perfectionism and personality disorder features have on the formation of the therapeutic alliance by comparing schema-focused therapy and transference-focused therapy. 239 participants met criteria for major depressive disorder and were required to attend at least 12 therapy sessions over a 15-week period. The authors concluded that patient contribution to the therapeutic alliance is predicted by personality characteristics such as perfectionism, rather than specific personality disorder features. Individuals with Cluster A personality disorders and trait perfectionism were found to have more depressive symptoms at the cessation of treatment compared to individuals with no personality disorder diagnosis.

Personality Disorders and the Therapeutic Alliance

Personality disorders are conceptualised as a pervasive and obstinate pattern of internal experience and behaviour that deviates from the norm, leading to distress or functional impairment (American Psychiatric Association, 2013). Personality disorders comprised Axis II of DSM-IV (American Psychiatric Association, 2000, 2013) and were organised into three conceptual clusters – this has been changed in the DSM-5. In an attempt to reduce the overlap of personality disorders from within the same cluster co-occurring, the clusters are associated with a general model of personality disorders changing from a categorical diagnostic approach to a dimensional diagnostic approach (American Psychiatric Association, 2000, 2013). Cluster A personality disorders are *odd-eccentric* and include paranoid, schizoid, and schizotypal personality disorders. Cluster B personality disorders are *dramatic-erratic*, including borderline, antisocial, histrionic, and narcissistic personality disorders. Cluster C personality disorders are *anxious-fearful* and include avoidant, dependent, and obsessive-compulsive personality disorders.

Kushner et al. (2016) examined the role of the therapeutic alliance between pre-treatment personality and the reduction of depressive symptoms in a randomised controlled trial. Participants were 209 outpatients from a tertiary care psychiatric facility with a diagnosis of major depressive disorder. The randomised controlled trial had three treatment conditions: antidepressant medication, interpersonal therapy, and cognitive behaviour therapy. Depression severity was measured by the Hamilton Depression Rating Scale, and the Beck Depression Inventory. Personality was measured by the revised NEO personality inventory, while therapeutic alliance was measured with the patient-rated California Psychotherapy/Pharmacotherapy Alliance Scales. Agreeableness was found to have an indirect effect on the reduction of depression severity via therapeutic alliance, while extraversion and openness were mediated via late ratings of the alliance. The authors

concluded that patient personality influences treatment outcome via the influence on the therapeutic alliance. This result, however, could not be replicated across patient and therapist rating of the alliance nor did the authors replicate these findings via observer-ratings of the alliance.

Shahar et al.'s (2003) study examining the influence of trait perfectionism also examined the influence of personality disorder features on the formation of the therapeutic alliance. Personality disorders were assessed during baseline sessions using the Personality Assessment Form. Therapeutic alliance was found to improve throughout the course of treatment regardless of treatment type, although treatment type influenced how the therapeutic alliance was formed and maintained. The use of the Personality Assessment Form to assess personality disorders is a limitation of the study as it does not rely on structured interviews to assess personality disorders.

Spinhoven et al. (2007) found that schema-focused therapy was found to have higher therapeutic alliance ratings than transference-focused therapy by both therapist and patients. A reduction of borderline personality disorder pathology was associated with an increase in the strength of the therapeutic alliance during the first year of schema-focused therapy. Interactions between personality disorders and the therapeutic technique associated with treatment type enable change processes which are crucial to clinical improvement. The authors concluded that the therapeutic alliance is influenced by patient personality disorder and therapist presumptions of the personality disorder.

Pierò, Cairo, and Ferrero (2013) examined the effect that personality dimensions have on the therapeutic alliance in a sample of 49 individuals receiving treatment for borderline personality disorder. Borderline personality disorder severity was measured using the revised version of the Symptom Checklist. Interpersonal functioning was examined using the Global Assessment Functioning Scale and the Clinical Global Impression Scale. Personality

dimensions were assessed using Cloninger's TCI, and the therapeutic alliance was measured using the client version of the short form of the Working Alliance Inventory. They found that therapeutic alliance is negatively affected by borderline personality disorder diagnosis and specific temperamental traits such as harm avoidance, which may also predict early termination of therapy. The authors suggest that the association for individuals with high harm avoidance scores and weak therapeutic alliance is reflective of the effectiveness of the behavioural inhibition system. Therefore, the presence of these traits may make the formation of the therapeutic alliance more challenging. Replication of Pierò et al. (2013) study with other personality disorders is needed.

Cluster A personality disorders and depressive personality disorder, from the DSM-IV, predict clinical outcomes and impact negatively on ratings of client contributions to the therapeutic alliance (Shahar et al., 2003). Individuals with impairments forming interpersonal relationships associated with Cluster A personality disorders are apparent and need to be taken into account during therapy (Bender, 2005). These personality disorders are associated with exaggerated paranoid or withdrawn features, with the added difficulty of the client often not being willing to seek treatment unless dealing with a comorbid Axis I diagnosis (Bender, 2005). Paranoid and withdrawn features will influence the formation and maintenance of interpersonal relationships, and subsequently the formation and strength of the therapeutic alliance.

Cluster B personality disorders are associated with pushing the limits of personal relationships which extends to therapy (Bender, 2005). Borderline personality disorder has been studied the most extensively from this cluster (Bender, 2005; Pierò et al., 2013; Shahar et al., 2003; Spinhoven et al., 2007), clients with this diagnosis are described as demanding and needy (Bender, 2005) which may be a result of the instability in interpersonal relationships as a subsequence of the nature of the diagnosis (American Psychiatric

Association, 2013). The therapeutic alliance has been found to be negatively influenced in patients with borderline personality disorder. Pierò et al. (2013) found that individuals with borderline personality disorder are more likely to be more insecure, cautious and stubborn – traits that are inherently associated with more severe impairments in interpersonal functioning. Forming and maintaining the alliance with clients with borderline personality disorder can be challenging as borderline personality disorder clients can display strong surges of sudden – and at times unexpected – emotion, will act out in self-destructive ways, and their view of the therapist can alternate between idealisation and disparagement (Bender, 2005).

Cluster C personality disorders are characterised by emotional inhibition (American Psychiatric Association, 2013). These clients are often aversive to interpersonal conflict, and are more likely to feel guilty and internalise blame, even when the situation does not call for blame (Bender, 2005).

Muran et al. (1994) developed and evaluated an alliance-focused training procedure regarding patient-therapist interpersonal behaviour. Patients with difficulties relating to depression, anxiety, interpersonal functioning and a Cluster C or not otherwise specified personality disorder were randomised to receive 30 sessions of cognitive behaviour therapy with the alliance-focus treatment introduced either after 8 sessions or 16 therapy sessions. To assess the effect of the introduction of alliance-focused treatment a simplified version of the Structural Analysis of Social Behaviour was used, this is an observer-based measure of the therapeutic alliance. The alliance-focused treatment lead to a decrease in patient dependency on the therapist, and increased patient self-disclosure. A limitation of this study is that the personality disorders were limited to Cluster C (avoidant, dependent, and obsessive-compulsive). Therefore, these findings are not generalizable to other personality disorders, or other comorbid diagnoses and replication of this study in other clinical populations is needed.

Overall, personality disorders influence formation of the therapeutic alliance and are associated with lower ratings of the therapeutic alliance (Bender, 2005; Dennhag, Ybrandt, & Sundström, 2017; Horvath, 2001) and more difficulties during the early phase of treatment which may lead to premature termination of therapy (Spinhoven et al., 2007).

Measurement of Personality and Personality Disorders

Cloninger's TCI provides a comprehensive explanation of normal and maladaptive personality functioning (Cloninger et al., 1994; De Fruyt et al., 2006; Svrakic et al., 1993) and offers a thorough trait analysis using seven components to assess personality. The inclusion of both temperament and character in Cloninger's psychobiological model enable the measurement of both stable and changing aspects of personality. The distinction between character and temperament components of the TCI are helpful in the planning of treatment specific to therapy type, as they enable a more specific individual focus which enhances therapy outcome (Hansenne et al., 1999).

The Current Study

The current study examines the influence that personality, personality disorder diagnoses, and personality disorder symptoms have on therapeutic alliance in a randomised controlled trial of cognitive behaviour therapy and schema therapy for depressed adult participants (Carter et al., 2013). Audio recordings of randomly selected therapy sessions are rated by observers using the VTAS and VPPS.

By examining changes in therapeutic alliance in cognitive behaviour therapy and schema therapy over the course of treatment for major depressive disorder, this study aims to determine the extent to which personality, personality disorders and personality disorder symptoms have on therapeutic alliance, and to identify which personality disorders or personality disorder symptoms have the most influence on the therapeutic alliance.

The current study has three hypotheses: (1) that therapeutic alliance strength will increase over the course of therapy (2) that high levels of harm avoidance, reward dependence, persistence, self-directedness, and cooperativeness, as measured by Cloninger et al.'s (1994) TCI, will be associated with higher therapeutic alliance strength, and (3) that there will be a correlation between strength of the therapeutic alliance and the total number of personality disorder diagnoses.

Method

The Clinical Trial

Ratings of therapy sessions from the randomized clinical trial of two psychotherapies for depression comprise the therapeutic alliance data for the current study. Carter et al. (2013) compared the efficacy of cognitive behaviour therapy and schema therapy for major depressive disorder. The trial received ethical approval from the Upper South Regional Ethics Committee (Appendix A) and was conducted in Christchurch, New Zealand. Human ethics approval (Appendix B) and Māori consultation (Appendix C) were sought and approved for the current study.

Participants

Ninety-nine participants (males n = 30, females n = 69) attended an outpatient treatment for major depressive disorder in a clinical research unit at the Department of Psychological Medicine, University of Otago, Christchurch. Participants had a principle current diagnosis of major depressive disorder and were over 18 years of age. Exclusion criteria included a history of bipolar I disorder, schizophrenia, a physical illness that would interfere with therapy, moderate to severe drug or alcohol dependence, the use of centrally acting medication except the oral contraceptive pill or occasional medication for sleep, and a trial of either cognitive behaviour therapy or schema therapy within the past year.

Therapy

Participants were randomly assigned to receive either cognitive behaviour therapy or schema therapy weekly for six months then monthly for six months. At least 15 weekly sessions and at least three monthly sessions were considered *a priori* as the number of sessions considered as completion of therapy. Therapy sessions were approximately 50 minutes each.

Cognitive behaviour therapy aims to teach the individual how to monitor negative automatic thoughts, and to recognize connections between cognitions, affect, and behaviours in order to produce enduring cognitive and behavioural change and consequent change in depressive symptoms via the attenuation of behavioural responses (Beck, 1979; Beck, 2011).

The main goal of schema therapy is to help clients identify maladaptive schemas and become aware of the childhood memories and experiences associated with them and situations that may trigger schemas (Young et al., 2003). Psychological change is achieved by healing schemas and thereby weakening memories, cognitions and behaviours associated with the schemas, including symptoms of depression.

Therapists

Six clinical psychologists provided both cognitive behaviour therapy and schema therapy for Carter et al.'s (2013) randomized controlled trial. The foundation of professional training as a clinical psychologist in New Zealand is cognitive behaviour therapy. Therapists received subsequent training in schema therapy prior to the randomized controlled trial. Therapists were all female, with at least two years prior experience treating depressed clients before the commencement of the randomized controlled trial.

Measures

Psychotherapy process and therapeutic alliance

The Vanderbilt rating instruments (Vanderbilt Psychotherapy Process Scale and revised version of the Vanderbilt Therapeutic Alliance Scale) refer to those receiving therapy as "patients", however, "clients" will be used in the current thesis.

The Vanderbilt Psychotherapy Process Scale (VPPS) measures psychotherapeutic-relevant characteristics of client, therapist, and their interaction (De Fruyt, Van De Wiele, & Van Heeringen, 2000). The VPPS is an observer-rated measure for use by uninvolved, external assessors. The instrument comprises 33 Likert-type items rated on a scale ranging from one "not at all" to five "a great deal", which are grouped into eight constructs: client participation, client hostility, therapist warmth and friendliness, negative therapist attitude, client exploration, therapist exploration, client psychic distress, and client dependency. *Client participation* is the client's active involvement in the therapy interaction. *Client hostility* is the level of negativism, hostility or distrust displayed by the client. *Therapist warmth and friendliness* is the degree to which the therapist displays warmth and is emotionally involved with the client. *Negative therapist attitude* is an intimidating or threatening demeanour of the therapist. *Client exploration* is the level of self-examination and exploration of feelings and experiences displayed by the client. *Therapist exploration* is the therapist's attempts to examine the psychodynamics underlying the client's problems. *Client psychic distress* is the level of emotional distress and feelings of discouragement expressed by the client. *Client dependency* is the level the client is reliant on the therapist. The VPPS has high levels of internal consistency as indicated by Cronbach's alpha coefficient ranging from .81 for client dependency to .96 for client exploration and therapist exploration, and good inter-rater reliability scores, ranging from .79 to .94 (Suh et al., 1989).

The revised version of the Vanderbilt Therapeutic Alliance Scale (VTAS-R) assesses the therapeutic relationship between therapist and client (Hartley & Strupp, 1983; Suh, Strupp, & O'Malley, 1986). It is a 37-item measure to be rated on a Likert-type scale ranging from 0 “not at all” to five “a great deal” with items grouped into three subscales; therapist factor (11 items), client factor (20 items), and the total alliance score (37 items) (Krupnick et al., 1996). Assessment criteria for the therapist subscale include the therapist’s skill and observable level of empathy and understanding. The client subscale examines the degree of client involvement in the therapeutic process, and how receptive the client is to the therapist’s personal and therapeutic style. Exploration of how well the therapist and client understand their roles in treatment comprises the therapist-client interaction subscale (Krupnick et al., 1994). The VTAS-R has been found to have consistent inter-rater reliabilities for the subscales, as measured by random-effects intra-class correlations with scores of .60 or above (Fenton, Cecero, Nich, Frankforter, & Carroll, 2001), and high levels of internal consistency, with Cronbach’s alpha of $\alpha = .95$ (Cecero, Fenton, Frankforter, Nich, & Carroll, 2001).

Personality

The revised version of the Temperament and Character Inventory (TCI-R) measures the strength of, and association between basic personality dimensions of temperament and character (Cloninger et al., 1994). The four dimensions of temperament, the automatic emotional response to experience, which is stable throughout life and moderately heritable, are *novelty seeking*, behavioural activation in response to novelty signals of reward and avoidance of conditioned signals of punishment; *harm avoidance,* behavioural inhibition in response to signals of punishment and non-reward; *persistence*, maintenance of behaviour despite frustration, failure, or fatigue; and *reward dependence*, behavioural maintenance in response to cues of social reward. Character is the individual difference in goals and values which influence life experiences, and mature throughout life. The three character dimensions

are *self-directedness*, the extent an individual is responsible, reliable, goal-oriented and self-confident; *cooperativeness,* the extent individuals consider themselves to be an integral part of society; and *self-transcendence*, the extent individuals consider themselves to be part of the universe as a whole (Cloninger et al., 1994).

Personality disorders

Personality disorders were assessed at baseline by independent non-treating clinicians using the Structured Clinical Interview II (SCID-II) for DSM-IV personality disorders (First, Spitzer, Gibbon, & Williams, 1995). Assessment of personality disorder symptoms is based on initial endorsement of items of the Structured Clinical Interview – Personality Questionnaire (First, Spitzer, Gibbon, & Williams, 1995) followed by SCID-II interview.

The total number of personality disorder diagnoses and the total number of personality disorder symptoms were used in the current study to indicate higher personality pathology.

Procedure

Raters

Six female clinical psychologists or postgraduate psychology students trained in the use of the Vanderbilt rating instruments were raters for the current research.

Rater Training

Following a didactic introduction to therapy types and rating instruments used, all raters listened to and individually rated a single, full therapy session. As a training group, ratings were then reviewed item by item, and questions about the instruments and rating procedures were addressed to ensure that all raters interpreted items similarly. Raters then independently rated sessions on their own and later ratings were compared with trainers' ratings of the same session which provided an informal estimate of rater competence. This was repeated until satisfactory concordance with trainers was achieved. To reach a criterion

level of understanding of how scale items should be interpreted, a minimum of 15 hours of training for raters was required. Weekly review of co-rated sessions continued throughout the study to prevent and correct potential rater drift.

Selection of Therapy Sessions

Therapy sessions were randomly selected for each participant from the three phases of therapy; early (the first five sessions), late (the last five sessions), and middle (all remaining sessions). One session from each phase of therapy was selected for each participant. Due to the idiosyncratic nature of the first and last sessions (Andony et al., 2015; Hill, O'Grady, & Elkin, 1992), these sessions were excluded from selection. For participants who did not complete therapy, oversampling occurred in the phases that were attended, allowing three sessions to be rated for all participants. For participants who stopped treatment in the middle phase of therapy, one session was sampled from the early phase, and two sessions from the middle phase. Similarly, if a participant stopped treatment during the early phase of therapy, three sessions were sampled from the early phase. Oversampled sessions were not included in phase analyses but were included in analysis of scale psychometrics.

Twenty percent of therapy sessions (n = 60) were randomly selected to be independently rated by a second rater to calculate inter-rater reliability.

Rating of Therapeutic Alliance

Psychotherapy process and therapeutic alliance were rated using the VPPS and the VTAS-R, respectively, after listening to digital audio recordings of full therapy sessions. Participants were assigned ID numbers, ensuring that the confidentiality of participants and content of therapy were maintained.

Data Analysis

Data were analysed using IBM's Statistical Package for the Social Sciences (SPSS) software (IBM Corp., Released 2014).

Data were entered into SPSS and 10% of ratings were randomly selected to be checked for entry errors and missing data against the physical rating sheets.

Data were analysed for normality of distribution with a visual inspection of the histogram against a normal distribution curve, Shapiro-Wilk's test, which indicates if the statistic departs from normality as indicated by $p > .05$, the Normal Q-Q Plot where a relatively straight line indicates normal distribution, the Detrended Normal Q-Q Plot, with which normality was indicated by no real clustering of points, and finally visual inspection of the boxplot which indicates outliers. Non-normally distributed data were transformed where possible. Data unable to be transformed to a normal distribution were analysed using non-parametric statistics.

Internal Consistency. Internal consistency of VTAS-R and VPPS subscales was assessed by calculating Cronbach's alpha coefficient.

Inter-rater Reliability. Inter-rater reliability was examined by comparing rating scores for dual rated sessions. Intra-class correlation coefficients and coefficients of variation were calculated to determine correlation and variation, respectively, between raters for each subscale. Intra-class correlations assess agreement by comparing the variance of different measurements of the same subject made by different observers with the total variance across all measurements and subjects (Costa-Santos, Bernardes, Ayres-de-Campos, Costa, & Costa, 2011). Different forms of the intra-class correlation can give different results when applied to the same data set, as each intra-class correlation form involves different assumptions in their calculation, which leads to different interpretations of the statistic (Koo, 2016). The main limit of intra-class correlations is the strong dependence on variance in the assessed population (Costa-Santos et al., 2011). Another limitation is that there are two different definitions for inter-rater reliability – reflecting the variation between two or more raters who measure the same group of subjects (this is applicable to the current study) and reflecting the

variation of data measures by one rater across two or more trials (Koo, 2016). Bland and Altman (1986) highlight that the use of the intra-class correlation coefficient is an inappropriate statistic to examine comparison data. For these reasons, it is expected that intra-class correlation coefficient will not accurately reflect the agreement between raters.

Personality and Therapeutic Alliance. Associations among measures of personality and measures of therapeutic alliance were examined by calculating Pearson's correlation coefficient.

Correlations among personality and therapeutic alliance were examined by calculating multiple regression models, using the constructs of personality (TCI-R subscales, number of personality disorder symptoms, and number of personality disorder diagnoses) as independent variables and strength of the therapeutic alliance as measured by the VTAS-R and VPPS as the dependent variables.

Analysis of Variance. To compare ratings between the two treatment types (cognitive behaviour therapy and schema therapy) t-tests were calculated. Repeated measures ANOVAs examined therapeutic alliance during early, middle and late stages of therapy, with phase of therapy as the repeated measure, and therapy group as the between-subject factor. Where a significant difference between the three groups was found Fisher's least significant difference tests were calculated to test the effect between pairs.

Results

Means and standard deviations or number and percentage of participants for descriptive characteristics are displayed in Table 1.

Table 1

Descriptive Statistics Including Age, Gender, Ethnicity, Marital Status, and Years of Education for 99 Participants at Pre-Treatment Assessment

	M (SD)	N (%)
Female		69 (69.7)
Age	38.47 (11.27)	
Ethnicity	1.31 (8.30)	
New Zealand European		84 (84.8)
Māori		4 (4.0)
Non-New Zealand European		8 (8.1)
Asian		1 (1.0)
Samoan		1 (1.0)
Egyptian		1 (1.0)
Marital status	2.44 (1.72)	
Married or living together 1+ year		51 (51.5)
Separated		8 (8.1)
Divorced		12 (12.1)
Widowed		1 (1.0)
Never married		27 (27.3)
Total years of education (n = 98)	6.80 (2.53)	
Years of secondary education	4.17 (1.01)	
Years of tertiary education	2.62 (1.92)	

The sample of 99 participants had a mean age of 38.47 years (SD = 11.27) at pre-treatment assessment and was 69.7% female. Eighty-four participants were New Zealand European, eight were non-New Zealand European, four were Māori, one participant was Asian, one was Samoan, and one was Egyptian. Fifty-one participants were married or living with a partner for one year or longer, 27 had never been married, 12 were divorced, eight separated, and one was widowed. For 98 participants, due to one participant excluding education years in their pre-treatment assessment, mean years of total education was 6.03 (SD = 2.53) across all participants, equating to a mean of 4.17 years (SD = 1.01) of secondary education, and 2.62 years (SD = 1.92) of tertiary education.

Table 2 presents depression characteristics for the sample of 99 participants from pre-treatment assessment.

Table 2

Depression Severity as Indicated by the Hamilton Depression Rating Scale, the Montgomery-Åsberg Depression Rating Scale, and the Beck Depression Inventory-II Scores, Age at Onset of Major Depressive Episodes, and Number of Depressive Episodes as Measured at Pre-Treatment Assessment (n = 99)

	M / n	*SD*
Depression severity		
Hamilton Depression Rating Scale	16.37	5.34
Montgomery-Åsberg Depression Rating Scale	23.16	6.47
Beck Depression Inventory-II	26.36	9.64
Age at onset of first Major Depressive Episode	22.04	11.54
Before 10 years	7	
Between 10 and 14 years	12	
Between 15 and 19 years	13	
Between 20 and 24 years	3	
Between 25 and 29 years	8	
Over 30 years	10	
Unclear	46	
Number of depressive episodes	24.21	39.26

Note. MDE = Major Depressive Episode.

Mean (pre-treatment assessment) score on the HDRS was 16.37 (SD = 5.34), MADRS was 23.16 (SD = 6.47), and BDI-II was 26.36 (SD = 9.64, n = 98). Mean number of lifetime depressive episodes was 23.98 (SD = 39.13). Mean age of onset of depressive episodes for 95 participants was 24.21 years (SD = 39.26). Seven participants had the onset of depressive episodes before 10 years of age, 12 between 10 and 14 years, 13 between 15 and 19 years, three between 20 and 24 years, eight between 25 and 29 years, 10 participants over 30 years, and for 46 participants the exact age at onset was unclear.

Table 3 presents the number or percentage of current comorbidities with other Axis I diagnoses for the current sample.

Table 3

Other Comorbid Axis I Diagnoses for the Total Sample of Participants (n = 99) with Major Depressive Disorder at Pre-Treatment Assessment

	N / %
Bipolar II disorder (Y/N)	8
Anxiety disorder •	
Lifetime	57
Past month	48
Eating disorder ••	
Lifetime	13
Past month	7
Alcohol abuse/dependence	
Lifetime	35
Past month	13
Substance abuse/dependence	
Lifetime	18
Past month	3

Note. • Including panic disorder, agoraphobia without history of panic disorder, social phobia, specific phobia, obsessive-compulsive disorder, posttraumatic stress disorder.
•• Including anorexia nervosa, bulimia nervosa, binge eating disorder.

Eight participants had a diagnosis of bipolar II disorder. Fifty-seven participants had a lifetime history of an anxiety disorder, with 48 participants having experienced an anxiety disorder in the past month. Thirteen participants had an eating disorder diagnosis during their lifetime, with seven participants with an eating disorder in the past month. Thirty-five participants had a lifetime history of alcohol abuse or dependence, 13 of these in the past month. Eighteen participants had a lifetime history of substance abuse or dependence, three of these in the past month.

Means and standard deviations for personality characteristics at pre-treatment assessment are displayed in Table 4.

Two participants did not complete pre-treatment assessment of personality and Cluster B data were not available for one further participant. Examination of skewness, Detrended Normal Q-Q plots, and Kolmogorov-Smirnov's statistic, and a visual inspection of

the frequency of distribution indicate that these variables did not violate normality assumptions.

Table 4

Personality Characteristics Including Number of Personality Disorder Diagnoses, Number of Personality Disorder Symptoms, and Temperament and Character Inventory Scores for Participants at Pre-Treatment Assessment

	M	*SD*
Personality disorders (n = 97)		
Number of Diagnoses	1.82	10.09
Number of Symptoms	8.74	7.80
Cluster A		
Number of Diagnoses	0.21	0.61
Number of Symptoms	2.23	2.85
Cluster B		
Number of Diagnoses	0.18	0.71
Number of Symptoms	2.18	2.86
Cluster C		
Number of Diagnoses	0.35	0.65
Number of Symptoms	3.93	3.89
TCI-R (n = 99)		
Temperament		
Novelty Seeking	102.98	15.50
Harm Avoidance	112.98	18.48
Reward Dependence	98.35	15.09
Persistence	104.99	19.77
Character		
Self-directedness	122.09	16.00
Cooperativeness	130.76	15.30
Self-transcendence	64.00	15.92

Note. TCI-R = Revised Temperament and Character Inventory.

Mean number of personality disorder diagnoses was 1.82 (SD = 10.09) for 97 participants. Mean number of personality disorder symptoms was 8.74 (SD = 7.80) for 97 participants.

Mean number of Cluster A diagnoses was 0.21 (SD = 0.61) for 97 participants, with 14.4% of participants with one or more diagnoses. Mean number of Cluster A symptoms was 2.23 (SD = 2.85) for 97 participants, with 61.9% of participants with one or more Cluster A symptom. Mean number of Cluster B diagnoses was 0.18 (SD = 0.71) for 96 participants,

with 10.40% of participants with one or more diagnoses. Mean number of Cluster B symptoms was 2.18 (SD = 2.86) for 96 participants, with 60.80% of participants with one or more Cluster B symptom. Mean number of Cluster C diagnoses of 0.35 (SD = 0.65) for 97 participants, with 26.80% of participants with one or more Cluster C diagnoses. Mean number of Cluster C symptoms was 3.93 (SD = 3.89) for 97 participants, with 80.40% of participants with one or more Cluster C symptom.

For all 99 participants, TCI-R data were collected during pre-treatment assessment. For the temperament subscales of the TCI-R the mean novelty seeking score was 102.98 (SD = 15.50), harm avoidance was 112.98 (SD = 18.48), reward dependence was 98.35 (SD = 15.09), and persistence was 104.99 (SD = 19.77). For the character subscales of the TCI-R the mean score for self-directedness was 122.09 (SD = 16.00), cooperativeness was 130.76 (SD = 15.30), and self-transcendence was 64.00 (SD = 15.92).

Mean scores and standard deviations for the total sample and for the two therapy groups, as well as t-test and Mann-Whitney U statistics for the difference in therapy type between cognitive behaviour therapy and schema therapy for the Vanderbilt Therapeutic Alliance Scale (VTAS-R) and the Vanderbilt Psychotherapy Process Scale (VPPS) subscales are presented in Table 5. Three VPPS subscales – client hostility, negative therapist attitude, and client dependency violated the assumptions of normality and were found to be positively skewed. It was not possible to transform this data to be normally distributed, therefore, it was decided that the non-transformed data would be examined using non-parametric tests.

Table 5 presents the means and standard deviations for the total sample, cognitive behavioural therapy group, and the schema therapy group, as well as t-tests or Mann-Whitney U statistics for between groups comparison for the VTAS-R and the VPPS subscales.

Table 5

Means and Standard Deviations for the Total Sample, Cognitive Behavioural Therapy Group and Schema Therapy Group and T-tests or Mann-Whitney U Statistic for Between Groups Comparison for the Revised Vanderbilt Therapeutic Alliance Scale and Vanderbilt Psychotherapy Process Scale Subscales for 99 Participants

	Total sample (n = 99)		**CBT** (n = 50)		**ST** (n = 49)								*95% CI for Odds Ratio*	
	M	SD	M	SD	M	SD	*z*	*t/U*	*df*	*p*	η^2/r	Odds Ratio	Lower	Upper
VTAS-R subscales														
Client alliance	4.11	.51	4.08	.44	4.11	.37		.38	97	.70	.001	.85	.34	2.14
Therapist alliance	4.14	.57	4.05	.50	4.20	.40		1.72	97	.09	.020	.56	.24	1.27
Total alliance	4.15	.42	4.10	.37	4.18	.28		1.19	97	.24	.010	.56	.18	1.75
VPPS subscales														
Client participation	4.20	.53	4.21	.47	4.18	.44		-0.36	97	.72	.003	1.27	.53	3.03
Client hostility +	1.11	.22	1.06	.13	1.06	.18	-0.21	1172	97	.83	.02	.72	.06	8.11
Therapist warmth and friendliness	3.92	.56	3.89	.43	3.92	.39		.40	97	.69	.002	.81	.34	1.90
Negative therapist attitude +	1.02	.06	1.00	.03	1.00	.04	-1.56	1052.5	97	.12	.16	.00	.00	28.82
Therapist exploration	3.45	.62	3.34	.46	3.56	.45		**2.41***	**97**	**.02**	**.034**	**.48**	**.22**	**1.07**
Client exploration	3.48	.66	3.41	.51	3.54	.50		1.31	97	.19	.014	.65	.31	1.34
Client psychic distress	2.14	.62	2.12	.53	2.17	.47		.48	97	.63	.004	.82	.38	1.76
Client dependency +	1.27	.23	1.16	.25	1.22	.22	-0.63	1112.5	97	.53	.06	.82	.16	4.18

Note. VTAS-R = Revised Vanderbilt Therapeutic Alliance Scale, VPPS = Vanderbilt Psychotherapy Process Scale, CBT = cognitive behaviour therapy, ST = schema therapy

** Correlation is significant at the .01 level (2-tailed).

* Correlation is significant at the .05 level (2-tailed).

+ Denotes the use of non-parametric statistics.

An independent t-test was conducted to compare VTAS-R and VPPS subscale means for cognitive behaviour therapy and schema therapy conditions. Mean scores for the VPPS therapist exploration subscale for the schema therapy group were found to be significantly higher than mean scores for the cognitive behaviour group (ST: M = 3.56, SD = 0.45, CBT: M = 3.34, SD = 0.46; t (97) = 2.41, p = .02, η^2 = .034, with an odds ratio and 95% confidence interval of Exp(B) = .48 [.22, 1.07]) for the VPPS therapist exploration subscale. No differences were found for remaining normally distributed VPPS subscales. Mann-Whitney U tests compared the groups on the VPPS subscales that were not normally distributed: Client hostility, negative therapist attitude, and client dependency. No differences between therapy groups were found for these subscales.

No differences were found for the VTAS-R subscales.

Table 6

Means and Standard Deviations or Mean Ranks and Median Values from Repeated Measures Analysis of Variance or Friedman's Non-Parametric Test for Phase of Therapy (Early, Middle, and Late) for the Revised Version of the Vanderbilt Therapeutic Alliance Scale and Vanderbilt Psychotherapy Process Scale for 84 Participants

	Early		**Middle**		**Late**					
	M (SD) / mean rank (Mdn)		M (SD) / mean rank (Mdn)		M (SD) / mean rank (Mdn)		χ^2	F		*p*
VTAS-R subscales										
Client alliance	3.98[a]	(.44)	4.09[a]	(.48)	4.18[b]	(.57)		**6.93**	**	**.002**
Therapist alliance	4.02[a]	(.54)	4.02[b]	(.64)	4.23[b]	(.54)		**9.99**	**	< **.001**
Total alliance	4.03[a]	(.37)	4.10[a]	(.43)	4.23[b]	(.44)		**10.26**	**	< **.001**
VPPS subscales										
Client participation	4.14[a]	(.54)	4.24[b]	(.49)	4.26[b]	(.53)		**3.17**	*	**.05**
Client hostility [+]	1.93	(1.00)	1.95	(1.00)	2.12	(1.00)	3.99			.14
Therapist warmth and friendliness	3.75[a]	(.55)	3.84[a]	(.55)	4.07[a]	(.54)		**15.78**	**	< **.001**
Negative therapist attitude [+]	2.08	(1.00)	1.95	(1.00)	1.97	(1.00)	5.78			.07
Therapist exploration	3.25[a]	(.57)	3.42[b]	(.62)	3.60[c]	(.66)		**11.84**	**	< **.00**
Client exploration	3.43	(.59)	3.47	(.68)	3.51	(.74)		.39		.68
Client psychic distress	2.26[a]	(.62)	2.09[b]	(.49)	2.05[b]	(.73)		**6.08**	**	**.003**
Client dependency [+]	2.09	(1.17)	1.84	(1.00)	2.07	(1.17)	4.88			.09

Note. VTAS-R = Revised Vanderbilt Therapeutic Alliance Scale, VPPS = Vanderbilt Psychotherapy Process Scale

** Correlation is significant at the .01 level (2-tailed).

* Correlation is significant at the .05 level (2-tailed).

[+] Indicates the use of non-parametric statistics.

[a, b, c] Values with the same superscript are not significantly different ($p < .05$, Fisher's least significant difference test).

Table 6 shows one-way repeated measures analyses of variance (ANOVA), and Friedman test results comparing scores for the Vanderbilt Therapeutic Alliance Scale (VTAS-R) and Vanderbilt Psychotherapy Process Scale (VPPS) subscales across early, middle and late phases of therapy.

Significant phase effects were found for all VTAS-R subscales: the client alliance subscale ($F(2, 82) = 6.93$, $p = .002$); therapist alliance subscale ($F(2, 82) = 9.99$, $p < .001$); and total alliance subscale ($F(2, 82) = 10.26$, $p < .001$).

A significant effect for phase was found for the VPPS client participation subscale ($F(2, 82) = 3.17$, $p = .05$); therapist warmth and friendliness subscale ($F(2, 82) = 15.78$, $p < .001$); therapist exploration ($F(2, 82) = 11.84$, $p < .001$). No significant phase effects were found for the client exploration subscale or client psychic distress subscale. Non-parametric tests were used for three VPPS subscales. The Friedman test indicated there were no phase effects for the VPPS client hostility subscale, VPPS negative therapist attitude subscale, and VPPS client dependency subscale.

Table 7 shows one-way repeated measures ANOVAs for the VTAS-R and VPPS subscales comparing scores over the phases of therapy with therapy type as the between-subjects variable.

Non-parametric tests were used for three VPPS subscales. Friedman's Test indicated there was no phase effect for client hostility, negative therapist attitude, and client dependency subscales across early, middle and late phases of therapy.

Table 7

Repeated Measures Analysis of Variance or Friedman's Non-Parametric Test for Phase of Therapy (Early, Middle, and Late) for Therapy Type (Cognitive Behavioural Therapy and Schema Therapy) for the Revised Version of the Vanderbilt Therapeutic Alliance Scale and Vanderbilt Psychotherapy Process Scale Subscales for 83 Participants

	Cognitive Behaviour Therapy (n = 40)					**Schema Therapy (n = 43)**					**Phase x Therapy Interaction**		
	Early M (SD)	Middle M (SD)	Late M (SD)	χ^2	*p*	Early M (SD)	Middle M (SD)	Late M (SD)	χ^2	*p*	F	*p*	η^2
VTAS-R subscales													
Client alliance	4.00	4.14	4.13			3.96	4.03	4.21			1.71	.19	.01
	(.48)	(.43)	(.58)			(.40)	(.53)	(.56)					
Therapist alliance	3.96	3.94	4.15			4.08	4.06	4.29			.04	.96	.00
	(.58)	(.65)	(.59)			(.50)	(.63)	(.48)					
Total alliance	4.02	4.11	4.18			4.04	4.09	4.27			.79	.46	.02
	(.42)	(.41)	(.47)			(.33)	(.45)	(.42)					
VPPS subscales													
Client participation	4.12	4.27	4.27			4.15	4.19	4.24			.72	.49	.02
	(.58)	(.50)	(.50)			(.51)	(.49)	(.57)					
Client hostility [+]	1.98	1.96	2.06	5.03	.08	1.87	1.94	2.19	.56	.76			.00
	(1.0)	(1.0)	(1.0)			(1.0)	(1.0)	(1.17)					
Therapist warmth and friendliness	3.76	3.83	4.04			3.72	3.83	4.08			.20	.82	.01
	(.57)	(.53)	(.55)			(.53)	(.58)	(.53)					
Negative therapist attitude [+]	2.08	1.93	2.00	2.36	.31	2.08	1.98	1.94	4.80	.09			.02
	(1.0)	(1.0)	(1.0)			(1.0)	(1.0)	(1.0)					
Therapist exploration	3.21	3.32	3.45			3.28	3.50	3.72			.94	.39	.02
	(.55)	(.61)	(.62)			(.61)	(.62)	(.67)					
Client exploration	3.43	3.44	3.42			3.43	3.49	3.57			.38	.68	.01
	(.56)	(.62)	(.69)			(.62)	(.74)	(.78)					
Client psychic distress	2.28	2.07	2.01			2.23	2.11	2.10			.60	.55	.02
	(.68)	(.52)	(.65)			(.57)	(.47)	(.81)					
Client dependency [+]	2.15	1.78	2.08	.72	.70	2.01	1.92	2.07	4.99	.08			.06
	(1.17)	(1.0)	(1.17)			(1.17)	(1.17)	(1.17)					

Note. VTAS-R = Vanderbilt Therapeutic Alliance Scale, VPPS = Vanderbilt Psychotherapy Process Scale

[+] Indicates the use of non-parametric statistics.

Table 8

Correlations of the Revised Version of the Vanderbilt Therapeutic Alliance Scale, and Personality Disorder Diagnoses, Personality Disorder Symptoms and Temperament and Character Inventory Subscales

	Revised Version of the Vanderbilt Therapeutic Alliance Scale Subscales					
	Therapist Alliance		Client Alliance		Total Alliance	
	Pearson's *r*	*p*	Pearson's *r*	*p*	Pearson's *r*	*p*
Number of Personality disorder diagnoses (n = 96)	-.01	.90	-.03	.75	-.05	.63
Number of personality disorder symptoms (n = 96)	-.001	.99	-.13	.20	-.11	.29
Cluster A diagnoses	.16	.13	-.05	.65	-.003	.98
Cluster A symptoms	.04	.68	**-.28****	**.005**	-.20	.06
Cluster B diagnoses	.07	.53	.06	.55	.04	.70
Cluster B symptoms	-.06	.57	-.18	.08	-.15	.15
Cluster C disorders	.10	.34	.13	.20	.11	.29
Cluster C symptoms	-.02	.82	.07	.51	.02	.87
TCI-R (n = 99)						
Temperament						
Novelty Seeking	-.13	.22	-.02	.83	-.09	.38
Harm Avoidance	.09	.36	-.06	.57	-.01	.93
Reward Dependence	.06	.56	**.25***	**.01**	**.20***	**.05**
Persistence	.07	.49	.11	.29	.12	.25
Character						
Self-Directedness	.006	.96	.08	.45	.07	.48
Cooperativeness	-.02	.85	.16	.11	.12	.25
Self-Transcendence	.03	.81	.12	.25	.11	.30

Note. VTAS-R = Revised Vanderbilt Therapeutic Alliance Scale, TCI = Temperament and Character Inventory

** Correlation is significant at the .01 level (2-tailed).

* Correlation is significant at the .05 level (2-tailed).

Pearson product-moment correlations were calculated to investigate the association among personality disorder diagnoses, personality disorder symptoms, and TCI-R characteristics as measured at pre-treatment assessment and the Vanderbilt Therapeutic Alliance Scale and Vanderbilt Psychotherapy Process Scale subscales.

Table 8 presents correlations between the VTAS-R subscales and personality disorder diagnoses, personality disorder symptoms for 96 participants and TCI-R subscales for all participants.

A small negative correlation between the number of Cluster A personality disorder symptoms and the VTAS-R client alliance subscale (r = -.28, n = 96, p < .01) was found, with more Cluster A symptoms associated with lower VTAS-R client alliance subscale scores. A small positive correlation was found between the TCI-R temperament component of reward dependence and the VTAS-R client alliance subscale (r = .25, n = 99, p = .01), with higher TCI-R reward dependence scores being associated with higher VTAS-R client alliance subscale scores. A small positive correlation was found between the TCI-R temperament component of reward dependence and the VTAS-R total alliance subscale (r = .20, n = 99, p = .05), with higher TCI-R reward dependence scores being associated with higher VTAS-R client alliance subscale scores.

Table 9

Correlations of Vanderbilt Psychotherapy Process Scale Client Subscales and Personality Disorder Diagnoses, Personality Disorder Symptoms and Temperament and Character Inventory Subscales

	Vanderbilt Psychotherapy Process Scale Client Subscales									
	Client Participation		Client Hostility[+]		Client Exploration		Client Psychic Distress		Client dependency[+]	
	Pearson's *r*	*p*	Spearman's rho	*p*	Pearson's *r*	*p*	Pearson's *r*	*p*	Spearman's rho	*p*
Number of personality disorder diagnoses (n = 96)	-.01	.36	.01	.95	-.08	.42	.12	.27	.02	.84
Number of personality disorder symptoms (n = 96)	-.10	.32	.04	.73	-.03	.76	**.21***	**.04**	-.03	.81
Cluster A diagnoses	.01	.96	**.29***	**.005**	.10	.34	.18	.08	**.31****	**.002**
Cluster A symptoms	**-.26***	**.01**	.09	.37	-.14	.17	**.30****	**.003**	-.04	.68
Cluster B diagnoses	.05	.62	.13	.22	.05	.61	-.01	.90	**.24***	**.02**
Cluster B symptoms	-.17	.11	.18	.08	-.09	.41	**.23***	**.03**	-.03	.78
Cluster C diagnoses	.08	.42	-.09	.38	.07	.52	.01	.92	.03	.75
Cluster C symptoms	.07	.52	-.19	.07	.02	.84	-.01	.94	-.07	.52
TCI-R (n = 99)										
Temperament										
Novelty Seeking	.17	.10	.15	.14	-.08	.46	-.14	.16	.12	.24
Harm Avoidance	-.17	.10	-.18	.07	.03	.77	.18	.08	-.03	.77
Reward Dependence	**.35****	**< .001**	-.07	.51	**.22***	**.03**	-.15	.13	.04	.68
Persistence	.18	.07	.11	.28	.08	.42	-.10	.32	.07	.52
Character										
Self-Directedness	.17	.09	-.10	.31	.06	.56	-.12	.25	.02	.87
Cooperativeness	**.22***	**.03**	-.15	.13	.10	.33	-.08	.46	-.01	.95
Self-Transcendence	.08	.43	-.01	.96	.05	.62	-.004	.97	.01	.93

Note. ** Correlation is significant at the .01 level (2-tailed).

* Correlation is significant at the .05 level (2-tailed).

[+] Indicates the use of non-parametric statistics.

Table 9 presents correlations between the VPPS client subscales and personality disorder diagnoses, and personality disorder symptoms for 96 participants, and TCI-R subscales for 99 participants.

A small, negative correlation between the number of Cluster A symptoms and the VPPS client participation subscale (r = -.26, n = 96, p = .01) with more Cluster A personality disorder symptoms associated with lower VPPS client participation subscale scores. A moderate, positive correlation was found between TCI-R reward dependence and the VPPS client participation subscale (r = .35, n = 96, p < .001) with higher reward dependence scores associated with higher VPPS client participation subscale scores. A small, positive correlation was found between TCI-R cooperativeness and the VPPS client participation subscale (r = .22, n = 96, p = .03) with higher cooperativeness scores associated with higher VPPS client participation subscale scores. A small, positive correlation was found between TCI-R reward dependence and the VPPS client exploration subscale (r = .22, n = 96, p = .03) with higher reward dependence scores associated with higher VPPS client exploration subscale scores. A small, positive correlation was found between the number of personality disorder symptoms and the VPPS client psychic distress subscale (r = .21, n = 96, p = .04) with more personality disorder symptoms associated with higher VPPS client psychic distress subscale scores. A moderate, positive correlation was found between the number of Cluster A personality disorder symptoms and the VPPS client psychic distress subscale (r = .30, n = 96, p = .003) with more Cluster A personality disorder symptoms associated with higher VPPS client psychic distress subscale scores. A small, positive correlation was found between the number of Cluster B personality disorder symptoms and the VPPS client psychic distress subscale (r = .23, n = 96, p = .03), with more Cluster B personality disorder symptoms associated with higher VPPS client psychic distress subscale scores.

Non-parametric tests were used for two VPPS client subscales. A Spearman's rank order correlation was calculated to determine the correlation between personality disorder diagnoses, personality disorder symptoms, TCI-R components and VPPS client subscales. A small, positive correlation between the number of Cluster A personality disorder diagnoses and the VPPS client hostility subscale (r_s = .29, n = 96, p = .005) was found indicating that more Cluster A personality disorder diagnoses associated with higher client hostility. A moderate, positive correlation between the number of Cluster A personality disorder diagnoses and the VPPS client dependency subscale (r_s = .31, n = 96, p = .002) was found with more Cluster A personality disorder diagnoses associated with higher client dependency. A small, positive correlation between the number of Cluster B personality disorder diagnoses and the VPPS client dependency subscale (r_s = .24, n = 96, p = .02) was found with more Cluster B diagnoses associated with higher client dependency.

Table 10 presents correlations between correlations between the VPPS therapist subscales and personality disorder diagnoses, and personality disorder symptoms for 96 participants, and TCI-R subscales for 99 participants.

No correlations were found between personality disorder diagnoses, personality disorder symptoms, or TCI-R characteristics and VPPS therapist subscales.

Table 10

Correlations of Vanderbilt Psychotherapy Process Scale Therapist Subscales and Personality Disorder Diagnoses, Personality Disorder Symptoms and Temperament and Character Inventory Characteristics

	Vanderbilt Psychotherapy Process Scale Therapist Subscales					
	Therapist Warmth and Friendliness		Negative Therapist Attitude[+]		Therapist Exploration	
	Pearson's *r*	*p*	Spearman's rho	*p*	Pearson's *r*	*p*
Number of personality disorder diagnoses (n = 96)	-.09	.40	-.004	.97	-.16	.12
Number of personality disorder symptoms (n = 96)	-.05	.61	-.01	.90	-.04	.71
Cluster A diagnoses	.03	.81	.02	.84	.06	.60
Cluster A symptoms	-.03	.77	.04	.70	-.04	.74
Cluster B diagnoses	.02	.89	-.03	.79	-.01	.90
Cluster B symptoms	.08	.44	-.15	.16	-.05	.66
Cluster C disorders	-.16	.11	.13	.21	-.07	.51
Cluster C symptoms	-.19	.07	.04	.71	-.18	.26
TCI-R (n = 99)						
Temperament						
Novelty Seeking	-.002	.98	-.01	.93	-.13	.19
Harm Avoidance	.05	.61	.03	.76	.05	.66
Reward Dependence	.07	.51	-.03	.74	.03	.78
Persistence	.08	.45	-.06	.53	.10	.32
Character						
Self-Directedness	.08	.44	.13	.22	.003	.98
Cooperativeness	.04	.71	.05	.62	-.07	.52
Self-Transcendence	.01	.91	-.17	.09	.03	.78

Note. [+] Indicates the use of non-parametric statistics.

Backward deletion stepwise multiple regression analyses were performed to model the predictive ability of candidate predictor variables on each of the VTAS-R and VPPS subscales. The entry value was $p = .049$, and the exit value was $p < .10$. Final models for each VTAS-R and VPPS subscale are presented in Tables 11-20.

Table 11

Final Model from Backward Deletion Stepwise Multiple Regression Analysis Predicting the Vanderbilt Therapeutic Alliance Scale Client Alliance Subscale

	B	**(SE)**	**β**	**95% Confidence Intervals**		***p***
				Lower	**Upper**	
Self-Transcendence	**.005**	**(.003)**	**.20**	.00	.01	**.04**
Number of Cluster A Symptoms	**-.19**	**(.04)**	**-.44**	-.28	-.10	**< .01**
Number of Cluster C Diagnoses	**.22**	**(.07)**	**.33**	.08	.36	**.003**

Table 11 shows the final regression model predicting the client alliance subscale for the Vanderbilt Therapeutic Alliance Scale from predictor variables. Self-transcendence ($\beta = .20$, $t(90) = 2.05$, $p = .04$), number of Cluster A personality disorder symptoms ($\beta = -.044$, $t(90) = -4.21$, $p = .00$) and number of Cluster C personality disorder diagnoses ($\beta = .33$, $t(90) = 3.10$, $p = .003$) were all significant predictors of client alliance. A significant regression equation was found ($F(3, 90) = 7.16$, $p < .001$) with an R^2 of .193, indicating that 19.3% of the variance in the model is explained by the predictor variables. For every unit increase in client alliance score, self-transcendence increased .20 units, the number of Cluster C personality disorder diagnoses increased by .33 units, and the number of Cluster A personality disorder symptoms decreased by .44 units.

Table 12

Final Model from Backward Deletion Multiple Regression Analysis Predicting Vanderbilt Therapeutic Alliance Scale Therapist Alliance Subscale

	B	**(SE)**	**β**	**95% Confidence Intervals**		***p***
				Lower	**Upper**	
Novelty Seeking	**-.01**	**(.003)**	**-.20**	-.01	.00	**.05**
Number of Cluster C Symptoms	**-.08**	**(.03)**	**-.60**	-.13	-.02	**.01**
Number of Cluster C Diagnoses	**.45**	**(.16)**	**.60**	.14	.77	**.01**

Table 12 shows the final regression model predicting the therapist alliance subscale of the Vanderbilt Therapeutic Alliance Scale from the predictor variables. Novelty seeking (β = -0.20, t (90) = -.20, p = .05), number of Cluster C personality disorder symptoms (β = -.60, t (90) = -2.80, p = .01), and number Cluster C personality disorder diagnoses (β = .60, t (90) = 2.84, p = .01), were all significant predictors of therapist alliance. A significant regression equation was found (F(3, 90) = 3.76, p = .01) with an R^2 of .111, indicating that 11.1% of the variance in the model is explained by predictor variables. For every unit increase in therapist alliance, the number of Cluster C personality disorder diagnoses increased by .60 units, while the number of Cluster C personality disorder symptoms decreased by .60 units, and novelty seeking decreased by .20 units.

Table 13

Final Model from Backward Deletion Stepwise Multiple Regression Analysis Predicting Vanderbilt Therapeutic Alliance Scale Total Alliance Subscale

	B	**(SE)**	**β**	**95% Confidence Intervals**		***p***
				Lower	**Upper**	
Novelty Seeking	**-.01**	**(.002)**	**-.22**	-.01	.00	**.04**
Self-Transcendence	**.01**	**(.002)**	**.25**	.001	.01	**.02**
Number of Cluster A Symptoms	**-.12**	**(.04)**	**-.34**	-.19	-.04	**.002**
Number of Cluster C Diagnoses	**.14**	**(.06)**	**.25**	.02	.25	**.02**

Table 13 shows the final regression model predicting the total alliance subscale of the Vanderbilt Therapeutic Alliance Scale from predictor variables. Novelty seeking (β = -.22, t (89) = -2.10, p = .04), self-transcendence (β = .25, t (89) = 2.34, p = .02), number of Cluster

A personality disorder symptoms (β = -.34, t (89) = -3.13, *p* = .002), and number of Cluster C personality disorder diagnoses (β = .25, t (89) = 2.33, *p* = .02), were all significant predictors of total alliance. A significant regression equation was found (F (4, 89) = 3.97, *p* = .005) with an R^2 of .151, indicating that 15.1% of the variance in the model is explained by predictor variables. For every unit increase in total alliance, self-transcendence increased by .25 units, the number of Cluster C personality disorder diagnoses increased by .25 units, novelty seeking decreased by .22 units, and the number of Cluster A personality disorder symptoms decreased by .34 units.

Table 14

Final Model from Backward Deletion Stepwise Multiple Regression Analysis Predicting the Vanderbilt Psychotherapy Process Scale Client Participation Subscale

	B	**(SE)**	**β**	**95% Confidence Intervals**		***p***
				Lower	**Upper**	
Reward Dependence	**.01**	**(.003)**	**.27**	.002	.013	**.006**
Total Number of Personality Disorder Symptoms	.08	(.05)	.28	.28	1.79	.08
Number of Cluster A Symptoms	**-.20**	**(.07)**	**-.47**	-.33	-.07	**.004**

Table 14 shows the final regression model predicting the client participation subscale of the Vanderbilt Psychotherapy Process Scale from predictor variables. Reward dependence (β = .27 , t(90) = 2.81, *p* < .01), and number of Cluster A symptoms (β = -.47 , t(90) = -2.98, *p* = .004), were significant predictors of client participation, and the total number of personality disorder symptoms (β = .28, t(90) = 1.79, *p* = .08) remained in the model as the *p* value for Cluster A symptoms (*p* = .08) was below the *p* < .10 exit criterion for the backward deletion. A significant regression equation was found (F(3, 90) = 6.94, *p* < .001) with an R^2 of .188, meaning that 18.8% of the variance in the model is explained by predictor variables. For every unit increase in client participation, reward dependence increased by .27 units, the total number of personality disorder symptoms increased by .28 units, and the number of Cluster A personality disorder symptoms decreased by .47 units.

Table 15

Final Model from Backward Deletion Stepwise Multiple Regression Analysis Predicting the Vanderbilt Psychotherapy Process Scale Client Hostility Subscale

	B	**(SE)**	**β**	**95% Confidence Intervals**		***p***
				Lower	**Upper**	
Cooperativeness	**-.003**	**(.001)**	**-.26**	.05	.20	**.01**
Number of Cluster A Diagnoses	**.13**	**(.04)**	**.46**	.05	.20	**.001**
Number of Cluster B Diagnoses	**-.08**	**(.03)**	**-.33**	-.14	-.01	**.02**
Number of Cluster B Symptoms	**.01**	**(.01)**	**.22**	.001	.03	**.04**
Number of Cluster C Symptoms	**-.02**	**(.004)**	**-.37**	-.02	-.01	**< .001**

Table 15 shows the final regression model predicting the client hostility subscale of the Vanderbilt Psychotherapy Process Scale from predictor variables. Cooperativeness (β = -.26, t(88) = -2.63 , p = .01), number of Cluster A personality disorder diagnoses (β = .46, t(88) = 3.50, p = .001), number of Cluster B personality disorder diagnoses (β = -.33, t(88) = -2.40, p = .02), number of Cluster B personality disorder symptoms (β = .22, t(88) = 2.12, p = .04), and number of Cluster C personality disorder symptoms (β = -.37, t(88) = -3.64, p < .001) significantly predicted client hostility. A significant regression equation was found (F(5, 88) = 5.99, p < .001) with an R^2 of .254, indicating that 25.4% of the variance in the model is explained by predictor variables. For every unit increase in client hostility, the number of Cluster A personality disorder diagnoses increased by .46 units, the number of Cluster B personality disorder symptoms increased by .22 units, while cooperativeness decreased by .26 units, the number of Cluster B personality disorder diagnoses decreased by .33 units, and the number of Cluster C personality disorder symptoms decreased by .37 units.

Table 16

Final Model from Backward Deletion Stepwise Multiple Regression Analysis Predicting the Vanderbilt Psychotherapy Process Scale Negative Therapist Attitude Subscale

	B	**(SE)**	**β**	**95% Confidence Intervals**		***p***
				Lower	**Upper**	
Self-Transcendence	**-.001**	**(.00)**	**-.28**	-.001	.00	**.01**
Total Number of Personality Disorder Symptoms	**.01**	**(.004)**	**.31**	.00	.01	**.05**
Number of Cluster C Symptoms	**-.004**	**(.001)**	**-.47**	-.01	-.00	**.004**

Table 16 shows the final regression model predicting the negative therapist attitude subscale of the Vanderbilt Psychotherapy Process Scale from predictor variables. Self-transcendence (β = -.28, t (90) = -.28, p = .01), total number of personality disorder diagnoses (β = .31, t (90) = 1.98, p = .05), and number of Cluster C personality disorder symptoms (β = -.47, t (90) = -2.98, p = .004) significantly predicted client hostility. A significant regression equation was found (F (3, 90) = 4.25, p = .007) with an R^2 of .124, indicating that 12.4% of the variance in the model is explained by predictor variables. For every unit increase in negative therapist attitude, the total number of personality disorder symptoms increased by .31 units, self-transcendence decreased by .28 units, and the number of Cluster C personality disorders decreased by .47 units.

Table 17

Final Model from Backward Deletion Stepwise Multiple Regression Analysis Predicting the Vanderbilt Psychotherapy Process Scale Therapist Exploration Subscale

	B	**(SE)**	**β**	**95% Confidence Intervals**		***p***
				Lower	**Upper**	
Novelty Seeking	**-.01**	**(.003)**	**-.20**	-.01	**.00**	**.05**
Total Number of Personality Disorder Diagnoses	**-.25**	**(.12)**	**-.36**	-.48	**-.01**	**.05**
Number of Cluster C Diagnoses	.37	(.19)	.47	-.01	.75	.06
Total Number of Personality Disorder Symptoms	**.14**	**(.07)**	**.39**	.01	**.27**	**.04**
Number of Cluster C Symptoms	**-.08**	**(.04)**	**-.62**	-.15	**-.01**	**.02**

Table 17 shows the final regression model predicting the therapist exploration subscale of the Vanderbilt Psychotherapy Process Scale from predictor variables. Novelty seeking (β = -.20, t(88) = -1.97 , p = .01), total number of personality disorder diagnoses (β = -.36, t(88) = -2.03, p = .05), total number of personality disorder symptoms (β = .39, t(88) = 2.07, p = .04), and the number of Cluster C personality disorder symptoms (β = -.62, t(88) = -2.29, p = .02), significantly predicted client hostility, and the number of Cluster C personality disorder diagnoses (β = .47, t(88) = 1.95, p = .06) remained in the final model as the p-value (p = .06) was below the p < .10 exit criterion for the backward deletion. A significant regression equation was found (F(5, 88) = 2.35, p < .05) with an R^2 of .118, indicating that 11.8% of the variance in the model is explained by predictor variables. For every unit increase in therapist exploration, the number of Cluster C personality disorder diagnoses increased by .47 units, the total number of personality disorder symptoms increased by .39 units, while novelty seeking decreased by .20 units, the total number of personality disorder diagnoses decreased by .36 units, and the number of Cluster C personality disorder symptoms decreased by .62 units.

Table 18

Final Model from Backward Deletion Stepwise Multiple Regression Analysis Predicting the Vanderbilt Psychotherapy Process Scale Client Exploration Subscale

	B	**(SE)**	**β**	**95% Confidence Intervals**		***p***
				Lower	**Upper**	
Novelty Seeking	-.01	(.004)	-.18	-.01	.001	.08
Reward Dependence	**.01**	**(.004)**	**.27**	.002	.02	**.01**

Table 18 shows the final regression model predicting the client exploration subscale of the Vanderbilt Psychotherapy Process Scale from predictor variables. Reward dependence (β = .27, t (91) = 2.65, p = .01) significantly predicted client exploration, and novelty seeking (β = -.18, t (91) = -1.77, p = .08) remained in the final model as the p-value (p = .08) was below the p < .10 exit criterion for the backward deletion. A significant regression equation

was found (F(2, 91) = 4.21, p = .02) with an R^2 of .085, indicating that 8.5% of the variance in the model is explained by predictor variables. For every unit increase in client exploration, reward dependence increased by .27 units, while novelty seeking decreased by .18 units.

Table 19

Final Model from Backward Deletion Stepwise Multiple Regression Analysis Predicting the Vanderbilt Psychotherapy Process Scale Client Psychic Distress Subscale

	B	**(SE)**	**β**	**95% Confidence Intervals**		***p***
				Lower	**Upper**	
Novelty Seeking	**-.002**	**(.001)**	**-.21**	-.004	**.00**	**.04**
Number of Cluster A Diagnoses	**.10**	**(.04)**	**.38**	.03	**.18**	**.008**
Number of Cluster B Diagnoses	**-.09**	**(.03)**	**-.37**	-.15	**-.02**	**.01**
Number of Cluster A Symptoms	.04	(.02)	.24	-.001	.08	.06
Number of Cluster B Symptoms	.01	(.01)	.23	.00	.03	.06
Number of Cluster C Symptoms	**-.01**	**(.01)**	**-.22**	-.02	**.00**	**.04**

Table 19 shows the final regression model predicting the client psychic distress subscale from predictor variables. Novelty seeking (β = -.21, t(87) = -2.13, p = .04), the number of Cluster A personality disorder diagnoses (β = .38, t(87) = 2.73, p = .008), the number of Cluster B personality disorder diagnoses (β = -.37, t(87) = -2.59, p = .01), and the number of Cluster C personality disorder symptoms (β = -.22, t(87) = -2.04, p = .04) significantly predicted client hostility, the number of Cluster A personality disorder symptoms (β = .24, t(87) = 1.93, p = .06) and number of Cluster B personality disorder symptoms (β = .23, t(87) = 1.93, p = .06) remained in the final model as the p-values (p = .06) were below the p < .10 exit criterion for the backward deletion. A significant regression equation was found (F (6, 87) = 4.24, p = .001) with an R^2 of .226, indicating that 22.6% of the variance in the model is explained by predictor variables. For every unit increase in client psychic distress, the number of Cluster A personality disorder diagnoses increased by .38 units, the number of Cluster A personality disorder symptoms increased by .24 units, the number of Cluster B personality disorder symptoms increased by .23 units, while novelty seeking decreased by .21 units, the number of Cluster B personality disorder diagnoses

decreased by .37 units, and the number of Cluster C personality disorder symptoms decreased by .22 units.

Table 20

Final Model from Backward Deletion Stepwise Multiple Regression Analysis Predicting the Vanderbilt Psychotherapy Process Scale Client Dependency Subscale

	B	**(SE)**	**β**	**95% Confidence Intervals**		***p***
				Lower	**Upper**	
Number of Cluster A Diagnoses	**.15**	**(.03)**	**.44**	.08	.22	**< .01**
Number of Cluster C Diagnoses	.12	(.06)	.36	-.01	.24	.08
Number of Cluster B Symptoms	**-.01**	**(.01)**	**-.20**	-.03	.00	**.05**
Number of Cluster C Symptoms	**-.024**	**(.01)**	**-.44**	-.05	-.003	**.03**

Table 20 shows the final regression model predicting the client dependency subscale of the Vanderbilt Psychotherapy Process Scale from predictor variables. The number of Cluster A personality disorder diagnoses (β = .44 , t(89) = 4.35, $p < .001$), number of Cluster B personality disorder symptoms (β = -.20, t(89) = -1.98, $p = .05$), and number of Cluster C personality disorder symptoms (β = -.44, t(89) = -2.22, $p = .03$) significantly predicted client hostility, the number of Cluster C personality disorder diagnoses (β = .36, t(89) = 1.79, $p = .08$) remained in the final model as the p-value ($p = .08$) was below the $p < .10$ exit criterion for the backward deletion. A significant regression equation was found (F (4, 89) = 6.83, $p < .001$) with an R^2 of .235, indicating that 23.5% of the variance in the model is explained by predictor variables. For every unit increase in client dependency, the number of Cluster A personality disorder diagnoses increased by .44 units, number of Cluster C personality disorder diagnoses increased by .36 units, while the number of Cluster B personality disorder symptoms decreased by .20 units, and number of Cluster C personality disorder symptoms decreased by .44 units.

Table 21

Intra-class Correlations and Coefficients of Variation as Measures of Inter-Rater Agreement and Cronbach's Alpha as a Measure of Internal Consistency for the Vanderbilt Therapeutic Alliance Scale and Vanderbilt Psychotherapy Process Scale

	Inter-Rater Agreement N = 64				**Internal consistency N = 378**
	Intra-class correlation	95% Confidence Interval Lower	Upper	Coefficients of variation (%)	Cronbach's α
VTAS-R subscales					
Total Scale	.34	.24	.46		.89
Client alliance	.38	.16	.57	7.02	.88
Therapist alliance	-.02	-.27	.22	10.11	.79
Total alliance	.19	-.06	.41	6.63	.89
VPPS subscales					
Total scale	-.05	-.05	-.04		.90
Client participation	.54	.35	.70	6.36	.82
Client hostility	.39	.16	.58	6.88	.67
Therapist warmth and friendliness	-.17	-.40	.08	12.75	.83
Negative therapist attitude	.27	.02	.48	12.75	.15
Therapist exploration	.12	-.12	.36	12.05	.86
Client exploration	.21	-.04	.43	12.08	.74
Client psychic distress	.72	.58	.82	9.91	.84
Client dependency	.36	.12	.55	14.20	.50

Table 21 shows the two-way, mixed, random effects intra-class correlations and associated 95% confidence intervals, and coefficients of variation, and Cronbach's alpha for the VTAS-R and VPPS and associated subscales. Intra-class correlations and coefficients of variation were calculated as an indication of inter-rater agreement, Cronbach's alpha was calculated to assess internal consistency of scales and subscales.

The VTAS-R total scale had an intra-class correlation and 95% confidence interval of .34 [.24 -.46], and a very high level of internal consistency (α = .89). The client alliance subscale had an intra-class correlation and 95% confidence interval of .38 [.16, .57], with 7.02% variation between raters, and a very high level of internal consistency (α = .88). The therapist alliance subscale had an intra-class correlation and 95% confidence interval of -0.02

[-0.27, .22] with 10.11% variation between raters, and a high level of internal consistency (α = .79). The total alliance was .19 [-0.06, .41] with 6.63% variation between raters, and a very high level of internal consistency (α = .89).

The VPPS total scale had an intra-class correlation and 95% confidence interval of -0.05 [-0.05, -0.04], and very high levels of internal consistency (α = .90). The client participation subscale had an intra-class correlation and 95% confidence interval of .54 [.35, .70] with 6.36 variation between raters, and a very high level of internal consistency (α = .82). The client hostility subscale had an intra-class correlation and 95% confidence interval of .39 [.16, .58] with 6.88 variation between raters, and an acceptable level of internal consistency (α = .67). The therapist warmth and friendliness subscale had an intra-class correlation and 95% confidence interval of -0.17 [-0.40, .08] with 12.75% variation between raters, and a very high level of internal consistency (α = .83). The negative therapist attitude subscale had an intra-class correlation and 95% confidence interval of .27 [.02, .48] with 12.75% variation between raters, and a very low level of internal consistency (α = .15). The therapist exploration subscale had an intra-class correlation and 95% confidence interval of .12 [-0.12, .36] with 12.05% variation between raters, and a very high level of internal consistency (α = .86). The client exploration subscale had an intra-class correlation and 95% confidence interval of .21 [-0.04, 43] with 12.08% variation between raters, and an acceptable level of internal consistency (α = .74). The client psychic distress subscale had an intra-class correlation and 95% confidence interval of .72 [.58, .82] with 9.91% variation between raters, and a very high level of internal consistency (α = .84). The client dependency subscale had an intra-class correlation and 95% confidence interval of .36 [.12, .55] with 14.20% variation between raters, and a low level of internal consistency (α = .50).

Discussion

The present study examined therapeutic alliance in the treatment of major depressive disorder to determine which personality disorder diagnoses, personality disorder cluster symptoms, or TCI-R personality traits influence the therapeutic alliance.

All VTAS-R subscales had higher late phase ratings of therapy compared to early phase ratings of therapy. The VPPS subscales of client participation, therapist warmth and friendliness, therapist exploration also had higher late phase ratings than early phase ratings of therapy. This suggests that as therapy progresses, strengthening of the interpersonal relationship between client and therapist occurs. The VPPS client distress subscale, however, had lower late phase ratings than early phase ratings of therapy. Lower levels of client distress may be indicative of symptom relief of major depressive disorder, however the association between client distress and reduction of symptoms is beyond the scope of the current investigation.

Correlations were found between the VTAS-R client alliance subscale and Cluster A symptoms and the TCI-R component of reward dependence, and also between the VTAS-R total alliance subscale and reward dependence. Significant correlations between the Vanderbilt Psychotherapy Process Scale subscales were found. Client participation was correlated with lower levels of Cluster A personality disorder symptoms ($p = .01$), and a small positive correlation was found between the TCI-R components of reward dependence ($p < .001$), and cooperativeness ($p < .05$). Client exploration was positively correlated with reward dependence ($p < .05$). A small positive correlation was found between client psychic distress and the total number of personality disorder symptoms ($p < .05$), Cluster A personality disorder symptoms ($p < .05$), and Cluster B personality disorder symptoms ($p = .03$). A Spearman's rank order correlation revealed a small positive correlation between client hostility and Cluster A personality disorder diagnoses ($p = .005$), and client dependency and

Cluster A personality disorder diagnoses (p = .002) and Cluster B personality disorder diagnoses (p = .02).

The first hypothesis that therapeutic alliance strength will increase over the course of therapy, was supported by the results. A significant increase in therapeutic alliance was found in all three VTAS subscales. These results were not replicated when comparing therapeutic alliance over phase of therapy between therapy types. This was not a surprising result as cognitive behaviour therapy and schema therapy are similarly efficacious treatment methods for major depressive disorder (Carter et al., 2013; Hoffart, Versland, & Sexton, 2002).

The second hypothesis that there will be a correlation between strength of the therapeutic alliance and the total number of personality disorder diagnoses was not supported by the results. The total number of personality disorder diagnoses was not correlated to any of the VTAS subscales, nor to any of the VPPS subscales. Backwards regression models did, however, indicate that the total number of personality disorder diagnoses was a predictor of the VPPS therapist exploration and client participation subscales.

The third and final hypothesis that high levels of harm avoidance, reward dependence, persistence, self-directedness and cooperativeness, as measured by Cloninger et al.'s (1994) TCI-R, will be associated with higher therapeutic alliance strength was partially supported by the results. Reward dependence was positively correlated with the VTAS client alliance and total alliance subscales, and the VPPS client participation and client exploration subscales. Cooperativeness was also found to be positively correlated with the VPPS client participation subscale. It was unexpected that cooperativeness was not correlated with any of the VTAS subscales as it is expected that cooperativeness is essential for a strong interpersonal relationship (Svrakic et al., 1993).

Consistent with previous findings, Cluster A symptoms were found to be predictive of poor client alliance, and also poor total alliance, however, therapist contribution to the

alliance was not impacted by Cluster A personality disorder diagnoses or symptoms. Cluster A diagnoses were associated with higher levels of client hostility, and client dependency during therapy. Cluster A symptoms were also associated with higher client psychic distress and lower client participation in therapy. Lingiardi, Filippucci, and Baiocco (2005) reported that clients with Cluster A personality disorders had more difficulty establishing the alliance than clients with Cluster B or Cluster C personality disorders. This is most likely due to the nature of Cluster A personality disorders, specifically paranoid personality disorder, where individuals with this diagnoses expect harm or exploitation in interpersonal relationships, and as a result may withdraw from or attack the therapeutic relationship (Bender, 2005).

Cluster B symptoms were correlated with high levels of client psychic distress. Clients with Cluster B diagnoses are often untrusting of others and have impairments in interpersonal relationships (Bender, 2005; Colli, Tanzilli, Dimaggio, & Lingiardi, 2014).

The current study found inconsistencies in the predictive ability of Cluster B symptoms and Cluster B diagnoses. First, neither were found to be predictive of low levels of therapeutic alliance. Second, Cluster B diagnoses were predictive of lower levels of client hostility and distress, whereas, Cluster B symptoms were predictive of higher levels of client hostility and distress, as well as lower levels of client dependency. This may, in part, be explained by the current study using the total number of personality disorder symptoms as a measure of personality pathology, regardless of the presence of a personality disorder diagnosis. Third, the number of Cluster B diagnoses being predictive of lower levels of client hostility and distress is inconsistent with previous studies. Interpersonal sensitivity has been identified as a barrier to forming a strong therapeutic alliance for people with borderline and narcissistic personality disorders (Lingiardi et al., 2005), therefore it is assumed that the number of Cluster B diagnoses would have an effect on client distress. Pierò et al. (2013) reported difficulties establishing a strong therapeutic alliance for clients with borderline

personality disorder due to dysfunctional attachment processes and the high level of emotional dysregulation associated with the cluster of disorders. While Colli et al. (2014) found that clients with Cluster B personality disorders elicited more negative responses from therapists, it is common for individuals with borderline personality disorder to act on aggressive impulses, which therapists must tolerate (Bender, 2005). The negative response from therapists may, in turn, moderate the experienced level of distress by the client. Clients with narcissistic personality disorder, however, seek to maintain self-esteem by defeating others in order to establish a sense of superiority and also have a distorted idea of their own self-image, in that individuals have a grandiose sense of self-importance (Bender, 2005). This behaviour has been linked to therapists feeling frustrated and detached when dealing with clients with narcissistic personality disorder (Colli et al., 2014). The nature of both of borderline personality and narcissistic personality disorders would suggest that the number of Cluster B personality disorder diagnoses would increase the level of client hostility. Higher levels of client hostility are likely to make it harder to establish and maintain a sound interpersonal relationship, therefore, negatively impacting the strength of the therapeutic alliance. Finally, previous studies have relied on client and therapist ratings of the alliance (Lingiardi et al., 2005; Pierò et al., 2013), whereas, the current study used external observers to measure therapeutic alliance. It can be suggested that objective ratings offer a neutral insight to the therapeutic relationship as they are not influenced by the potential difficulties endured in therapy. Clients with Cluster B personality disorder diagnoses can be described as being emotionally unstable, uncooperative and insecure, due to this it is possible that the nature of Cluster B personality disorders may have a negative influence on therapist and client ratings of the therapeutic alliance (Bender, 2005; Pierò et al., 2013).

Cluster C diagnoses were found to be predictive of the VTAS-R client alliance, therapist alliance, and total alliance subscales. Previous research has found that Cluster C

clients have been found to evoke less negative reactions from therapists than Cluster A and B clients, and are aversive to conflict (Colli et al., 2014). The nature of these personality disorders suggests that these clients will often feel guilty and actively avoid conflict, typically by internalising blame (Bender, 2005). The internalisation of blame is considered facilitative in the formation of the therapeutic alliance as clients are more willing to engage with therapists to deal with their presenting problems (Bender, 2005). Therapist evaluations of Cluster C clients are also more positive than for Cluster A or B clients (Colli et al., 2014). The number of Cluster C symptoms was predictive of lower levels of client hostility, and negative therapist attitude. This is not a surprising finding, as therapists have reported that they are less inclined to explore painful feelings and negative affect with dependent clients as these clients are viewed as vulnerable and emotionally fragile (Bender, 2005). Cluster C diagnoses were predictive of high levels of client dependency. However, contradictory to this is that the number of Cluster C symptoms negatively predicted client dependency. The extent to which these findings conform to previous findings is limited, as few studies have been conducted regarding the strength of the therapeutic alliance in clients with Cluster C personality disorders.

Despite being willing to engage with unfamiliar environments, due to enthusiasm and curiosity, individuals with high novelty seeking scores can be quick-tempered, and impulsive and have been described as being erratic and unpredictable in therapeutic settings (Cloninger et al., 1994; Garcia, 2012). In the current study, novelty seeking predicted therapist alliance, and negatively predicted total alliance. Limited previous research has examined the correlation between novelty seeking and the therapeutic alliance. Hansenne et al. (1999) found in a sample of depressed clients that depressed clients had low novelty seeking scores and concluded that this is due to increased difficulties for depressed clients to initiate novel behaviour, and being unwilling to explore new environments such as therapy.

Reward dependence is the notion that behaviour that has been positively reinforced previously will remain maintained without further reinforcement (Cloninger et al., 1994). Reward dependence is comprised of four facets: sentimentality, persistence, attachment, and dependence. Highly reward dependent individuals are described as being drawn to social contact and are highly communicable.

Reward dependence was positively correlated with the VTAS-R client alliance and therapist alliance subscales, as well as the VPPS client participation and client exploration subscales. Reward dependence was found to be predictive of the VPPS client participation and client exploration subscales. Although no research to date has found evidence regarding the association between reward dependence and therapeutic alliance, reward dependence has been found to be associated with dependent personality disorder (De Fruyt et al., 2006; Svrakic et al., 1993) which has been associated with strong alliances (Colli et al., 2014). Given the definition of reward dependence, it is not surprising that it is positively correlated to client alliance and total alliance scores. Individuals that are driven by social reward, such as praise, would be highly motivated to contribute to the therapeutic alliance and form strong interpersonal relationships with those with perceived authority (such as a therapist). Cooperativeness accounts for the ability of individuals to identify with and accept others (Cloninger et al., 1994) and is the concept of the self as an essential part of society (Otani et al., 2015). Highly cooperative individuals are considered empathetic, tolerant and compassionate (Cloninger et al., 1994). High levels of cooperativeness were correlated with client participation as well as client hostility being predicted by a decrease in cooperativeness. This is consistent with the definition of cooperativeness, and the facets that comprise cooperativeness (social acceptance, empathy, helpfulness, compassion, integrated conscience) and is logical that clients would be less hostile in their interpersonal interactions, as well as being more willing to participate during therapy sessions (Pukrop, 2002).

Cooperativeness was not found to be correlated with or predictive of the VTAS client, therapist, or total alliance subscales. This was surprising as agreeableness, which is the NEO-PI equivalent of cooperativeness, has been found to be correlated with the therapeutic alliance (De Fruyt et al., 2000). Agreeableness is the prosocial and communal orientation of an individual characterised by trust and modesty (Costa & McCrae, 1995). Coleman (2006) found a strong correlation between agreeableness and the therapeutic alliance in a diverse sample of clients with mental health diagnoses. Agreeable individuals are predisposed to form warm, positive relationships, and in therapeutic settings, clients are more likely to adhere to therapy recommendations (Coleman, 2006).

Self-transcendence is associated with spirituality, and refers to an individual identifying with everything considered to be an essential part of a unified whole (Cloninger et al., 1994; Hansenne et al., 1999; Otani et al., 2015). Self-transcendence was found to be predictive of the VTAS-R client alliance and total alliance subscales, and negatively predictive of the VPPS negative therapist attitude subscale. These are considered novel findings as no research to date has examined the TCI characteristic of self-transcendence on therapeutic alliance. Self-transcendence has been found to be associated with the NEO-PI-R, however this association is beyond the scope of the current investigation.

Implications

Despite the therapeutic alliance being identified as the main factor predicting treatment outcome (Barber et al., 2009; Krupnick et al., 1994; Krupnick et al., 1996; Martin et al., 2000; Zuroff et al., 2000), insufficient studies have examined what variables predict the therapeutic alliance. It is vital to understand what factors can positively influence the formation and maintenance of this interpersonal relationship due to the mediatory role it plays in the association between personality and treatment outcome (Kushner et al., 2016). This is especially important in clinical populations where there are known difficulties

establishing interpersonal relationships, such as with personality disorders. Understanding the influence personality disorders have on the formation and maintenance of the therapeutic alliance is critical to garner greater treatment outcomes for comorbid diagnoses.

Understanding the personality pathology of clients allows for flexibility in treatment approaches. This means that interventions can be made appropriate for the client's individual style, although this may result in longer periods of treatment for clients with a more complex character and personality pathologies (Bender, 2005).

Strengths

A strength of the current study is the use of observer ratings of the therapeutic alliance, which are less prone to therapist or client subjectivity. Previous studies of the therapeutic alliance, for example, Martin et al. (2000) have demonstrated that observer ratings of the therapeutic alliance are less prone to biases and subjective ratings.

Despite weak intra-class correlation coefficients, the low coefficients of variance scores indicate that there is limited variation between ratings of the therapeutic alliance. It was expected that the intra-class correlation coefficients would be low, as there have been criticisms as the use of intra-class correlation coefficients as a measure of inter-rater agreement. Low levels of covariance were found between raters for therapeutic alliance and psychotherapy process measures. This suggests that ratings of these measures had precise levels of estimation.

The rating of full therapy sessions allowed for a more accurate insight to the therapist-client interactions was another strength of this study. This was opposed to the ratings of segments or sections of therapy sessions which would not have allowed for a thorough understanding of the interpersonal relationship.

Another strength was the variety of personality measures. Personality pathology was not limited to personality disorders, as personality disorder criteria are not always

representative of the complexity of personality pathology (Bender, 2005). Personality disorder information such as total number of diagnoses, total number of symptoms and personality disorder cluster information was used. The TCI-R was used to measure character and personality styles.

Limitations

The current results should be interpreted taking into account the following limitations. Participants were part of a randomised controlled trial with stringent exclusion criteria. The influence that personality and personality disorders have on the formation and strength of the therapeutic alliance hasn't been studied in other clinical populations. Typically, the therapeutic alliance is examined in relation to its influence over treatment outcome relating to a decrease in symptomatology (Barber et al., 2009; Constantino et al., 2010; Krupnick et al., 1996; Lorenzo-Luaces et al., 2014; Martin et al., 2000) or premature termination of therapy (Horvath & Symonds, 1991; Johansson & Jansson, 2010; Jordan et al., 2014; Jordan et al., 2017). Therefore, the current results may not be generalised to other clinical populations.

Personality assessments were conducted prior to psychotherapy treatment for major depressive disorder. It remains unknown whether the TCI traits remained stable aspects of a participant's character or merely as a function of their present psychological state. If the TCI traits are a function of an individual's current psychological state it can be assumed that changes to the TCI trait scores and therefore personality pathology may occur with relief of symptoms.

Future Directions of Research

Future studies could investigate whether personality traits are susceptible to change over the course of therapy. The current study only had personality trait information in the form of TCI-R data from baseline sessions, and therefore cannot draw conclusions relating to the susceptibility to change of personality traits. Examination of this would offer insight to

the stability of personality traits as aspects of the individual's character. Further research examining the influence that TCI-R components have on the therapeutic alliance is crucial due to the predictive nature of the therapeutic alliance in the outcome of treatment.

Exploration of the association between therapeutic alliance and personality traits in other clinical samples should be an aim of future research. To truly understand the influence that personality traits and personality disorders have on the therapeutic alliance replication of the current study in other clinical samples is needed.

Summary

Strong correlations have been found between TCI components and personality disorders in addition to strong evidence relating to how personality disorders affect the therapeutic alliance. The aim of the current study was to determine the extent personality, personality disorders and personality disorder symptoms have on therapeutic alliance, and to identify which personality disorder or personality disorder symptoms have the most influence on the therapeutic alliance. Cluster C personality disorder diagnoses, and TCI-R character component of self-transcendence were found to positively predict the therapeutic alliance. Cluster A personality disorder symptoms, Cluster C personality disorder symptoms, and the TCI-R temperament component of novelty seeking were predictive of poor therapeutic alliance. Results of the current study emphasise the significance of pre-treatment personality assessments to alter treatment to client's individual needs.

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Appendix A

Canterbury Ethics Committee
4th Floor, 250 Oxford Terrace
P.O. Box 3877
Christchurch
Phone (03) 372 3018
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19 June 2003

Professor P Joyce
Department of Psychological Medicine
P O Box 4345
Christchurch

Dear Professor Joyce

A randomized clinical trial of Schema Focused Therapy for depression
Investigators: Prof P Joyce, Dr J Carter, J Jordan, V McIntosh, Dr R Porter, Prof C Frampton
Ethics reference: CTY/03/04/057
Information sheet/consent form version 28.5.03

I am pleased to advise that, using the delegated authority granted her by the Committee, the Chairperson of the Canterbury Ethics Committee has given final ethical approval for this study to proceed in Canterbury.

The Committee is satisfied that this study is not being conducted principally for the benefit of the manufacturer or distributor of the medicine or item in respect of which the trial is being carried out.

Approval is until 30 September 2008.

The Committee will review the study annually and notify you if it withdraws approval. It is your responsibility to forward a progress report in May each year. Failure to do so may result in withdrawal of ethical approval. A final report is also required at the conclusion of the study. Report forms are available from the administrator.

It is also a condition of approval that the Committee is advised of any adverse events, if the study does not commence, or the study is altered in any way, including all documentation eg advertisements, letters to prospective participants. Please quote the above ethics committee reference number in all correspondence.

The Committee wishes you well with your research.

Yours sincerely

Sally Cook
Ethics Committee Administrator

Appendix B

HUMAN ETHICS COMMITTEE

Secretary, Rebecca Robinson
Telephone: +64 03 369 4588, Extn 94588
Email: human-ethics@canterbury.ac.nz

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

2018/06/EX

29 August 2018

Clara Fergusson
Psychology
University of Canterbury

Dear Clara,

I can confirm that your request for an exemption for the research project titled "The Effect of Personality and Personality Disorders on Therapeutic Alliance in the Treatment of Depression" has been reviewed and approved by the Human Ethics Committee.

Yours sincerely

R. Robinson

pp.

Professor Jane Maidment
Chair
University of Canterbury Human Ethics Committee

Appendix C

Ngāi Tahu Consultation and Engagement Group

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

Wednesday 8 August 2018

Tēnā koe Clara Fergusson

RE: The effect of personality and personality disorders on therapeutic alliance in the treatment of depression.

This letter is on behalf of the Ngāi Tahu Consultation and Engagement Group (NTCEG). I have considered your proposal and acknowledge it is a worthwhile and interesting project and you are clear about how you ought to take participants' (cultural) needs into account if and when applicable.

Given the scope of your project, no issues have been identified and further consultation with Māori is not required.

Thank you for engaging with the Māori consultation process. This will strengthen your research proposal, support the University's Strategy for Māori Development, and increase the likelihood of success with external engagement. It will also increase the likelihood that the outcomes of your research will be of benefit to Māori communities. We wish you all the best with your current project and look forward to hearing about future research plans.

The Ngāi Tahu Consultation and Engagement Group would appreciate a summary of your findings on completion of the current project. Please feel free to contact me if you have any questions.

Ngā mihi whakawhetai ki a koe

Henrietta Latimer (on behalf of the NTCEG)

Kaiarāhi Maori Research
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Appendix D

Revised Vanderbilt Therapeutic Alliance Scale (VTAS)
Therapist Alliance Factor ITEMS (11)

1. Convey the idea that they are competent to help with patient's problems
2. Express hope and encouragement, a belief that the patient is making (or can make) progress
3. Commit themselves and their skills to help the patient to the fullest extent possible
4. Show respect, acceptance, and compassion for the patient and their problems
5. Acknowledge the validity of the patient's feelings, thoughts, and behaviour
6. Make sure that the patient understood the procedure of therapy and their rationale, what was asked of them and why
7. Make his interventions in a way that preserved the patient's self-esteem and dignity
9. Express his own reactions, assets and liabilities in appropriate ways
11. Make irrelevant or uncalled for comments (reverse scored)
12. Build a sense of mutuality by using "we" and "us"
13. Miss interventions where they appeared needed (reverse scored)

Patient Alliance Factor ITEMS (20)

14. Express that he feels better since beginning therapy
15. Indicate that they experience the therapist as understanding and supportive of them
16. Seem to identify with the therapist's method of working, so that they assumed part of the therapeutic task themselves
17. Expect the therapist to change them without accepting their own responsibility for the session (reverse scored)
18. Make an effort to carry out therapeutic procedures suggested by the therapist
19. Acknowledge that they had problems, which the therapist could help them deal with
20. Indicate a strong desire to overcome their problems
21. Talk freely, openly, and honestly with the therapist about their thoughts, feelings, and behaviour
22. Act in a hostile, attacking, or critical manner toward the therapist (reverse scored)
23. Act in a mistrustful or defensive manner toward the therapist (reverse scored)
24. Become so anxious (reverse scored)
25. Show evidence that he missed an appointment, come late to sessions, or hesitates to make the next appointment
26. Show enthusiasm, which made the session seem alive and energetic
27. Work together in a joint effort to deal with the patient's problems
28. Share a common viewpoint about the definition, possible causes, and potential alleviation of the patient's problems
29. Relate in a realistic, honest straightforward way, within the bounds of reasonable human interaction
30. Agree upon the goals and tasks for the session
32. Seem to be engaged in a power struggle (reverse scored)
33. Express directly or indirectly the possibility of premature termination (reverse scored)
34. Accept their different roles and responsibilities as part of their relationship

Total Alliance Factor ITEMS (37)

1. Convey the idea that they are competent to help with patient's problems
2. Express hope and encouragement, a belief that the patient is making (or can make) progress
3. Commit themselves and their skills to help the patient to the fullest extent possible
4. Show respect, acceptance, and compassion for the patient and their problems
5. Acknowledge the validity of the patient's feelings, thoughts, and behaviour
6. Make sure that the patient understood the procedure of therapy and their rationale, what was asked of them and why
7. Make his interventions in a way that preserved the patient's self-esteem and dignity
8. Intrude their own life story, ideas or values on the patient (reverse scored)
9. Express his own reactions, assets and liabilities in appropriate ways
10. Foster undue dependency (reverse scored)
11. Make irrelevant or uncalled for comments (reverse scored)
12. Build a sense of mutuality by using "we" and "us"
13. Miss interventions where they appeared needed (reverse scored)
14. Express that he feels better since beginning therapy
15. Indicate that they experience the therapist as understanding and supportive of them
16. Seem to identify with the therapist's method of working, so that they assumed part of the therapeutic task themselves
17. Expect the therapist to change them without accepting their own responsibility for the session (reverse scored)
18. Make an effort to carry out therapeutic procedures suggested by the therapist
19. Acknowledge that they had problems, which the therapist could help them deal with
20. Indicate a strong desire to overcome his problems
21. Talk freely, openly, and honestly with the therapist about their thoughts, feelings, and behaviour
22. Act in a hostile, attacking, or critical manner toward the therapist (reverse scored)
23. Act in a mistrustful or defensive manner toward the therapist (reverse scored)
24. Become so anxious (reverse scored)
25. Show evidence that he missed an appointment, come late to sessions, or hesitates to make the next appointment
26. Show enthusiasm, which made the session seem alive and energetic
27. Work together in a joint effort to deal with the patient's problems
28. Share a common viewpoint about the definition, possible causes, and potential alleviation of the patient's problems
29. Relate in a realistic, honest straightforward way, within the bounds of reasonable human interaction
30. Agree upon the goals and tasks for the session
31. Focus on the therapeutic task throughout the session, without excessive superficiality
32. Seem to be engaged in a power struggle (reverse scored)
33. Express directly or indirectly the possibility of premature termination (reverse scored)
34. Accept their different roles and responsibilities as part of their relationship
35. Accept their different roles and responsibilities as part of their relationship
36. Refer back to experiences they have been through together
37. Have awkward silences or pauses in their conversation

Appendix E

Vanderbilt Therapeutic Alliance Scale

To what extent did the therapist:
(Remember to establish which ends not at all and great deal come)

		Not at all					Great deal	
1.	Convey the idea that he is competent to help with patient's problems.	0	1	2	3	4	5	_____
2.	Express hope and encouragement, a belief that the patient is making (or can make) progress.	0	1	2	3	4	5	_____
3.	Commit himself and his skills to help the patient to the fullest extent possible.	0	1	2	3	4	5	_____
4.	Show respect, acceptance, and compassion for the patient and his problems.	0	1	2	3	4	5	_____
5.	Acknowledge the validity of the patient's feelings, thoughts, and behaviour.	0	1	2	3	4	5	_____
6.	Make sure that the patient understood the procedures of therapy and their rationale, what was asked of him and why.	0	1	2	3	4	5	_____
7.	Make his interventions in a way that preserved the patient's self-esteem and dignity.	0	1	2	3	4	5	_____
8.	Intrude his own life story, ideas, or values on the patient.	0	1	2	3	4	5	_____
9.	Express his own reactions, assets and liabilities in appropriate ways.	0	1	2	3	4	5	_____
10.	Foster undue dependency.	0	1	2	3	4	5	_____
11.	Make irrelevant or uncalled for comments.	0	1	2	3	4	5	_____
12.	Build a sense of mutuality by using "we" and "us".	0	1	2	3	4	5	_____
13.	Miss interventions where they appeared needed.	0	1	2	3	4	5	_____

To what extent did the patient:

		Not at all					Great deal	
14.	Express that he feels better since beginning therapy.	0	1	2	3	4	5	____
15.	Indicate that he experiences the therapist as understanding and supportive of him.	0	1	2	3	4	5	____
16.	Seem to identify with the therapist's method of working, so that he assumed part of the therapeutic task himself.	0	1	2	3	4	5	____
17.	Expect the therapist to change him without accepting his own responsibility for the session.	0	1	2	3	4	5	____
18.	Make an effort to carry out therapeutic procedures suggested by the therapist.	0	1	2	3	4	5	____
19.	Acknowledge that he had problems, which the therapist could help him deal with.	0	1	2	3	4	5	____
20.	Indicate a strong desire to overcome his problems.	0	1	2	3	4	5	____
21.	Talk freely, openly, and honestly with the therapist about his thoughts, feelings, and behaviour.	0	1	2	3	4	5	____
22.	Act in a hostile, attacking, or critical manner toward the therapist.	0	1	2	3	4	5	____
23.	Act in a mistrustful or defensive manner toward the therapist.	0	1	2	3	4	5	____
24.	Become so anxious in the session that it interfered with the therapeutic task.	0	1	2	3	4	5	____
25.	Show evidence that he missed an appointment, come late to sessions, or hesitates to make the next appointment.	0	1	2	3	4	5	____

To what extent did the therapist and patient together:

		Not at all					Great deal	
26.	Show enthusiasm, which made the session seem alive and energetic.	0	1	2	3	4	5	_____
27.	Work together in a joint effort to deal with the patient's problems.	0	1	2	3	4	5	_____
28.	Share a common viewpoint about the definition, possible causes, and potential alleviation of the patient's problems.	0	1	2	3	4	5	_____
29.	Relate in a realistic, honest straightforward way, within the bounds of reasonable human interaction.	0	1	2	3	4	5	_____
30.	Agree upon the goals and tasks for the session.	0	1	2	3	4	5	_____
31.	Focus on the therapeutic task throughout the session, without excessive superficiality.	0	1	2	3	4	5	_____
32.	Seem to be engaged in a power struggle.	0	1	2	3	4	5	_____
33.	Express directly or indirectly the possibility of premature termination.	0	1	2	3	4	5	_____
34.	Allow the session to become ruminative, empty, or boring, without a clear trend of theme.	0	1	2	3	4	5	_____
35.	Accept their different roles and responsibilities as part of their relationship.	0	1	2	3	4	5	_____
36.	Refer back to experiences they have been through together.	0	1	2	3	4	5	_____
37.	Have awkward silences or pauses in their conversation.	0	1	2	3	4	5	_____

Appendix F

Vanderbilt Psychotherapy Process Scale Rating Scale
Subscales and Items:
Patient Participation (8 items)
Patient's behaviour

4. Actively participated in the interaction
5. Took initiative in bringing up the subjects that were talked about
15. Was logical and organised in expressing thoughts and feelings
19. Seemed to trust the therapist

Patient's demeanour

23. Withdrawn (reverse scored)
39. Inhibited (reverse scored)
40. Spontaneous
41. Passive (reverse scored

Patient Hostility (6 items)
Patient's behaviour

11. Reacted negatively to the therapist's comments

Patient's demeanour

29. Hostile
30. Frustrated
32. Impatient
33. Intellectualising
38. Defensive

Negative Therapist Attitude (6 items)
Therapist's behaviour

70. Confronted the patient in a negative way

Therapist's demeanour

74. Intimidating
75. Authoritarian
77. Lecturing
78. Defensive
79. Judgmental

Therapist Warmth and Friendliness (9 items)
Therapist's behaviour

44. Communicated approval of some aspects of the patient's behaviour
47. Showed warmth and friendliness towards the patient
48. Helped the patient feel accepted in the relationship
49. Supported the patient's self-esteem, confidence, and building hope
50. Responded empathetically to the patient

Therapist's demeanour

72. Involved
73. Relaxed
76. Optimistic

80. Respectful

Patient Exploration (7 items)

2. How productive was this hour

Patient's behaviour

6. Seemed to be motivated for therapy
8. Concern was with how to deal more effectively with self and others
14. Focused on particular problem
16. Tried to understand the reasons behind problematic feelings or behaviour
18. Was struggling to achieve better control over feelings or impulses
21. Talked about his/her feelings

Therapist Exploration (13 items)

Therapist's behaviour

45. Tried to help the patient evaluate his/her reactions and feelings
46. Placed the patient's reports in a new perspective or reorganised the patient's experience
52. Tried to get a better understanding of the patient of what was really going on
53. Tried to help the patient recognise his/her feelings
54. Tried to help the patient understand the reasons behind his/her reactions
55. Encouraged depth rather than shallowness
59. Identified themes in the patient's behaviour and experiences
60. Encouraged the patient to accept responsibility for his/her problems
61. Maintained focus on therapy-related topics
62. Modelled behaviour or set an example for the patient
63. Tried to help the patient to achieve better control over his/her feelings and impulses
67. Conveyed expertise
68. Disclosed his/her own feelings, attitudes, values, or experiences (reverse scored)

Patient Psychic Distress (9 items)

3. How well does the patient seem to be getting along at the time (reverse scored)

Patient's behaviour

22. Portrayed himself/herself as overwhelmed by his/her problem

Patient's demeanour

24. Guilty
25. Optimistic (reverse scored)
26. Self-critical
28. Depressed
34. Defeated
42. Ashamed
43. Emotional

Patient Dependency (6 items)

Patient's behaviour

7. Asked for advice on how to deal more effectively with self or others
9. Tried to elicit approval, sympathy, or reassurance from the therapist
10. Relied upon the therapist to solve his/her problems

12. Tried to learn more about what to do in therapy and what to expect from it

Patient's demeanour

35. Dependent
37. Deferential

Appendix G

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Segment # _____
Rater # _____
Date: _____

VANDERBILT PSYCHOTHERAPY PROCESS SCALE (REVISED)

		Very poor	Poor	Fair	Good	Excellent
1.	What is your global impression of the quality of the relationship?	1	2	3	4	5
2.	How productive was this hour?	1	2	3	4	5
3.	How well does the patient seem to be getting along at this time?	1	2	3	4	5

I. Characterize the patient's behaviour during this hour

		Not at all	Some	Fair amount	Pretty much	Great deal
4.	Actively participated in the interaction.	1	2	3	4	5
5.	Took the initiative in bringing up the subjects that were talked about.	1	2	3	4	5
6.	Seemed to be motivated for therapy.	1	2	3	4	5
7.	Asked for advice on how to deal more effectively with self or others.	1	2	3	4	5
8.	Concern was with how to deal more effectively with self and others.	1	2	3	4	5
9.	Tried to elicit approval, sympathy, or reassurance from the therapist.	1	2	3	4	5
10.	Relied upon the therapist to solve his/her problems.	1	2	3	4	5
11.	Reacted negatively to the therapist's comments.	1	2	3	4	5
12.	Tried to learn more about what to do in therapy and what to expect from it.	1	2	3	4	5
13.	Discussed his/her feelings and perceptions about the therapist.	1	2	3	4	5
14.	Focused on particular problem.	1	2	3	4	5
15.	Was logical and organized in expressing thoughts and feelings.	1	2	3	4	5

I. Characterize the patient's behaviour during this hour: (cont'd)						
16.	Tried to understand the reasons behind problematic feelings or behaviour.	1	2	3	4	5
17.	Explored feelings and experiences.	1	2	3	4	5
18.	Was struggling to achieve better control over feelings or impulses.	1	2	3	4	5
19.	Seemed to trust the therapist.	1	2	3	4	5
20.	Discussed his/her feelings as a patient and his/her progress in therapy.	1	2	3	4	5
21.	Talked about his/her feelings.	1	2	3	4	5
22.	Portrayed himself/herself as overwhelmed by his/her problem.	1	2	3	4	5

II. Describe the patient's demeanour during this hour:						
		Not at all	Some	Fair amount	Pretty much	Great deal
23.	Withdrawn	1	2	3	4	5
24.	Guilty	1	2	3	4	5
25.	Optimistic	1	2	3	4	5
26.	Self-critical	1	2	3	4	5
27.	Mistrustful	1	2	3	4	5
28.	Depressed	1	2	3	4	5
29.	Hostile	1	2	3	4	5
30.	Frustrated	1	2	3	4	5
31.	Tense	1	2	3	4	5
32.	Impatient	1	2	3	4	5
33.	Intellectualizing	1	2	3	4	5
34.	Defeated	1	2	3	4	5
35.	Dependent	1	2	3	4	5
36.	Controlling	1	2	3	4	5
37.	Deferential	1	2	3	4	5
38.	Defensive	1	2	3	4	5
39.	Inhibited	1	2	3	4	5
40.	Spontaneous	1	2	3	4	5
41.	Passive	1	2	3	4	5
42.	Ashamed	1	2	3	4	5
43.	Emotional	1	2	3	4	5

III. Characterize the therapist's behaviour during this hour:						
		Not at all	Some	Fair amount	Pretty much	Great deal
44.	Communicated approval of some aspects of the patient's behaviour	1	2	3	4	5
45.	Tried to help the patient evaluate his/her reactions and feelings.	1	2	3	4	5
46.	Placed the patient's reports in a new perspective or reorganized the patient's experience.	1	2	3	4	5
47.	Showed warmth and friendliness towards the patient.	1	2	3	4	5
48.	Helped the patient feel accepted in the relationship.	1	2	3	4	5
49.	Supported the patient's self-esteem, confidence, and building hope.	1	2	3	4	5
50.	Responded empathically to the patient.	1	2	3	4	5
51.	Explicitly encouraged the patient to express feelings and concerns.	1	2	3	4	5
52.	Tried to get a better understanding of the patient of what was really going on.	1	2	3	4	5
53.	Tried to help the patient recognize his/her feelings.	1	2	3	4	5
54.	Tried to help the patient understand the reasons behind his/her reactions.	1	2	3	4	5
55.	Encouraged depth rather than shallowness.	1	2	3	4	5
56.	Dealt with interpersonal dynamics between himself/herself and the patient.	1	2	3	4	5
57.	Actively participated in the interaction.	1	2	3	4	5
58.	Encouraged the patient to take more active role in therapy.	1	2	3	4	5
59.	Identified themes in the patient's behaviour and experiences.	1	2	3	4	5
60.	Encouraged the patient to accept responsibility for his/her problems.	1	2	3	4	5
61.	Maintained focus on therapy –related topics.	1	2	3	4	5
62.	Modelled behaviour or set an example for the patient.	1	2	3	4	5
63.	Tried to help the patient to achieve better control over his/her feelings and impulses	1	2	3	4	5

III. Characterize the therapist's behaviour during this hour: (cont'd)						
64.	Encouraged the patient to try new ways of dealing with self and others.	1	2	3	4	5
65.	Explicitly tried to impose his/her own set of values on the patient.	1	2	3	4	5
66.	Offered specific suggestions for things that the patient could do.	1	2	3	4	5
67.	Conveyed expertise.	1	2	3	4	5
68.	Disclosed his/her own feelings, attitudes, values, or experiences.	1	2	3	4	5
69.	Confronted the patient.	1	2	3	4	5
70.	Confronted the patient in a negative manner.	1	2	3	4	5

IV. Describe the therapist's demeanour during this session:						
		Not at all	Some	Fair amount	Pretty much	Great deal
71.	Annoyed	1	2	3	4	5
72.	Involved	1	2	3	4	5
73.	Relaxed	1	2	3	4	5
74.	Intimidating	1	2	3	4	5
75.	Authoritarian	1	2	3	4	5
76.	Optimistic	1	2	3	4	5
77.	Lecturing	1	2	3	4	5
78.	Defensive	1	2	3	4	5
79.	Judgmental	1	2	3	4	5
80.	Respectful	1	2	3	4	5