Perceptions of psychological mindedness, motivation, and alliance in psychotherapy

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Declaration

This thesis has been submitted in partial fulfilment for the award of Doctorate in Clinical Psychology at the University of Sheffield. It has not been submitted for any other qualification or to any other academic institution.

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Abstract

Literature Review. The systematic review considered clients' perception of the therapeutic alliance. Factors identified by clients as important to the alliance were different to previously identified therapist factors, with clients focusing more on therapist behaviours. Although different clients valued different aspects of the alliance, nearly all valued basic counselling skills such as validation. However, some variables such as self-disclosure, friendliness, and professionalism were more contentious; with some clients valuing these highly whilst others found them less helpful or even harmful. This suggests the need for flexibility and attention to client needs and preferences. The implications for clinical practice, methodological limitations and recommendations for future research are discussed.

Empirical Report. The aims of the study were to consider the relationship between therapist ratings of psychological mindedness, motivation, and alliance, and treatment model, outcomes and therapy efficiency. A quantitative analysis of an archival client dataset (n=18,257), collected in routine practice, showed that therapy was more effective when clients were rated as *good* in psychological mindedness, motivation, and alliance. Pre-treatment severity was the largest predictor of outcomes, followed by motivation and psychological mindedness. Alliance was a significant but smaller predictor and treatment model was not significantly predictive of client outcomes. Therapists were generally most likely to rate clients as good in psychological mindedness, motivation, and alliance; however there was large variability between therapists. The results suggest that psychological mindedness, motivation, and alliance are all important to therapeutic change. The implications for clinical practice are

discussed as well as methodological limitations and recommendations for future research.

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Section 1: Literature Review

Clients’ subjective experiences of the therapeutic alliance: A systematic review

Abstract

Objectives: Client ratings of the therapeutic alliance have been found to be more predictive of therapy outcomes than therapist ratings of alliance. However there has been limited research into client perspectives of different aspects of the alliance. This systematic review aimed to bring together and analyse existing research to consider whether any factors are consistently found to be important to clients in developing and maintaining a therapeutic alliance.

Methods: Three databases were searched for relevant articles using variations of the search terms 'therapeutic alliance' and 'client perceptions'. A final total of 15 articles were included within the review.

Results: Individual clients valued different therapist behaviours and attributes. Certain variables were more contentious such as self-disclosure, friendliness and professionalism. However, some variables (validation, respect, listening, empathy, genuineness and honesty) were important to nearly all clients.

Conclusions: Clients were able to identify factors important to the alliance. These were different to factors previously identified by therapists, with clients focusing on therapist behaviours. Although different clients valued different aspects of the alliance, nearly all clients valued basic counselling skills such as validation.

Practitioner points:

Clinical implications: The research has important clinical implications for the training of therapists in basic counselling skills. The research outlined the importance of validation and emotional support to alliance development.

Limitations: The reviewed papers focused on a relatively homogenous sample with many of the articles been written by the same authors which limits generalisability.

A strong therapeutic alliance has been associated with improved therapeutic outcomes (Horvath, Del Re, Fluckiger, & Symonds, 2011; Horvath & Symonds, 1991) and reduced dropout (Mohl, Martinez, Ticknor, Huang & Cordell, 1991; Saatsi et al., 2007; Westmacott, Hunsley, Best, Rumstein-McKean, & Schindler, 2010). The therapeutic alliance, henceforth referred to as *alliance*, has been defined as agreement on treatment goals, collaboration on treatment tasks to achieve goals and the affective bond between client and therapist (Bordin, 1994).

Outcomes and alliance

Alliance has consistently been found to impact upon outcomes across a diverse range of clients, therapists, presenting problems, treatment models and healthcare systems (Martin, Garske, & Davis, 2000; Muran & Barber, 2010). Meta-analyses of 79 studies found an overall alliance-outcome coefficient of 0.22, suggesting that alliance accounted for 4.8% of the variance in outcomes (Martin et al. 2000). Most studies of the alliance are limited as, although they show an association between alliance and outcome, they cannot evidence a causal link between the two, as alliance ratings may be affected by expected outcomes, therapeutic improvements, or other variables which impact upon both alliance and outcomes (DeRubeis, Brothman, & Gibbons, 2005). For example, it has been suggested that initial symptom severity may impact upon both alliance and outcomes. Falkenstrom, Granstrom and Holmqvist (2014) found that alliance predicted outcome above the effect of pre-treatment symptom severity. However, it is important for researchers, practitioners and services to consider effective components of the alliance and how these can be implemented to improve outcomes.

Client and therapist agreement on alliance ratings

Despite the importance of the alliance in predicting outcomes, only a moderate correlation has been found between client and practitioner perceptions of alliance

(Bachelor, 1995; Tyron, Blackwell, & Hammel, 2007). Clients often rate the alliance more highly than therapists (Tyron et al., 2007). Comparison of alliance perceptions has normally included measurement by standardised measures such as the Working Alliance Inventory (WAI; Horvarth & Greenberg, 1989). Measures are normally developed through researcher and practitioner perceptions about what is important to the alliance and therefore it is possible that standardised measures do not accurately reflect client perceptions (Elliott & James, 1989).

What factors affect the alliance?

Researchers have attempted to understand factors contributing to effective alliance. Collaboration between clients and practitioners has been identified as an important factor in alliance development for a number of decades (Bordin 1979; Horvath & Bedi, 2002). Therapist behaviours and characteristics such as openness, flexibility, respect and the use of technical interventions have all been associated with positive alliance ratings (Ackerman & Hilsenroth, 2001; 2003). Research has also considered how client factors such as attachment style can impact upon the alliance (Eames & Roth, 2000). Although a number of contributing factors have been identified, these have generally arisen from practitioner or researcher perceptions and few attempts have been made to consider what clients believe to be important to the alliance.

Client perceptions

It is important to gain more knowledge about client perceptions, particularly as research has shown that client ratings of the alliance are a better predictor of outcome than therapist ratings (Horvath & Bedi, 2002). Tyron et al. (2007) suggest that we need to know more about what impacts upon clients' alliance ratings using both quantitative and qualitative methods. Qualitative methods are likely to be particularly useful in identifying variables that may not be apparent to researchers. In recent years,

researchers have begun to consider a client perspective which has a number of potential clinical implications for research and clinical practice. However, at present, the research has not been systematically reviewed to consider similarities and differences in conclusions, quality of research, limitations, and future directions.

Aim

The aim of the current literature review is to systematically review the qualitative literature on client perspectives of the alliance in order to inform future research and clinical practice.

Method

Search procedure

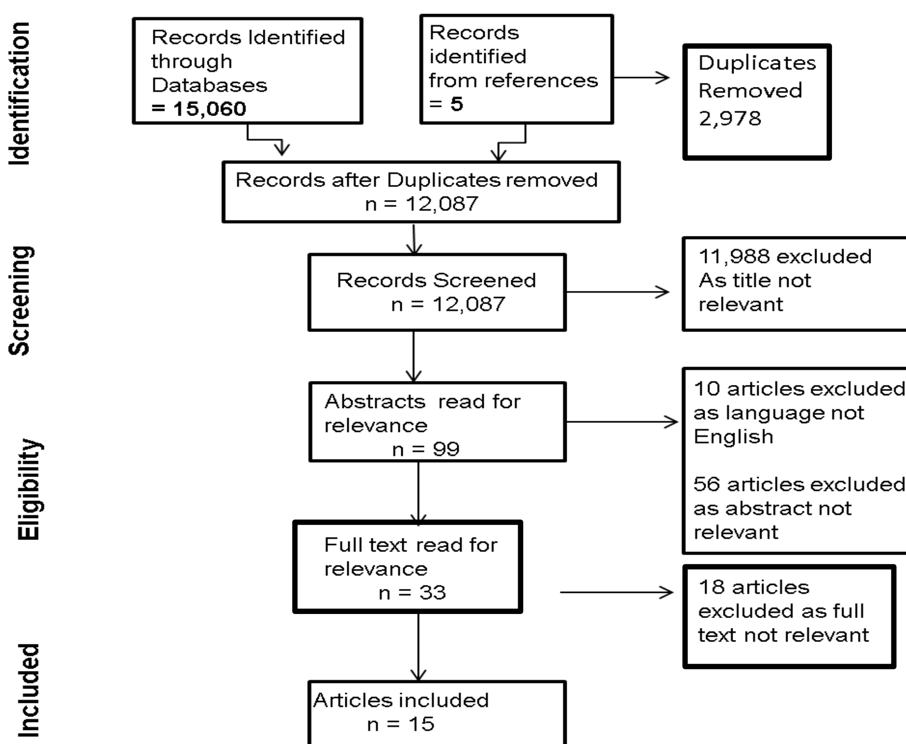
The Cochrane library was searched for existing reviews. No Cochrane reviews regarding client perception of the therapeutic alliance were found.

Three databases, *Psycinfo*, *PubMed* and *Web of Science*, were searched for relevant articles in February 2015. The search terms of *Therapeutic Alliance* or *Working Alliance*, *Alliance*, or *Therapeutic Relationship* were combined with *Patient Perception*, *Patient Views*, *Patient Satisfaction*, *Patient Attitude*, *Client Perception, Client Views, Client Satisfaction,* or *Client Attitude*. The same search terms were used in all three databases. In total this produced 15,060 articles. A further five articles were found in the references of relevant articles providing a total of 15,065. Figure 1 shows a PRISMA diagram (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009) of the number of articles found, included and excluded at each stage. An additional search was conducted in October 2015 and no further relevant articles were found.

The 2,978 duplicate articles found in more than one search were removed. The titles of the remaining 12,087 records were screened for relevance. Only qualitative articles

were included in the review. Articles were included if they were directly relevant to the research question and focused upon adult experiences of the alliance. Articles were excluded if the title did not focus upon the alliance or client perspective, if the focus was upon children or adolescents, medical settings, physical health, alliance measurement or the relationship of alliance to therapeutic outcomes. This resulted in 11,988 articles being excluded due to lack of title relevance. The abstracts of the remaining 99 articles were screened for application to the research question and the inclusion/ exclusion criteria were re-applied. Articles were also excluded if the article was not written in English, focused upon the convergence or divergence of client and therapist views of the alliance, were purely quantitative, or were based upon standardised measurement, as this was not sufficiently client led. A further 66 articles were removed after the abstracts were read leaving 33 full text articles to be checked for eligibility. A final 18 articles were removed after reading the full text leaving 15 articles to be included in the current review.

Figure 1. PRISMA diagram



Quality Assessment

National Institute of Clinical Excellence (NICE) guidelines (PMG4, 2012) suggest the use of 14 questions to assess the quality of qualitative articles in terms of theoretical approach, methodology, trustworthiness, data analysis, validity, reliability, ethics and clinical usefulness. These 14 questions largely overlap with the Critical Appraisal Skills Programme (CASP) for qualitative research, which is referenced within the NICE guidelines. Table 1 outlines the overlap between items.

Table 1. Overlapping themes in NICE guidelines and CASP

Area of Assessment	NICE recommended	CASP
Theoretical approach	1. Is a qualitative approach appropriate 2. Is the study clear in what it seeks to do	1. Was there a clear statement of aims 2. Was a qualitative methodology appropriate
Study Design	3. How defensible/ rigorous is the methodology/design	3. Was the research design appropriate to address aims
Data Collection	4. How well was the data collection carried out	5. Was the data collected in a way that addressed the research issue
Trustworthiness	5. Is the role of the researcher clearly described 6. Is the context clearly described (e.g. participants/setting) 7. Were the methods reliable	6. Was the relationship between researcher and participants clearly described 4. Was the recruitment strategy appropriate
Analysis	8. Is the data analysis sufficiently rigorous 9. Is the data rich 10. Is the analysis reliable 11. Are the findings convincing 12. Are the findings relevant to the aims 13. Conclusions	8. Was the data analysis sufficiently rigorous 9. Was there a clear statement of findings 10. How valuable is the research (Conclusions)
Ethics	14. How clear and coherent is the reporting of ethics	7. Have ethical issues been taken into consideration

The 10-item CASP appeared to cover all areas recommended with less repetition. Therefore it was decided to consider methodological reliability (Q7 of NICE) as part of study design. Richness of data and analysis reliability can be considered within data analysis. Finally, whether findings are convincing and relevant to aims (Q11 & Q12 of NICE) will be considered as clear statement of findings.

It is acknowledged that a number of the 15 articles included within the review could be viewed as mixed method designs including concept mapping and Delphi poll. A mixed methods quality checklist was therefore considered for these articles. However, for consistency across articles it was decided to adapt the CASP qualitative checklist to encompass mixed methods research. The following alteration was made. Question 2 (Was a qualitative methodology appropriate?) was changed to 'Was the methodology appropriate?' All other questions were appropriately broad enough to include mixed methods research.

The adapted CASP qualitative checklist (Appendix A1) was utilised to assess the quality of the final 15 included articles. Each question on the CASP checklist is rated either *Yes*, *No* or *Can't tell*. A scoring system is not designated by the CASP. However, for the purpose of comparison, in the current study each *Yes* is rated as one whereas each *No* or *Can't tell* is rated zero, thereby providing a maximum total score of 10. The aim was for any score under five to be deleted. However, all of the articles scored above this threshold.

NICE guidelines suggest that a minimum of 10 percent of articles should be double rated and any discrepancies should be resolved through discussion or recourse to a third reviewer (PMG4, 2012). The current review aimed to double rate a third of all articles (33.3%) for increased reliability/consistency, especially given the adaptations to the measures. Five papers were reviewed by a second-rater who was a Trainee Clinical

Psychologist completing their own systematic literature review and therefore familiar with quality appraisal checklists. Inter-rater quality assessments differed on one item, *Clear statement of aims*, on all five papers due to a disagreement regarding what a clear statement would mean. Following increased clarity on this issue, this item was remarked and full consensus was reached. Reviews that were second rated are shown in brackets in Tables 2, 3, and 4.

Review of the Literature

Fifteen articles are reported which consider the alliance from the client's perspective. Although client perspectives can be measured using both qualitative and quantitative research, the current review focuses on qualitative articles. Three articles focus on client-derived alliance typologies (Bachelor, 1995; Bedi & Duff, 2009; Mohr & Woodhouse, 2001). Five articles provide qualitative accounts of client perceptions of the alliance (Bedi, 2006; Bedi, Davis, & Arvay, 2005; Bedi, Davis, & Williams, 2005; Fitzpatrick, Janzen, Chamodraka, & Park, 2006; Shattell, Starr, & Thomas, 2007). Four articles use pre-defined statements, developed in previous research, to provide a deeper understanding of the alliance (Bedi & Duff, 2014; Bedi & Richards, 2011; Duff & Bedi, 2010; Simpson & Bedi, 2012). Finally, three studies focus on therapeutic relational depth (Knox, 2008; Knox & Cooper, 2010; McMillan & McLeod, 2006).

Alliance typologies

Bachelor (1995), Mohr and Woodhouse (2001), and Bedi and Duff (2009) have all considered that different clients may value different characteristics within the therapeutic relationship (see Table 2 for details of papers; provided in chronological order). Bachelor (1995) asked 34 self-referred clients from a University service what they believed a good therapeutic relationship entailed. All participants were French speaking Caucasians including 7 males and 27 women. Participants were moderately to

highly educated and a large proportion (44%) were students. Participants provided qualitative written accounts at three time points (pre-therapy, initial session, and later in therapy) producing 66 accounts in total. Accounts were analysed by four judges using a five step content-analytic procedure. Three distinct types of alliance were found: nurturant (46%), insight-oriented (39%), and collaborative (15%). Nurturant alliance was focused on trust, friendliness, feeling at ease, and therapist patience and guidance. Insight-oriented alliance was focused on self-understanding, self-revelation, therapist exploration, and confrontation. Collaborative alliance focused on active participation of both client and therapist.

The development of a trusting and equal relationship was believed to be helpful to all three alliance types. Client self-disclosure, autonomy, and participation were also important in all alliance types. The majority of variables described by clients for all alliance types were therapist behaviours, including being respectful, non-judgmental, empathic, and listening. The study was based on a small number of participants, receiving therapy at a university service which limits generalisability. However, the methodology and analysis appeared appropriate to the research question, inter-rater agreement was high, and ethical considerations were discussed; which resulted in a high quality rating. The authors did not describe their personal perspective and therefore it is unclear how this may have impacted upon the development of alliance types.

Mohr and Woodhouse (2001) asked participants to rank the importance of the variables identified in Bachelor's (1995) study. Q-sort technique was then used to reduce individual viewpoints into common factors. Participants were also asked to complete the essay-writing task utilised by Bachelor (1995) to provide additional qualitative data.

Table 2. Data Extraction and Quality Assessment of typology studies

Author	Aims	Participants	Method	Ethics	Researcher	Analysis	Results	Implications	Quality
Bachelor (1995)	Identify features of alliance from client view	n = 34	Qualitative Written accounts at 3 time-points	Info sheet Consent form Confidentiality	Not discussed.	Phenomenological Analysis. 5 step content analytic procedure	Inter-rater agreement- 94% 3 alliance types (Nurturant, 46%, Insight-Oriented, 39%, Collaborative-15%)	Clients had differing views Several ingredients, not typology specific, valued by most clients Clients focus on therapist attitudes and behaviours.	9 (9)
Mohr & Woodhouse (2001)	Client view of alliance	n = 47	Mixed method Essay writing task Therapy Priorities Q sort-technique	Not discussed	Not discussed	Q factor analysis	2 factors (Personal Alliance vs Professional Alliance) - Differ in level of emotional connection, professionalism & self-disclosure. Trusting climate & respectful therapist important for both types	Different clients have different perceptions regarding what is helpful/unhelpful. Need to focus on tasks of therapy and relationship.	6
Bedi & Duff (2009)	Consider prevalence of alliance type preferences	Study 1 n = 40 Study 2 n = 42	Mixed method Identified preferred alliance type and typology Rate variable importance (0-10)	Not discussed	Not discussed	Chi-square analyses Independent sample t-test	Study 1- Collaborative (54%), Insight-oriented (38%), Nurturant (8%), Personal alliance (56%) Professional (44%) Study 2- Insight-oriented (52%), Collaborative (26%), Nurturant (22%), Personal (55%), Professional (45%)	Bachelor's typology or combination preferred Nurturant typology least preferred	8

The Q-sort technique revealed two main factors: personal alliance and professional alliance. Clients who endorsed a personal alliance described a warm and friendly atmosphere where self-disclosure was appreciated. A professional alliance was associated with a more challenging and collaborative environment. Some factors, such as self-disclosure and friendliness, were contentious, as they were perceived as helpful by some participants and detrimental by others. The research provided further support to the theory that different clients value different aspects of the alliance. However some variables, such as respect and trust, are important to most clients. Limited information was provided regarding data collection and analysis, which resulted in a low quality rating. It is of note that this study used the information provided in Bachelor (1995); however derived different typologies. As such further information regarding researcher perspective and how such typologies were developed would be useful in increasing the quality of the research and applicability of the results.

Bedi and Duff (2009) considered the two client-derived typology systems (Bachelor 1995, nurturant, insight-oriented, collaborative; Mohr & Woodhouse, 2001; personal, professional) and identified client preferences for each typology. Two studies were conducted on different samples. Sample one (n=40) recruited participants who had attended three or more therapeutic sessions and self-reported a strong alliance. Sample two (n=43) did not stipulate alliance strength or number of sessions. Participants in both samples were asked to identify the typology system they found most useful and their preferred alliance type. Participants were also asked to rate the importance of a number of alliance variables on a scale of 1-10.

Bedi and Duff (2009) found further support that clients value different elements and characteristics in the formation and maintenance of alliance. Client variables such as insight, self-understanding, and disclosure were rated as more important than counsellor

behaviour or characteristics across alliance types. Most clients preferred Bachelor’s typology or a combination of the two typologies with only very few (<10% in both studies) endorsing the use of the personal or professional alliance typology identified by Mohr and Woodhouse (2001).

When considering Mohr and Woodhouse’s typology, there was a slight preference for a personal alliance type (Study 1; 55%, Study 2; 56%). When using Bachelor’s typology, both samples demonstrated the least preference for nurturant alliance (Study 1: 8%, Study 2: 22%). This differs to the results in Bachelor (1995) where nurturant alliance was most frequently endorsed. In study one, 54% preferred a collaborative alliance and 38% preferred an insight-oriented alliance type. In study 2, 52% preferred insight-oriented alliance and 26% preferred a collaborative alliance. The difference may be due to variation in alliance strength and stage of therapy between samples. The different results in the two studies would have warranted further investigation. However, the authors appeared content to acknowledge that clients had different preferences.

The results of Bedi and Duff (2009) were similar to those previously found by Bedi (2006; Table 3). Bedi (2006) also researched client preferences of Bachelor’s (1995) typologies and found that participants preferred collaborative alliance (50%) followed by insight-oriented (35%) with only 7.5 percent preferring a nurturant alliance type.

It will be important for future research to consider how stage of therapy and alliance strength affects preferences for alliance typologies. All studies of typology reported in this review have homogenous samples consisting mainly of students and Caucasian females. It will be important to consider typology preference within a more diverse sample. All of the studies utilised data from Bachelor’s original study, which may mean that these typologies are more likely to be endorsed. It would be useful for future

studies to collect primary data. None of the papers included in this section, provided a statement of researcher perspectives therefore it is unclear how this impacted upon the outcomes and this was reflected in quality ratings.

Typology studies provide information regarding the differing views of clients in regards to what is important within the alliance. For some clients, care, friendliness, and guidance were most important to the alliance whilst for others self-awareness and active participation were more important. In all alliance types, it was important for the therapist to be respectful, non-judgmental and to listen. The research described in this section spans fourteen years of study on the alliance, and factors important to the alliance have remained relevant throughout this time.

Clients' qualitative accounts of the therapeutic alliance

All articles in which clients were interviewed and asked directly about the alliance are described in Table 3 in chronological order.

Bedi, Davis, and Arvay (2005) and Bedi, Davis, and Williams (2005) asked participants with positive alliances to describe critical incidents within therapy that significantly contributed to the alliance. Participants were asked to rate the helpfulness (0-10) of each critical incident. The interview transcripts were independently analysed by two authors and critical incidents were sorted into categories. The category names were then provided to different researchers who were asked to re-sort the variables into these categories.

Bedi, Davis, and Arvay (2005) included nine participants providing 107 critical incidents. Bedi, Davis, and Williams (2005) included 40 participants providing 376 critical incidents, of which 73.9% were duplicated at least once. An adequate level of saturation was achieved suggesting a low probability of new variables emerging. Both

studies found that client factors were recorded infrequently and responsibility for the alliance was largely attributed to therapists.

In Bedi, Davis, and Arvay (2005) clients were asked about counsellor behaviours. The most frequently reported critical incidents were smiling, self-disclosure, and leaning forward. Eight categories of counsellor behaviours were developed. *General Counselling Skills* was the highest endorsed category, contributed to alliance for all participants, and represented approximately half of all critical incidents. General counselling skills are considered to be theoretically independent and occur across all therapeutic models. The *Counselling environment* was the second largest category and played a key role for a third of the sample, as participants valued quiet environments with windows and good furnishings. *Expression of positive affect and sentiment* was the third largest category, the second most highly endorsed category, and included the highest reported critical incident; *the counsellor smiled*. *Tracking the client's progress* was important to 44% of the sample and *Personal attributes of the counsellor* were important to the alliance in 22.2% of the sample.

Bedi, Davis, and Williams (2005) found 25 categories of critical incidents. *Technical activity* was reported as important by 72.5% of all participants and *Active listening* by 37.5%. The importance of technical activity to the therapeutic relationship was unexpected as technical elements are normally considered to contribute more to outcomes than alliance. The therapist's non-verbal behaviour (47.5%) and personal characteristics (30%) were rated as important to the alliance. Participants also reported therapists going beyond expectations (40%), self-disclosure (32.5%), appropriate greetings and farewells (30%), being provided with choices (32.5%) and client agency (35%) as important.

Table 3 Data extraction and quality assessment of qualitative accounts of the alliance

Author	Aims	Pps	Method	Ethics	Researcher	Analysis	Results	Implications	Quality
Bedi, Davis, & Arvay (2005)	Client perspective on important factors in alliance formation.	n =9	Qualitative Interviews- asked to recall early critical incidents.	Not discussed	Not discussed	Critical incidents extracted. Incidents sorted independently by researchers then resorted.	107 critical incidents- 77.6% variables referred to counsellor, 8.4% client, 4.7% mutual, 3.7% factors outside counselling sessions.	Simple factors important in forming alliance Alliance formation due to counsellor action	8
Bedi, Davis, & Williams (2005)	Investigate how clients understand formation and strengthening alliance.	n =40	Qualitative Interviews- asked to recall early critical incidents and rate how helpful (0-10)	Not discussed	Not discussed	Sorting of Critical incidents by authors- resorted by 4 other members of research team	376 critical incidents sorted into 25 categories- majority therapist factors Re-categorization agreement was 73.9%.	Alliance as responsibility of practitioner Clients identified different factors to therapists	8 (8)*
Bedi (2006)	Describe concept of alliance as understood by client	n = 40	Mixed Method Interview re critical incidents. Sorting task.	Not discussed	Not discussed	Multivariate Concept Mapping	11 categories identified Validation rated as most important	Clients assign responsibility to counsellor	8
Fitzpatrick et al. (2006)	How clients understand critical incidents in early sessions	n = 20	Qualitative Interview- perspectives on relationship development	Approval from 2 ethical review boards Consent	Background and expectation described	Consensual Qualitative Research method	5 Themes developed (Description, meaning of incident, client contribution, impact on relationship, outcome of incident)	Therapist intervention key Positive emotion- exploration spiral	10
Shattell et al. (2007)	Explore client experience of relationship	n =20	Qualitative Secondary analysis of interview	Approval from university review board	Not discussed	Qualitative Data Analysis Software	3 Themes developed (Relate to me, Know me as a person, Get to the solution).	Clients wanted emotional support, validation and skill/ technique.	6 (6)*

The findings suggest that clients attribute a large amount of the responsibility for alliance formation to therapists. The main factors identified by clients as important to alliance formation included basic counselling skills, genuineness and friendliness. This differs from therapist and researcher perceptions of the most important factors for alliance development which tend to be more client-focused.

Bedi (2006) interviewed 40 participants regarding their experiences of early critical incidents contributing to the therapeutic relationship. Two researchers independently extracted 376 critical incidents from the interview transcripts. Duplicates and any factors not mentioned by at least two participants were removed, leaving 74 statements. Thirty-one participants returned to sort the statements into categories, label each category, and rate the importance of each statement. Concept-mapping analysis was utilised to develop clusters of client-identified factors considering areas of overlap and similarity. The results had adequate to high reliability and point bi-serial correlations suggested trustworthiness of results. The study utilised a good mix of both qualitative and quantitative analysis and provided detailed description of methodology and analysis which increased the quality of the paper and credibility of results.

Bedi (2006) identified 11 categories important to alliance formation. Validation was rated as most important, followed by guidance, challenging, presentation, and body language. Clients attributed the majority of responsibility for alliance development to the counsellor and were less likely to identify client factors or collaboration. The research provided further support that the key factors in alliance development are related to basic counselling skills including nonverbal gestures, empathy, honesty, and listening. However, techniques and skill remained important. The therapeutic setting, session administration, education, referral, recommendations, guidance, and challenging were important to clients and have not previously been considered in therapist or

researcher led investigations into the alliance. This suggests that current standardised measures may omit some of the factors important to clients and fail to fully understand the client's experience of the alliance.

All three studies described so far in this section were rated to be of high quality (8) as methodology and analysis were appropriate and well described. However, all participants tended to be highly educated and included a large proportion of students, females, and individuals of white ethnic origin which limits generalisability. The studies did not describe ethical considerations or consider researcher perspective. This impacted upon quality ratings as it is unclear to what extent such perspectives impacted upon the development of categories important to the alliance.

Fitzpatrick et al. (2006) interviewed 20 undergraduate students after their third therapy session regarding incidents critical to the alliance formation. The Consensual Qualitative Research (CQR) method was used to organise qualitative descriptions. All clients highlighted therapist factors as important; although there was variability in the type of therapist intervention endorsed. The most important incidents were therapists offering new insight, providing space, sharing something meaningful, responding to client wishes, and providing tools or assignments. These incidents increased clients' feelings of validation, autonomy, confidence, understanding, and trust in the relationship.

Fitzpatrick et al. (2006) believed that critical incidents contribute to a positive emotion-exploration spiral in which positive events and emotions lead to increased trust and disclosure that increases relational depth and improves the alliance. Uniquely, Fitzpatrick et al. (2006) also considered a negative account of the alliance and acknowledged that a negative spiral could also occur. The idea of positive and negative spirals in the alliance is useful in considering how therapists deal with ruptures within

the relationship. A high quality rating was provided for this paper as a clear description of aims, recruitment, methodology, analysis and results was present. Consideration was also given to ethics and researcher expectations and background which increased validity of the findings.

Shattell et al. (2007) provided secondary analysis of interviews, in which participants (n=20) were asked what they found therapeutic about the alliance. Limited information was available regarding collection of data, interview procedure and data analysis. As such appropriateness of method, data collection, and analysis was unclear which resulted in a low quality rating. The study included therapeutic relationships within a range of healthcare providers including psychologists, therapists, nurses and General Practitioners. It is acknowledged that formal therapeutic work may not be occurring in all incidents, however therapeutic relationships were present in all cases. All 20 transcripts were analysed by a minimum of two authors and eight transcripts were analysed within a research group. Categories were presented to the research group and further interpretations considered consequently. This allowed categories to be validated by participants.

Clients wanted therapists to *Relate to me* which involved feeling connected and special. This occurred through personal attributes of the therapist, mutual investment, communication techniques and self-disclosure. Clients wanted the therapist to understand and *Know me as a person* as well as *Get to the solution* which involved insight, honesty, clarification and asking questions. Clients placed importance upon emotional support, validation, trust, respect, empathy, calmness, genuineness, and professionalism. They also valued time, space and individualised care as essential to the alliance. Finally participants reported that receiving education, appropriate referral, and recommended reference material were important. This suggests that clients value a

strong genuine alliance with someone who can support and validate their experiences. However, clients also want to develop insight and learn to better manage their presenting problem. A large number of examples were provided in the study which provided a good understanding of the themes and this was linked well to previous research. However, there was no acknowledgement of the study limitations or directions for further research.

The five studies reported in this section suggest that there is value in considering clients' qualitative accounts of the alliance. Participants were able to identify factors important to the alliance that differ from factors reported by researchers, practitioners, and existing standardised measures of alliance. However, there is no evidence that the critical incidents identified actually impacted on the alliance. It is also unclear as to how the variables relate to each other and which variables are perceived as the most important to clients.

Concept mapping, ranking of variables and relationship to alliance strength

The seventy-four critical incidents identified as important to alliance development (Bedi, 2006) have been utilised to move beyond listing factors important to the relationship. More recent research has aimed to identify the correlation between client-identified variables and alliance strength (Duff & Bedi, 2010), produce concept maps (Bedi & Richards, 2011; Simpson & Bedi, 2012) and rank the importance of categories (Bedi & Duff, 2014). Brief details of these studies can be found in Table 4 in chronological order.

Duff and Bedi (2010) utilised the 74 identified critical incidents to develop a 15-item Therapeutic Alliance Critical Incidents Questionnaire (TACIQ). Seventy-nine participants completed the TACIQ and the Working Alliance Inventory-Short form Revised (WAI-SR; Hatcher & Gillaspy, 2006) to consider how well the 74 incidents

correlated with existing measures of alliance strength. Duff and Bedi (2010) found that a number of critical incidents for alliance development occurred frequently within a strong alliance. *Validation* (Asking questions, encouraging comments, reflecting feelings, positive comments, and validating experiences) and *physical attending skills* (Eye contact, smiling, referring to previous session, honesty, sitting still, and facing client) were moderately to strongly correlated with a strong alliance. Four items (self-disclosure, choice of what to talk about, verbal prompts, and administration kept out of session) had low correlation with alliance strength. The results suggest that clients have some understanding of the factors that influence alliance. The finding that therapist self-disclosure is not correlated with increased alliance strength is consistent with the mixed results in prior research, with some clients finding self-disclosure helpful and others believing it to be detrimental. The study produced useful findings regarding the correlation between client-rated variables and alliance strength and suggests that validation and positive regard are critical to the alliance.

Bedi and Richards (2011) and Simpson and Bedi (2012) asked clients to sort the 74 previously identified critical incidents into piles and label each category. Participants were asked to rate occurrence and helpfulness of each incident within their current therapeutic relationship. Following this concept mapping analysis was used to consider category size, overlap, relation to other concepts and underlying dimensions. Due to the limited number of males in previous samples, Bedi and Richards (2011) focused solely upon male participants whereas, Simpson and Bedi (2012) included both males and female participants.

Table 4 Data extraction and quality assessment of concept mapping, ranking and relationship to alliance strength

Author	Aims	Pps	Method	Ethics	Researcher	Analysis	Results	Implications	Quality
Duff & Bedi (2010)	Examine relationship between alliance and previously identified counsellor behaviours	n = 79	Quantitative Cross-sectional correlation design Questionnaire (TACIQ)	Not discussed	Background explained No discussion of expectations.	Correlational analysis. Hierarchical Multiple Regression.	Positive relationship between frequency of behaviour and alliance strength. 4 items didn't relate to strong alliance. 11 Remaining predictors of therapeutic alliance.	Client-identified alliance factors are correlated to therapeutic alliance strength.	9
Bedi & Richards (2011)	Explore how male clients understand critical incidents in early therapeutic alliance	n = 41	Mixed Methods Questionnaire Card sort task	Not discussed	Not discussed	Multi-Variate Concept Mapping.	9 clear categories 'Bringing out issues' most helpful category. 2 continuous dimensions - Client vs practitioner agency and nonaffective vs affective.	Relevance of previously found factors in different sample.	8(8)
Simpson & Bedi (2012)	Investigate client perceptions of therapeutic alliance	n = 50	Mixed Methods Card sort task Helpfulness ratings of critical incident	Not discussed	Brief background provided No discussion of expectations	Multi-Variate Concept Mapping.	13 categories identified. Underlying dimensions- Professional vs personal Administrative vs Interpersonal.	Identified similar concepts to previous research. Emotional Support as most important.	8
Bedi & Duff (2014)	To derive client consensus regarding important alliance factors.	n = 42	Mixed Methods Delphi Poll Questionnaires at 3 stages	Not discussed	Background provided No discussion of expectations	Median ratings and Interquartile ranges.	23 variables consistently rated highly important although ratings dispersed. Validation most important.	Ranks and prioritises variables not just description.	8

Setting and client
responsibility least
important.
Low consensus

Bedi and Richards (2011) found that the four most important categories in alliance development were *bringing out the issues, client responsibility, formal respect* and *practical issues*. The most highly rated individual variables included, *the therapist asked questions, made encouraging comments,* and *listened to negative feedback*. The authors reflected that most of the highly endorsed variables were basic counselling skills. Bedi and Richards (2011) found similar concepts and categories to be endorsed by male participants. However, males rated *bringing out the issues* and *client responsibility* as most important. In previous research women have found *validation* and *education* most important and *client responsibility* least important. This may suggest that men identify client responsibility for alliance whilst women may be more likely to believe the therapist is responsible. Further research using male samples is required to validate such conclusions. It is of note that the data of four participants was excluded within this study as these participants did not rate the initial 74 items as helpful. It would have been useful for the study to provide further information regarding this as opposed to simply excluding these participants as they could likely provide valuable information regarding alternative perspectives.

Simpson and Bedi (2012) found 13 categories which were similar to categories found in previous research. The most important categories included *listening, asking critical questions*, being *non-judgmental,* and *normalising experiences*. Clients identified some responsibility in developing the alliance. However, the majority of variables related to counsellor agency, which formed an underlying dimension. The research suggests that although techniques are helpful to the alliance, emotional support is fundamental.

Bedi and Duff (2014) used a Delphi poll to achieve client consensus regarding the most important factors in alliance development. Forty-two participants rated the strength of their most recent therapeutic alliance and completed a questionnaire at three

time-points. The questionnaire involved rating the helpfulness of the 74 items (Bedi, 2006) and indicating which five items were most helpful. The second and third questionnaire showed a participant's previous response to each item as well as the median item rating from all 42 participants. Participants were informed that they could change their response but this should be based on their own experiences not just to fit the group response. Thirty-six participants remained in the study for all three rounds.

Bedi and Duff (2014) found that 23 variables were consistently rated as highly important. The most frequently rated top five variables were *validation, asking about life other than the problem, honesty, normalising experiences* and *making eye contact*. Validation was rated as most important and items within this category had high consensus. The therapeutic setting and client responsibility were rated least important. Of the 23 variables consistently rated as highly important, 87% represented therapist behaviour rather than practitioner characteristics or client-controlled variables. This provides further support that clients place the majority of the responsibility for alliance development to therapist actions.

Bedi and Duff (2014) were able to achieve some consensus regarding factors that clients perceive to be important to the alliance. However, ratings remained fairly dispersed and consensus remained low even on the top five rated variables. Given the large number of items rated, it is positive, that two variables, *validation* and *asking about other parts of life*, were endorsed by a third of participants in the final questionnaire. A number of factors, such as self-disclosure, were rated as highly important but had low consensus. This provides further evidence that clients have differing views about what is important to the alliance.

These results provide some understanding of the overall concepts involved in the alliance. The studies also provide continued support that therapist behaviours, in

particular validation and basic counselling skills, are most important to clients. Evidence has also been provided that such variables are correlated with alliance strength. The quality of all the studies in this section is of a high standard, with appropriate methodology and analysis. However, sample sizes remained small with limited diversity. Much of the research has also been conducted by the same authors, which further limits the generalizability of the research. Author expectations have not been directly discussed within any of these articles and this may impact upon validity and therefore is reflected in quality ratings. It would be useful for authors to provide reflective comments upon their own expectations and beliefs regarding the alliance. All research within this section utilised the 74 previously identified critical incidents. It would be useful to undertake further primary qualitative analysis to consider whether the 74 critical incidents, identified by Bedi (2006) are replicated before continuing to use them in further research.

Relational depth

Three studies involved qualitative interviews in which clients were asked to describe experienced moments of relational depth during therapy (Knox, 2008; Knox & Cooper, 2010; McMillan & Mcleod, 2006). Details can be found in Table 5 in chronological order. All three studies included participants who were therapists or trainee therapists and had also experienced relational depth as clients. The authors identified that this sample may have the language to describe the unspoken relationship.

McMillan and McLeod (2006) considered the difference between inadequate, adequate, and deeply facilitative therapeutic relationships. Inadequate relationships were perceived by clients as superficial or over-controlling. This led to anger and ambivalence towards the therapist and ultimately to therapy termination.

Table 5. Data extraction and quality assessment for relational depth studies

Author	Aims	Pps	Method	Ethics	Researcher	Analysis	Results	Implications	Quality
McLeod and McMillan (2006)	Explore client's view of relational depth.	n =10	Qualitative Interview	Approval granted by university ethics committee	Explanation of background and expectations.	Grounded theory	Willingness of both client and therapist to engage was a key factor. Therapist being real and human was important. Importance of being with someone who cared. Optimal therapeutic relationship allowed engagement in the 'task of therapy'.	In strong therapeutic relationships clients feel able to disclose more. Clients may have different perceptions of the therapeutic relationship.	9 (9)
Knox (2008)	To explore clients experience of relational depth.	n = 14	Qualitative Interview	Approval from university ethics committee	Explanation of background and expectations.	Grounded theory	All participants could identify at least one moment of relational depth. Therapists as empathic, real, focused, immersed in moment and fully accepting of client. Emotional holding important.	Client descriptions of relational depth similar to therapists. Emotional depth was more important than intellectual.	8
Knox (2010)	To find out the characteristics of therapeutic relationships where relational depth most likely.	n =14	Qualitative Interview	Approval from university ethics committee	Explanation of background and expectations.	Grounded theory	Genuineness and humanness significant. Lack of relational depth related to distance, lack of warmth and use of power. These led to negative interpretations and client closing down.	Earnest endeavour to understand and care more important than perfect technique.	10

In deeply facilitative relationships participants described knowing from the beginning that they were compatible with the therapist. The most important variables in a deeply facilitative relationship was willingness for both the therapist and client to relate, the experience of a sense of flow, and an intuitive connection. Further variables rated as important were honesty, unobtrusiveness, being present, attentive, caring, competent, and genuine. An adequate relationship met basic relational needs of acceptance and support whilst remaining professional. This again suggests that validation and emotional support are important to any therapeutic relationship. There also appears to be a balance between being distant and providing an unhelpfully intense alliance. This suggests that a boundaried but genuine and caring approach is appreciated by clients. Data was obtained from a qualitative interview; there was an in-depth explanation of the methodology and analysis as well as discussion of ethical approval and researcher background and expectations which resulted in a high quality rating.

Knox (2008) found that all participants could identify at least one moment of relational depth. Most participants had also experienced therapeutic relationships without relational depth. Moments of relational depth included feelings of openness, acceptance and aliveness. In these moments clients felt safe to be vulnerable and therapists were empathic, accepted, real, focused, present, and immersed in the moment. Emotional depth and feeling safe to express emotions were important to clients. This suggests that clients experience relational depth in a similar way to therapists.

Knox and Cooper (2010) found that clients identified compatibility with the therapist at an early point in therapy. In unhelpful relationships, therapists were perceived as unprofessional or inadequate and it was felt that there was no real connection. Although professionalism, skill, and similarity to the client were identified as helpful, it appeared that the most significant elements were genuineness, honesty, empathy and being cared

for over and above the professional role. Therapist mistakes did not necessarily damage the relationship and therapists did not have to be perfect as long as clients perceived a therapist to truly understand and care. It is positive that both studies (Knox, 2008; Knox & Cooper, 2010) acknowledged their clinical and research backgrounds and expectations for the research.

In all three studies of relational depth, participants were therapists or trainee therapists who had also experienced being a client in therapy. It is possible that the participant's profession made it difficult to describe their true experiences to someone of the same profession and their perception of the alliance may be more similar to the therapist perspective. As such it would be useful to undertake similar research with participants who are not part of the therapeutic profession.

Discussion

The 15 articles in the current review present a unique depiction of the alliance from the client's perspective. This perspective has largely been ignored in current research, despite the initial work by Bachelor (1995) occurring twenty years ago.

The reviewed research suggests that clients identify important factors in the alliance which are different to those identified by therapists and researchers. The majority of client-identified factors were related to therapist behaviours. Previous research has found that therapists were more likely to consider client factors and collaboration as most important. The differing perspectives of clients, practitioners, and researchers may mean that existing measures of alliance developed by researchers are less relevant to clients' understanding of the alliance.

Some variables were identified as important to nearly all clients, including validation, respect, listening, empathy, genuineness, and honesty. These were often

summarised as generic or basic counselling skills. Clients also suggested that it was important for therapists to find a balance between emotional support and task or insight focused work. However, emotional support and validation were considered the most important factor in all reported research. Although some factors were consistently reported as important, the findings suggested that clients are not a single group and often value different behaviours and attributes within therapists. This was particularly true of variables such as self-disclosure, friendliness, and professionalism. These factors were often rated as very important for some clients but considered harmful by others.

This area of research has so far focused upon a relatively homogenous sample mainly consisting of Caucasian, female, students and therapists self-selected through advertisement. A large amount of research has been conducted in University therapy samples within Canada and the USA, with only three of the articles comprising UK samples. This may limit generalizability to different healthcare systems. There was limited commentary across research papers regarding author perspective and ethical approval. Despite this, the papers described in this review were generally of a high quality with appropriate aims, methodology, analysis and discussion of findings as described in the review section and in Tables 2, 3, 4 and 5.

The 74 variables in Bedi (2006) have been utilised in a number of consequent studies. It would be useful to conduct further qualitative interviews and blind extraction of variables to consider whether these variables remain important. This is especially useful in increasing trustworthiness of the data given that most research in this area has been published by the same authors. Only one study considered whether client-identified factors correlated with actual alliance strength. Further research would be useful in identifying whether clients can accurately identify what is important to the

therapeutic alliance. Therapists and clients have different perceptions of what affects the alliance and accounts are often retrospective. It may be useful to consider a third-party observer perspective as to what factors are important in developing and maintaining a strong alliance.

Clinical implications

A key implication from the current research is that generic counselling skills, warmth, genuineness, and emotional support are extremely important to clients. This suggests that a continued focus on these areas is important in therapist training. However, therapists also need to remain vigilant to individual needs and more controversial variables, such as self-disclosure, need to be used with care. The finding that clients identify compatibility with therapists early in treatment has implications for client choice. For example, in many services, there may not be an option for clients to work with different practitioners and clients may feel they have to choose between therapy termination and continuing therapy with an inadequate alliance. It is important for practitioners, clients and service managers to continue to consider the alliance and how this is managed within services.

The current review provides an overview of the research on client perspectives of the alliance. The limited research in this area and the finding that clients and practitioners have different perceptions of important contributors to the alliance suggests that further research is required, especially as client perceptions are most correlated with outcome. Clients' subjective experiences of the alliance provide important information for clinical practice and practitioner training and continued attention to client needs and experiences is important.

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Appendix A1. Adapted Critical Appraisal Checklist

Question			
1. Was there a clear statement of aims?	Yes	No	Can't tell
2. Was the methodology appropriate?	Yes	No	Can't tell
3. Was the research design appropriate to address the aims?	Yes	No	Can't tell
4. Was the recruitment strategy appropriate?	Yes	No	Can't tell
5. Was the data collected in a way that addressed the research issue?	Yes	No	Can't tell
6. Was the relationship between researcher and participant clearly been described?	Yes	No	Can't tell
7. Have ethical issues been taken into consideration?	Yes	No	Can't tell
8. Was the data analysis sufficiently rigorous?	Yes	No	Can't tell
9. Was there a clear statement of findings?	Yes	No	Can't tell
10. Was the research valuable?	Yes	No	Can't tell

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Section 2: Empirical Report

Therapist perceptions of client readiness to change and engagement in therapy: Relationships to client outcomes

Abstract

Objectives: Psychological mindedness, motivation, and alliance have been linked to client outcomes in psychological therapies. The current study aimed to identify therapist ratings of psychological mindedness, motivation, and alliance in routine practice and their relationship to treatment model, client outcomes, and therapy efficiency.

Methods: Quantitative analysis of a pre-existing dataset of 18,257 clients who completed the Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM) in routine primary care practice. Variables included in the analysis comprised pre-treatment and post-treatment severity, client demographics, treatment model, and therapist-rated psychological mindedness, motivation, and alliance.

Results: Therapy outcomes and efficiency were greater when clients were rated as *good* in psychological mindedness, motivation, and alliance by their therapist. Regression analyses showed pre-treatment severity to be the largest predictor of outcomes, followed by motivation and psychological mindedness. Alliance was a significant but smaller predictor of outcomes. Treatment model was not a significant predictor of outcomes. There was a significant but limited effect of treatment model on therapist ratings of psychological mindedness, motivation, and alliance. Large variability was found between therapists in their ratings of client psychological mindedness, motivation, and alliance.

Conclusions: Therapists are able to discriminate between psychological mindedness, motivation, and alliance. All three variables are important to therapeutic change with motivation being the largest predictor after pre-treatment severity.

Practitioner points

Clinical implications.

- It would be useful for practitioners to assess pre-treatment psychological mindedness, motivation, and alliance.
- Where motivation is assessed as low, it would be useful to include motivational elements within treatment.

Cautions/limitations.

- Therapist ratings of psychological mindedness, motivation, and alliance were provided at post-therapy only. Future research should triangulate ratings using therapist, client, and observer ratings at pre and post-treatment using well-validated measures.

A considerable body of research has focused on whether factors common to all psychotherapies, such as client psychological mindedness, motivation, and alliance, are significant predictors of client outcomes. The current research considers the role and impact of three concepts – the psychological mindedness of clients, their motivation, and the client-therapist alliance – in relation to client outcomes using a large archived dataset collected from routine clinical practice.

Definitions

Psychological mindedness has variously been defined as a client characteristic, an ability (Applebaum, 1973) or disposition (Farber, 1985) which involves self-understanding and interest in the motivation, psychological states, emotions, thoughts and behaviour of self and others (Conte et al., 1990). Psychological mindedness is suggested to be important to a person's capacity to change (Conte & Ratto, 1997) and a prerequisite for positive psychotherapy outcome (Nyklicek, Majoor, & Shalken, 2010). It is generally perceived to be a static client characteristic and an important determinant of suitability for treatment (Rosenbaum & Horowitz, 1983). However, research has shown that psychological mindedness can change during psychotherapy, providing some evidence that it is not a fixed characteristic (Nyklicek et al., 2010).

Motivation is also a client characteristic defined as a state of client readiness to change, which is dynamic and can be changed through external conditions such as psychotherapy (Rosenbaum & Horowitz, 1983). Miller and Rollnick (1991) described motivation as the probability that a person will enter, continue, and adhere to a specific change strategy. Motivation is therefore important in a client's decision to enter, attend, participate, and complete therapy.

Alliance is the relationship between client and therapist arising from therapy. It has been defined as the agreement on treatment goals, the collaboration on treatment tasks

to achieve these goals, and the affective bond between therapist and client (Bordin, 1994). A number of key features of the alliance have been identified including empathy, congruence, and unconditional positive regard (Rogers, 1951). However, views regarding what factors are important to the alliance vary between clients, therapists, and researchers, as well as between individuals within these groups.

The relationship between psychological mindedness, motivation, and alliance

Psychological mindedness, motivation, and alliance have most frequently been researched separately. However, research has suggested that psychological mindedness is a prerequisite for both motivation (Rosenbaum & Horowitz, 1983: Sifneos, 1968) and alliance (Conte et al., 1990; Nyklicek et al., 2010), as without psychological mindedness, clients would lack the willingness to commit to therapy or the alliance. Interactions have also been identified between motivation and the alliance (Meier et al., 2005; Scheel, 2011), with clients needing to be willing to engage with the therapist in order for an alliance to be formed. The current research aims to consider the unique and combined effect of all three concepts.

Psychological mindedness, motivation, alliance, and symptom severity

Symptom severity has been linked to psychological mindedness, motivation, and alliance. However, research has been somewhat inconsistent; Beitel, Ferrer, and Cecero (2005) found psychological mindedness to be negatively correlated with psychological distress. They suggest that psychological mindedness is a protective factor, as clients with high psychological mindedness are more able to identify thoughts, feelings, and behaviour and therefore better equipped to manage psychological distress leading to lower symptom severity. Conversely, other research has stated that psychological mindedness is unrelated to psychiatric symptoms and level of functioning at intake (Conte et al., 1990).

Greater psychological problems at pre-treatment have been linked to lower motivation for treatment (Mulder, Jochems, & Kortrijk, 2014). As high levels of conditions such as anxiety and depression are likely to include symptoms of fatigue, decreased energy, difficulty concentrating, negative thoughts, and hopelessness, it is likely that as symptom severity increases, then motivation would decrease. In contrast, evidence from the substance use literature has suggested a positive relationship between symptom severity and motivation in that those clients with more severe problems would suffer more negative consequences in their daily life and therefore would be more motivated for change (Hiller et al., 2009). In addition, some research has found that motivation for treatment is not influenced by symptom severity (Freyer et al., 2005; Schweickhardt, Leta, & Bauer, 2005). The relationship between motivation and symptom severity remains unclear, with past research suggesting mixed results of a positive relationship, negative relationship, and no relationship.

In relation to the alliance, research suggests that clients with more severe psychiatric problems are often experienced by therapists as more challenging, more difficult to engage, and more difficult to establish a therapeutic alliance (Meier et al., 2005). However, a number of studies have found no association between psychiatric problems and client or therapist rated alliance (Barber et al., 1999; Luborsky et al., 1996). Such results again suggest mixed evidence as to the interaction between alliance and symptom severity.

Psychological mindedness, motivation, and alliance as predictors of therapy outcomes

The contribution of non-model specific factors, such as psychological mindedness, motivation, and alliance to client outcomes has received a large amount of attention from researchers. Psychological mindedness has been linked to increased commitment

to psychotherapy, higher number of attended sessions, increased involvement in the therapy process (Conte et al., 1990; McCallum & Piper, 1990; McCallum & Piper, 1997), and improved outcomes (McCallum, Piper, Ogrodniczuk, & Joyce, 2003; Piper, Joyce, McCallum, & Azim, 1998; Piper, Joyce, Rosie, & Azim, 1994; Piper, McCallum, Joyce, Rosie, & Ogrodniczuk, 2001). Other research has suggested that psychological mindedness does not directly impact on outcomes but impacts indirectly through the amount of work undertaken, which is impacted on by psychological mindedness (McCallum, Piper, & Kelly, 1997).

Motivation and alliance have both consistently been reported in the research literature as significant predictors of outcomes. Motivation has been found to be a key predictor of success in therapy in research that has spanned five decades (Button, Westra, Hara, & Aviram, 2015; Jochems, Mulder, van Dam, & Duivenvoorden, 2011; Malan 1976; Sifneos, 1968, 1978). The quality of the alliance has also been consistently found to be a significant predictor of treatment outcomes across a wide range of treatment models (Horvath & Bedi, 2002; Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000). McBride et al. (2010) found that both motivation and alliance predicted outcomes. There is no research known to the author that has considered the collective role of psychological mindedness, motivation, and alliance on client outcomes.

Therapy efficiency

In a climate of cost savings and efficiency within the UK's National Health Service (NHS) and the introduction of Payment by Results, most services have begun to consider the cost-effectiveness and efficiency of therapy. In many services this has led to the implementation of shorter-term therapy with a set number of sessions with the aim of achieving therapeutic change in a shorter time period. Research has shown that most client change occurs in the early stages of therapy and has reported limited benefits

of extended therapy (Kopta, 2003). This suggests that in addition to considering therapeutic outcomes and the amount of change, it is also important to consider how efficiently beneficial outcomes occur. At present, there is limited research describing the effect of psychological mindedness, motivation, and alliance on therapy efficiency. It would be expected that clients with high psychological mindedness and motivation who experience a good relationship with their therapist would make more change in a shorter period of time than clients low in psychological mindedness, motivation, and alliance.

Treatment model and psychological mindedness, motivation, and alliance

Mixed evidence exists as to whether different therapeutic models yield differential treatment outcomes. Although National Institute for Clinical Excellence (NICE) guidelines suggest Cognitive Behavioural Therapy (CBT) has the largest evidence base, particularly for depression (NICE CG90) and anxiety (NICE CG113), a plethora of research suggests equivalence of outcomes across differing treatment models (Cuijpers, Van Straten, Anderson, & van Oppen, 2008; Luborsky, Singer, & Luborsky, 1975; Stiles, Barkham, Mellor-Clark, & Connell, 2008). There is some research suggesting that psychological mindedness, motivation, and alliance may differ between the treatment models (Allen, Bennett, & Kearns, 2004; Beitel et al., 2004; Conte et al., 1990; McCallum et al., 1992; Raue, Goldfried, & Barkham, 1997). If so, it is possible that any interaction between treatment model and psychological mindedness, motivation, and alliance, may impact upon treatment outcomes.

Psychological mindedness has been described as particularly important to psychodynamic and insight-orientated therapies (Allen et al., 2004; McCallum, et al., 1992). It has been suggested that a high level of psychological mindedness may be required for psychodynamic therapy while clients with low psychological mindedness may be more suited to CBT or supportive therapy (Beitel et al., 2004; Conte et al.,

1990). However, up to now research has failed to find an interaction between psychological mindedness and treatment model and their impact on client outcome (McCallum et al., 2003). Motivation is considered important within all treatment models, whether insight-orientated, supportive, or task-focused. The transtheoretical model of change (Prochaska & DiClemente, 1982) provides an explanation of motivation that is applicable to all treatment models and a motivational interviewing approach has received increasing support both as a pre-therapy intervention or as a technique used throughout therapy. This suggests that there may be a limited interactional effect of motivation and treatment model upon outcomes.

Finally, the importance of alliance in different treatment models has been debated. The alliance has historically been considered least important in more task-focused models such as CBT and most important in relational models such as psychodynamic treatments. However, Raue et al. (1997) found that clients rated the alliance higher in CBT sessions than in psychodynamic treatment. The research and historical differences perceived in the alliance during different treatment models provides some basis for the view that there may be a differential effect of alliance as a function of treatment model. However, alliance has consistently been found to be important within all therapeutic models in order to reduce dropout and improve outcomes (Ardito & Rabellino, 2011).

Therapist ratings of psychological mindedness, motivation, and alliance

In the current study, therapist ratings of psychological mindedness, motivation, and alliance will be utilised. This provides a unique perspective on the role and contribution of these concepts in the context of the psychological therapies. The current study also focused on how therapists perceived client characteristics within routine practice and whether therapist ratings could predict client outcomes. Such an approach may help therapists and services deliver more tailored services without adding to client burden. A

standard assessment and outcome system used in primary care was employed which routinely asks therapists to rate client psychological mindedness, motivation, and alliance. Therefore it is important to develop an understanding of how therapists rate clients in each of the three variables and the relationship of such ratings to outcomes.

Practice-based evidence and the use of large practice-based datasets

A limitation of much of the empirical literature in relation to psychological mindedness, motivation, and alliance is the small sample sizes used. Clients with poor psychological mindedness, motivation, and alliance are more likely not to complete treatment and therefore outcomes are unknown for these groups, which can limit the power of research (McCallum et al., 1992; McCallum et al., 2003). The use of a large pre-existing dataset collected during routine practice allows the identification of difficult to study groups including clients with low psychological mindedness, motivation, and alliance.

Practice-based evidence provides external validity and allows for outcomes to be researched in real clinical practice, which often differs significantly from outcomes achieved in randomised controlled trials (Barkham et al., 2010). The use of practice-based data allows consideration of therapists' ratings of clients during routine clinical practice and whether such ratings predict client outcomes.

Aims

The aims of the current research were to identify therapists' ratings of their clients and whether these were stronger predictors of outcomes than treatment model or demographic information. The study also aimed to consider whether there was a differential effect of psychological mindedness, motivation, and alliance as a function of treatment model and whether higher psychological mindedness, motivation, and alliance

were related to more efficient therapy. In addition, the research also aimed to investigate the extent of therapist variability in ratings of psychological mindedness, motivation, and the alliance.

Research questions

The specific research questions addressed in this thesis are as follows:

1. Are therapist ratings of client psychological mindedness, motivation, and alliance better predictors of outcomes than client demographics or treatment model?
2. What is the added effect of combining psychological mindedness, motivation, and alliance?
3. Are higher ratings of client psychological mindedness, motivation, and alliance associated with more efficient therapy?
4. Is there a differential effect of psychological mindedness, motivation, and alliance on outcomes, as a function of different treatment models?
5. Is there therapist variability in the rating of psychological mindedness, motivation, and alliance?

Method

Design

The current study is a quantitative study using an archived and pre-existing dataset comprising routinely collected data within UK primary care psychological therapy services. Inclusion and exclusion criteria were applied to produce a study-specific dataset relevant to the research questions. The method section includes details as to how the study-specific data were selected. Secondary data analysis was then conducted to answer the study-specific research questions.

The specific dataset used was the Clinical Outcomes in Routine Evaluation (CORE) Practice-Based Evidence National Dataset (Stiles et al., 2008). Details of this dataset are set out in the following sections.

National Health Service (NHS) ethical approval for use of the dataset was originally provided in 2009 (Appendix B1), which also covered future use of the anonymised dataset. In addition, the current study has been approved by a University Research Panel (Appendix B2). Specific Research and Development (R & D) Approval was not required for the study as all client and service data within the dataset was anonymised. Hence neither clients nor service were identifiable.

Archived dataset

The Clinical Outcomes in Routine Evaluation (CORE) Practice-Based Evidence National Dataset (2008) comprises data routinely collected from 35 National Health Service (NHS) primary care services between January 1999 and November 2008. The dataset comprised 70,245 clients seen by 1,059 therapists. It contained no strong identifiers and all client identifiers were anonymised at source.

Measures

The CORE dataset is based on information collected from the Clinical Outcomes in Routine Evaluation- Outcome Measure (CORE-OM; Appendix B3), Therapist Assessment Form (CORE-A; Appendix B4), and Therapist End of Therapy Form (CORE-EOT; Appendix B5). The CORE-OM provides client-rated information. The CORE-A and CORE-EOT provide therapist rated information. Each of these measurement components is detailed in the following sections.

CORE-OM. The CORE-OM is a 34-item self-report measure comprising four domains (subjective wellbeing, symptoms, functioning, and risk). The subjective wellbeing domain includes four items, the symptom domain includes 12 items,

functioning includes 12 items, and the risk domain includes 6 items. Each item is scored on a five-point anchored scale (0=*Not at all*, 1=*Only occasionally*, 2=*Sometimes*, 3=*Often*, and 4=*All or most of the time*). The mean item total is multiplied by 10 to create the CORE clinical score that ranges from 0 to 40. The clinical score can be categorised as either *Healthy* (clinical score, 0-5), *Low* (clinical score, 6-9), *Mild* (clinical score, 10-14), *Moderate* (clinical score, 15-19), *Moderate to severe* (clinical score, 20-24), and *Severe* (clinical score, 25-40).

The CORE-OM has good internal ($\alpha = 0.94$; Barkham et al., 2001) and test-retest reliability (r=0.88; Barkham, Mullin, Leach, Stiles, & Lucock, 2007). The CORE-OM is completed at pre-treatment and post-treatment to enable calculation of pre-post change scores.

CORE Therapist Assessment Form (CORE-A). The CORE-A was completed at assessment by the therapist and includes information on referral dates, assessment dates, previous therapy, client support systems/living arrangements, and level of current/previous input from services. The CORE-A also asks therapists to record participant medication, type, severity and duration of presenting problem, risk issues, and assessment outcome. Therapist ratings of severity range from *minimal difficulty* (1) to *severe difficulty* (4). Scores of zero suggested no existing problem.

CORE End of Therapy Form (CORE-EOT). The CORE-EOT form was completed by the therapist after the final therapy session. Therapists reported therapeutic model, modality, frequency, and type of ending (planned or unplanned). Therapists also reviewed the severity of the presenting problem and risk issues and categorised client psychological mindedness, motivation, and the alliance as *poor*, *moderate,* or *good*.

Data variables

The variables that form the research dataset were taken from items on the CORE-OM, CORE-A, and CORE-EOT which are utilised as part of the CORE assessment (Barkham et al., 2010; Mellor-Clark & Barkham, 2006). All data was collected at either pre- or post-therapy using the CORE-OM, CORE-A, or CORE-EOT. Each question from the CORE-A, CORE-EOT, and CORE-OM produced a variable within the dataset. The majority of variables were provided by therapist ratings. Client ratings came solely from CORE-OM scores. Information collected at pre-therapy and post-therapy is depicted in Figure 1.

Figure 1.

Variables in the CORE Dataset collected at pre and post-therapy

Pre	
CORE_OM	*CORE Scores*
Therapist Assessment form	Therapist ID Site ID Gender Age Ethnic Origin Employment Previous Therapy On Medication Number of Mental Health Conditions (Pre) Most Severe Problem (Pre) Severity Rating (Pre)

Post	
CORE-OM	*CORE Scores*
End of Therapy form	Sessions Attended Sessions Planned Sessions Unattended Therapy Frequency End of therapy Medication Change Number of Mental Health Conditions (Post) Most Severe Problem (Post) Severity Rating (Post) Count Of Therapies Therapy Type Treatment Modality Therapy Benefits Number of Benefits Motivation Rating Working Alliance Rating Psychological Mindedness Rating

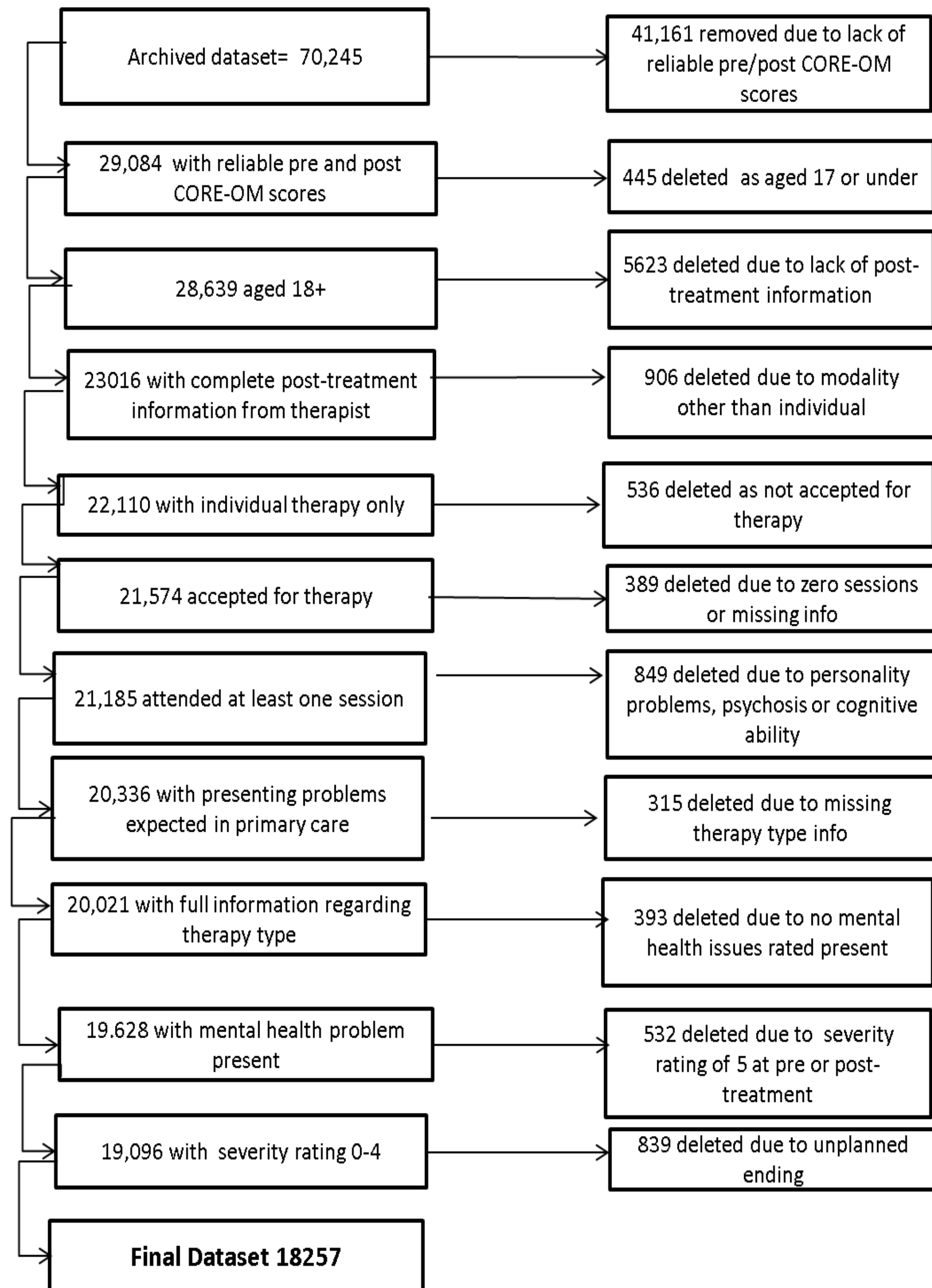
Selection of study-specific dataset

The study-specific database was derived through deletion of cases not relevant to the research question (Figure 2). Inclusion/exclusion criteria were devised to ensure that the sample was representative of clients accessing primary care and that information was

full and valid. Once the final sample was achieved using the inclusion/exclusion criteria (Figure 2), then variables in the dataset were approved, deleted or recoded to ensure all variables were suitable for analysis.

Figure 2.

Number and reasons of cases deleted due to exclusion criteria



Inclusion/Exclusion Criteria. Client data was excluded if reliable pre-treatment or post-treatment CORE-OM scores were not available, clients were aged 17 or under, information regarding psychological mindedness, motivation or alliance was missing, therapeutic modality was not individual, therapy model was not recorded or if the client did not attend at least one session. Data was also excluded if the client had a presenting problem of psychosis, personality problems, cognitive/intellectual disabilities, or if no presenting problem was identified at pre-treatment. Cases were excluded if therapists provided a severity rating of 5 at pre-treatment or post-treatment, as this was not a valid rating, and if an unplanned ending occurred. These exclusion criteria resulted in the final dataset comprising 18,257 clients seen by 785 therapists. All 35 NHS sites were represented in the final dataset. The majority of therapists (94.6%) each saw more than 10 clients (Range 1-1084, M=82.97, SD=125.36).

Clients

Clients were aged between 18 and 90 with a mean age of 41.8 years (SD=13.16). Most clients were female (72%) and White (93.6%). The majority of clients attended less than 21 sessions (99%; range, 1 to 117; M=6.6, SD=4.28). The majority of clients (92%) had more than one mental health condition with three (25.9%) or four (23.5%) presenting problems being reported most frequently. In 86% of cases at pre-treatment (n=16,418), therapists reported that the most severe presenting problem was causing the client either moderate (n=10,801, 56.6%) or severe difficulty (n=5,617, 29.4%). The most commonly reported presenting problem was Anxiety (81.3%). Depression was also highly reported (73.8%), while 60.3% experienced comorbid depression and anxiety. Interpersonal problems were reported by 51.5% of clients. Other reported presenting problems included Self-Esteem (50%), Bereavement (32.7%), Work/Academic problems (21.1%), Living/Welfare Problems (14.8%), Trauma (17.2%), Addiction (3.7%), and Eating Disorders (3%).

The study-specific dataset (N=18,257) was compared with the 51,988 clients deleted from the archived dataset due to the exclusion criteria (Table 1). There was a significant difference between the two databases with significantly more females (X^2 (1, 69470) = 71.19, p= 0.00, v[1]=0.03), *White* ethnicity (X^2 (1, 56,482)=244.13, p=0.00, v=0.07), higher age (t (1, 59044)=-51.15, p=0.00; d[2]=-0.45), and a higher number of sessions (t (1,41327) =-80.20, p=0.00; d=0.72) in the study-specific sample.

Shaping of dataset variables

A number of variables within the dataset were deleted as they were not relevant to the research question. Variables removed included the following: 1) All initial variables where recoded data was more accurate, 2) Variables related to dates of referral, assessment, therapy commencement, and completion, 3) Episode number, 4) Relationship/ support variables, 5) Service involvement, and 6) Referrer details.

Table 1.

Comparisons of deleted cases and study-specific dataset

	Archived dataset (N=51,988)	Study-specific dataset (N=18,257)
Age (Mean; SD)	35.7 (13.49)	41.8 (13.16)
Gender (%)		
Female	68.7	72.0
Male	31.3	28.0
Ethnicity (%)		
White	89.6	93.6
Number of sessions (Mean; SD)	3.2 (4.67)	6.6 (4.28)

[1] Effect size Cramer's v
[2] Effect size Cohen's d

The following variables were recoded to enable analysis: 1) Mental health condition, and 2) Treatment model. Each mental health condition was rated separately for severity by the therapist. This allowed a number of mental health problems to be endorsed and made severity and main presenting problem more difficult to identify. For each participant, the number of mental health conditions present was calculated, the most severe problem(s) identified, and the severity of the most severe problem recorded (0-4). For some clients, the therapist reported that a number of therapy models were utilised. This was recoded to allow consideration of whether a pure model, integrative model, or multimodal approach was utilised. If a pure model was endorsed then the type of model was also recorded. Multimodal therapy was reported for 10,860 clients. The remaining treatment types included integrative (n=2,591), supportive/person-centred (n=2,421), cognitive behavioural therapy (CBT; n=1,254), psychodynamic/analytic (n=699), and brief structured therapy (BST; n=410).

Three new variables were created: 1) pre-post difference in CORE-OM scores, 2) Mean CORE-OM change per session, and 3) Summary score of psychological mindedness, motivation, and alliance. The summary score was obtained by summing the scores for each of the three variables (psychological mindedness, motivation, and alliance). Psychological mindedness, motivation, and alliance were initially rated as *poor* (1), *moderate* (2), and *good* (3). Therefore, the summary variable yielded a new variable with the following categories: all *poor* (3-5), all *moderate* (6-7), *mixed* (8), and all *good* (9). The addition of these variables, shaping of previously discussed variables, and exclusion of cases with incomplete or irrelevant data, allowed the study-specific database to answer the outlined research questions.

Outcome variable

The main outcome variable was post-treatment CORE-OM scores ranging between 0 and 40. The CORE-OM pre-post change scores together with the number of sessions delivered were used to derive the Mean CORE-OM scores per session, which was used to determine therapy efficiency.

Predictor variables

The main predictor variables were psychological mindedness, motivation, alliance, treatment model, and pre-treatment CORE-OM scores. Psychological mindedness, motivation, and alliance were rated as *poor* (1), *moderate* (2), and *good* (3). Treatment model was a categorical variable consisting of multimodal, integrative, CBT, psychodynamic, BST, and supportive or person-centred therapy. Pre-treatment CORE-OM scores were continuous variables, as previously defined, with a score ranging between 0 and 40.

Analysis

The pre-post difference in CORE-OM scores was described at different levels of psychological mindedness, motivation, and alliance, and by different treatment types. Pre-post effect sizes are reported for all analyses of client change. Pre-post effect sizes were calculated as the pre-therapy score minus the post-therapy score divided by the pre-therapy standard deviation. As significant results are more likely to be found in large sample sizes there is an increased chance of type 1 error (Murphy & Myors, 2004) and effect sizes are unaffected by sample size.

Reliable change was used as an index of change and is the extent to which individual change exceeds that which could be attributed to measurement error. In the CORE-OM, a 5-point reduction in the clinical score would represent reliable improvement whereas a

5-point increase in scores would represent reliable deterioration (Stiles, Barkham, Connell, & Mellor-Clark, 2008).

Clinical change reflects a change in which the pre-therapy score moves from the clinical to the non-clinical population (Jacobson, Follette, & Revenstorf, 1984). For clinical change to occur, participants' scores must move from above the clinical cut-off to below clinical cut-off. Connell et al. (2007) recommended that for the CORE-OM a score of 10 should be used as the clinical cut-off as this has appropriate sensitivity (0.87) and specificity (0.88). Reliable and clinical change in the CORE-OM occurs when a client experiences a minimum of a 5-point reduction in CORE-OM scores and also moves from above the clinical threshold of 10 to below the clinical CORE-OM. Accordingly, this threshold can only be applied to clients who are above the clinical cut-off score at pre-therapy.

IBM SPSS Statistics 21 (IBM Corp., 2012) was used for statistical analyses. A regression model was used to describe whether psychological mindedness, motivation, and alliance were larger predictors of outcomes than demographic variables, and treatment model. Moderation analysis was performed using PROCESS plugin for SPSS (Hayes, 2013) in order to identify any interactions between significant predictors. Once interactions were identified the Johnson-Neyman technique was used to probe the interaction and consider at what data-points any interaction occurred (Johnson & Fay, 1950). A further regression analysis was considered as to whether there was an additive effect of psychological mindedness, motivation, and alliance when combined.

ANCOVAs were used to identify whether therapy was significantly more efficient at different levels of psychological mindedness, motivation, and alliance, controlling for pre-treatment CORE-OM scores. The outcome variable was the mean session change and pre-treatment CORE-OM scores were the covariate.

Chi-square tests (3 x 6) were calculated to identify whether any differences occurred in ratings of psychological mindedness, motivation, and alliance between treatment types. Further post-hoc 2 x 2 chi-square tests were applied to identify where any such differences occurred. Chi-square tests (3 x 6) were also calculated to consider whether there was a significant difference between treatment models in outcomes at different levels of psychological mindedness, motivation, and alliance. The dependant variable was the number of clients with above or below average change. The independent variables were the treatment model and the level of psychological mindedness, motivation, and alliance. Finally, therapist variability in ratings of psychological mindedness, motivation, and alliance were considered using descriptive information to consider the percentage of clients rated by their therapist as *poor*, *moderate*, and *good* in psychological mindedness, motivation, and alliance.

Results

The results section will first describe the frequency and correlation of *poor*, *moderate,* and *good* ratings of psychological mindedness, motivation, and alliance within the dataset. Post-treatment reduction in CORE-OM scores will be described for the study-specific dataset at different levels of psychological mindedness, motivation, and alliance and within different treatment models. Each hypothesis will then be considered separately.

Ratings of psychological mindedness, motivation, and alliance

The percentage of clients rated by therapists as *good* were as follows: 58.7% for psychological mindedness, 76.3% for motivation, and 80.1% for alliance. These percentages contrasted with therapists' ratings of their clients as *poor* for the three variables as follows: 6.1% for psychological mindedness, 2.7% for motivation, and 1.2% for alliance. A Chi-square test showed ratings of alliance to be significantly more

likely to be *good* as compared with psychological mindedness ($x^2(1,18179)= 5097.66$, $p=0.00$, $v=0.53$) and motivation ($x^2(1,18203)= 7368.33$, $p=0.00$, $v=0.64$). A Chi-square

test showed ratings of psychological mindedness to be significantly more likely to be *poor* as compared with motivation ($x^2(1, 18186) = 2581.92$, $p=0.00$, $v=0.38$) and alliance ($x^2(1, 18179) =2219.71$, $p=0.00$, $v=0.35$). The frequencies and percentages of *poor*, *moderate*, and *good* ratings for psychological mindedness, motivation, and alliance are reported in Table 2.

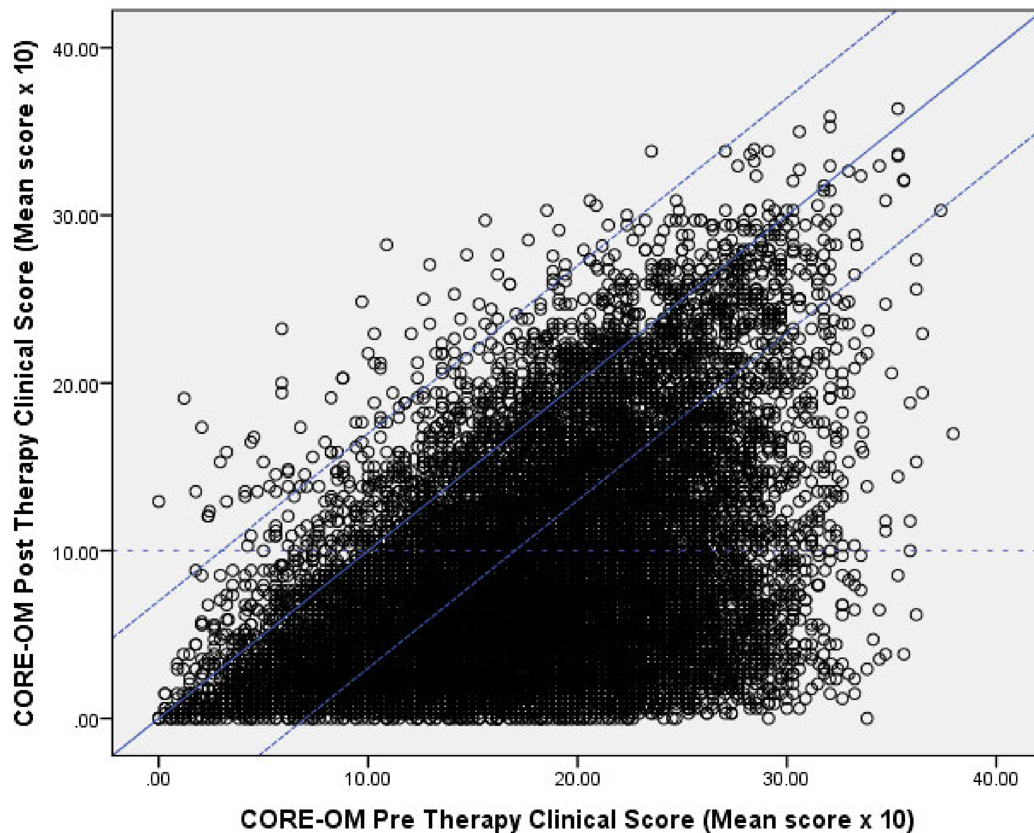
Motivation and alliance were significantly positively correlated ($r=0.65$, $p=0.00$), as were alliance and psychological mindedness ($r=0.58$, $p=0.00$) in addition to psychological mindedness and motivation ($r=0.57$, $p=0.00$). Although the inter-correlations were substantial, there appeared to be some discrimination between the three variables given the differing frequencies and percentages. Hence the variables will be reported independently as well as combined.

Outcomes

The mean pre-treatment CORE-OM score was 17.61 (SD=6.16) and mean post-treatment score was 8.34 (SD=6.02) providing a mean change score of 9.27 (SD=6.45) and a pre-post effect size of 1.50. A majority of clients met the criteria for reliable and clinically significant improvement (54.61%), while a further 19.9% met the criterion for reliable improvement only, 24.4% showed no reliable change, and 1.05% met the criterion for reliable deterioration. Figure 3 plots CORE-OM scores at pre and post-treatment and depicts the distribution of clients showing reliable and clinical improvement

Figure 3.

Scatterplot of pre and post-treatment CORE-OM scores



Post-treatment CORE-OM scores by psychological mindedness, motivation, and alliance

The mean pre-treatment CORE-OM scores, post-treatment CORE-OM scores, mean pre-post difference, and effect size of pre-post difference at each level of psychological mindedness, motivation, and alliance are shown in Table 2. For psychological mindedness, motivation, and alliance, the variables of intake severity, post-treatment scores and pre-post change follow a consistent pattern from poor to good. For example, pre-treatment scores were highest for clients rated by their therapists as *poor* and lowest for clients rated as *good* (Figure 4).

Table 2.

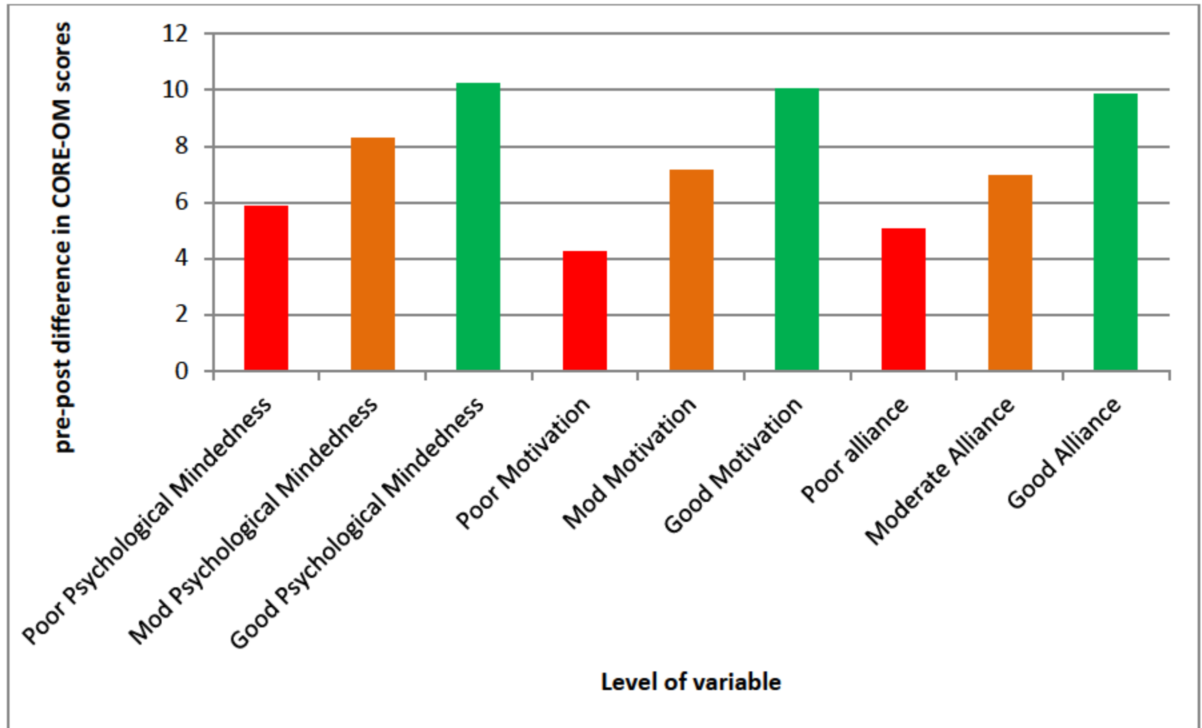
Mean pre and post CORE-OM scores by therapist rating of psychological mindedness, motivation, and alliance

Therapist rated variable	Clients		CORE-OM			Pre-post effect size (d)
	N	%	Pre-therapy: M (SD)	Post-therapy: M (SD)	Pre-post difference: M (SD)	
Psychological mindedness						
Poor	1119	6.1	18.94 (6.61)	13.08 (7.31)	5.87 (6.27)	0.89
Moderate	6402	35.2	18.00 (6.23)	9.72 (6.39)	8.29 (6.40)	1.33
Good	10684	58.7	17.24 (6.03)	7.01 (5.15)	10.23 (6.29)	1.70
Motivation						
Poor	488	2.7	19.52 (6.20)	15.26 (7.37)	4.25 (5.77)	0.69
Moderate	3829	21.0	18.25 (6.29)	11.10 (6.59)	7.15 (6.21)	1.14
Good	13917	76.3	17.37 (6.09)	7.34 (5.38)	10.03 (6.33)	1.65
Alliance						
Poor	215	1.2	19.75 (6.24)	14.69 (7.49)	5.05 (5.58)	0.81
Moderate	3410	18.7	17.91 (6.34)	10.95 (6.79)	6.95 (6.28)	1.10
Good	14595	80.1	17.51 (6.11)	7.63 (5.56)	9.88 (6.35)	1.62

Mean pre-post change increased as ratings of these variables improved (Figure 4). All effect sizes were above the 0.8 threshold indicating a large effect size (Cohen, 1988). The largest effect occurred in the group rated as *good* in psychological mindedness (1.70), motivation (1.65), and alliance (1.62) and smallest for those rated as *poor* in motivation (0.69), alliance (0.81), and psychological mindedness (0.89). The effect sizes for post-treatment change, in those rated as *good* in psychological mindedness, motivation, and alliance, were almost twice the magnitude of change observed in clients with *poor* ratings.

Figure 4.

Mean pre-post difference in CORE-OM scores at each level of psychological mindedness, motivation, and alliance.



Post-treatment CORE-OM scores by summary rating of psychological mindedness, motivation, and alliance.

A summary of psychological mindedness, motivation, and alliance was provided to consider the combined effect of the three variables. Pre-treatment CORE-OM scores, post-treatment scores, mean pre-post difference, and effect sizes of pre-post difference between summary ratings are shown in Table 3. The results for the summary variable followed the same pattern as the individual variables.

Table 3.

Mean pre and post CORE-OM scores by summary rating

Therapist rated variable	CORE-OM scores			Pre-post effect size (d)
Summary rating	Pre-therapy: M (SD)	Post-therapy: M (SD)	Pre-post difference: M (SD)	
Poor Overall (Rating 3-5)	19.15 (6.65)	14.10 (7.38)	5.05 (6.10)	0.76
Moderate overall (Rating 6-7)	18.06 (6.22)	10.64 (6.54)	7.43 (6.22)	1.19
Mixed (Rating 8)	17.88 (6.19)	8.70 (5.90)	9.18 (6.34)	1.48
Good overall (Rating 9)	17.21 (6.03)	6.81 (5.02)	10.40 (6.28)	1.72

Post-treatment CORE-OM scores by treatment model

CORE-OM scores are presented by treatment model in Table 4 to provide information regarding any differential effect. Treatment models are presented in rank order from smallest to largest effect.

Table 4.

Pre and post-treatment CORE-OM scores

Therapist rated variable	CORE-OM scores			Pre-post effect size (d)
Treatment model	Pre-therapy: M (SD)	Post-therapy: M (SD)	Pre-post difference: M (SD)	
Psychodynamic	16.84 (6.37)	8.19 (6.14)	8.65 (6.71)	1.36
Supportive	17.65 (6.38)	8.68 (6.44)	8.97 (6.71)	1.41
CBT	17.43 (6.55)	7.96 (6.10)	9.48 (6.75)	1.45
Integrative	17.66 (6.05)	8.83 (6.24)	8.83 (6.36)	1.46
Multimodal	17.64 (6.07)	8.19 (5.84)	9.45 (6.35)	1.56
BST	18.30 (6.19)	8.52 (6.21)	9.78 (6.47)	1.58

All groups experienced a mean reduction in CORE-OM scores at post-treatment that equated with a large pre-post effect size (>0.8). However, differences between treatment types were small. The largest effect size difference between treatment types was found between BST and psychodynamic therapy (d=0.22). This would be considered a small effect size difference.

Summary of outcomes

The results indicate that marginally more than half of the clients in the study-specific sample made reliable and clinically significant improvement. There was a large effect of treatment overall with a substantial reduction in CORE-OM scores at post-treatment. There was a differential effect of psychological mindedness, motivation, and alliance ratings on outcomes, with higher ratings associated with lower post-treatment CORE-OM scores.

Research question 1. Are therapist ratings of client psychological mindedness, motivation, and alliance better predictors of outcomes than client demographics or treatment model?

In order to consider whether psychological mindedness, motivation, alliance, and treatment type were good predictors of post-treatment CORE-OM scores, a multiple linear regression analysis was carried out. The dependant variable was post-treatment CORE-OM scores. Predictors were entered into the regression model in four blocks. Block one comprised all demographic variables including age, gender, ethnicity, number of sessions attended, therapist rated pre-severity rating, and number of mental health conditions present. Block two contained predictors of psychological mindedness, motivation, and alliance and block three contained pre-treatment CORE-OM scores. Block four contained treatment model variables (Psychodynamic, BST, CBT, Supportive, Integrative, & Multimodal).

Seven variables did not significantly predict post-treatment CORE-OM scores. The seven non-significant variables included therapist rated pre-therapy severity rating and the six treatment type variables (Psychodynamic, BST, CBT, Supportive, Integrative & Multimodal). These variables were removed from the model and removal did not affect the variance accounted for by the model, which was 29.9% with or without these variables. A significant regression model was found (F (15,17593) =501.18, p=0.00) with the model accounting for 29.9% (R^2) of the variance in post-treatment CORE-OM scores. Demographic variables explained 3.7% of the variance. At step 2, psychological mindedness, motivation, and alliance explained an additional 11.5% of the variance (R^2= 0.12, F(3,18158) = 822.97, p=0.00. At Step 3, pre-treatment CORE-OM scores explained an additional 14.7% of the variance (R^2=0.15, F(1,18157)=3808.78, p=0.00). The variables included in the model explained 29.9% of the variance in post-treatment CORE-OM scores.

The un-standardised coefficient, standard error, standardised coefficients, significance level, and effect size for each predictor are reported in Table 5. The standardised Beta scores and variance accounted for show that pre-treatment CORE-OM scores (ß=0.40) were the largest predictor of post-treatment CORE-OM scores with higher pre-treatment scores predicting higher post-treatment scores. This was followed by motivation (ß=-0.19) and psychological mindedness (ß=-0.12) with higher ratings significantly predicting lower CORE-OM scores post-treatment. There was a small to moderate effect size for motivation (d=-0.39) and psychological mindedness (d=-0.24). Further significant predictors included, age, number of sessions attended, alliance, number of pre-treatment mental health problems, gender, and ethnicity. However these predictors all yielded very small effect sizes

Table 5.

Coefficients of predictors within the regression model

Predictor	Variance accounted for (%)	Unstandardised B	St. Error	Standardised Beta	Significance (p)	Effect size (d)
Constant		9.49	0.47		0.00	
Pre-treatment CORE-OM score	13.7	0.39	0.01	0.40	0.00	0.87
Motivation	6.1	-2.31	0.11	-0.19	0.00	-0.39
Psychological mindedness	3.6	-1.22	0.08	-0.12	0.00	-0.24
Age	0.5	0.03	0.00	0.07	0.00	0.14
Number of sessions	0.8	0.10	0.01	0.07	0.00	0.14
Alliance	1.0	-0.48	0.12	-0.04	0.00	-0.08
Number of mh conditions pre	0.5	0.17	0.03	0.04	0.00	0.08
Gender	0.1	-0.31	0.09	-0.02	0.00	-0.04
Ethnic origin	0.1	0.74	0.21	0.02	0.00	0.04
CBT	-	-0.37	0.24	-0.02	0.13	-
Pre-severity	-	-0.05	0.06	-0.01	0.46	-
Supportive	-	0.25	0.22	0.01	0.26	-
Integrative	-	0.19	0.22	0.01	0.38	-
Multimodal	-	-0.03	0.20	-0.00	0.88	-
BST	-	0.07	0.32	0.00	0.84	-

A moderation analysis showed a significant interaction between all three variables (psychological mindedness, motivation, and alliance) and pre-treatment CORE-OM scores, suggesting that the effect of psychological mindedness, motivation, and alliance on post-treatment CORE-OM scores was moderated by pre-treatment CORE-OM scores. There was a significant but small change in the amount of variance in post-treatment CORE-OM scores explained by predictors when the interactions were added to the model (see Table 6).

Table 6.

Interaction effects of pre-treatment scores with each variable (psychological mindedness, motivation and alliance

Interaction of variable with pre-CORE-OM score	R^2increase due to interaction	F value	Significance	Coefficient of interaction	T value	Significance
PM	0.01	315.83	0.00	0.18	-17.77	0.00
Motivation	0.01	298.81	0.00	-0.21	-17.28	0.00
Alliance	0.01	222.29	0.00	-0.21	-14.91	0.00

The Johnson-Neyman Technique was used to consider whether the interaction between pre-treatment CORE-OM scores and psychological mindedness, motivation and alliance occurs at all levels of pre-treatment CORE-OM scores. The effect of psychological mindedness upon post-treatment CORE-OM scores was significant when pre-treatment CORE-OM scores were above 5.18. The effect of motivation upon post-treatment CORE-OM scores was significant when pre-treatment CORE-OM scores were above 3.64. The effect of alliance upon post-treatment CORE-OM scores was significant when pre-treatment CORE-OM scores are above 5.09. There was a significant effect of psychological mindedness, motivation and alliance upon post-treatment CORE-OM scores at most levels of pre-treatment CORE-OM scores, with a lack of interaction being evident at pre-treatment CORE-OM scores of non-clinical levels where pre-treatment severity would not be expected to impact upon psychological mindedness, motivation, and alliance.

Further moderation analyses were used to identify any interactions between psychological mindedness, motivation, and alliance. There was no significant interaction between psychological mindedness and motivation (p=0.07) or

psychological mindedness and alliance ($p=0.82$). There was a significant interaction between motivation and alliance ($\Delta R^2=0.001$, $F(1, 18198) = 28.56$, $p=0.00$) with alliance moderating the effect of motivation. However, the interaction between motivation and alliance did not lead to an increase in the amount of variance accounted for by the model ($\Delta R^2=0.001$), suggesting that any interaction had an extremely small effect.

In summary, the regression model accounted for 29.9% of the variance in outcome data. The largest predictor of post-treatment CORE-OM scores was pre-treatment scores, followed by motivation and psychological mindedness. Alliance was less predictive of outcome variance than client age and number of sessions attended. Gender and ethnicity had only slightly lower predictive value than alliance. There was also a significant interaction between pre-treatment severity (CORE-OM scores) and psychological mindedness, motivation and alliance suggesting that the three variables were moderated by pre-treatment scores. Treatment model and pre-treatment therapist ratings of client mental health severity were not significant predictors of post-treatment CORE-OM scores.

Research question 2. What is the added effect of combining psychological mindedness, motivation, and alliance?

The same regression analysis was completed with the only change being that psychological mindedness, motivation, and alliance were replaced by the summary rating score, which combined the three variables. The regression model remained significant ($F(13, 17595) = 561.50$, $p=0.00$) with 29.3% of the variance in the post-treatment CORE-OM scores accounted for, compared with the previous value of 29.9%. As would be expected, the Beta values varied only slightly for all variables and all significance values remained the same (Appendix B7).

A moderation analysis showed a significant interaction between the summary of the three variables and pre-treatment CORE-OM scores (b=-0.13, t (18162) = -20.71, p=0.00). When the interaction was added to the regression model, an additional 1.6% of the variance in post-treatment CORE-OM scores was explained by the predictors (ΔR^2=0.016, F (1,18162)= 428.70, p=0.00).

The Johnson-Neyman Technique was utilised to probe the interaction and consider where a significant interaction occurred. The effect of the summary of psychological mindedness, motivation, and alliance on post-treatment CORE-OM scores was significant when pre-treatment CORE-OM scores were above 4.80, scores below 4.80 would again represent a non-clinical range.

The summary rating of psychological mindedness, motivation, and alliance was significantly predictive of post-treatment CORE-OM scores (ß=0.30, p=0.00, d=0.62). This suggests that the additive effect is slightly higher than the independent effect of psychological mindedness (ß=-0.19), motivation (ß=-0.12), and alliance (ß=-0.04). However, this is no larger than the independent combined variance suggesting no additive effect above the summed variance.

Research question 3. Are higher ratings of client psychological mindedness, motivation and alliance associated with more efficient therapy

In order to consider therapy efficiency, the mean change in CORE-OM score by each session was calculated (total difference in CORE-OM scores/number of sessions). Initial analysis of the number of sessions attended indicated that 99% of clients received between 1 and 21 sessions. However the full range of sessions attended was 1 to 117.

Table 7 presents the number of sessions attended and mean session reduction in CORE-OM scores for each level of psychological mindedness, motivation and alliance.

Table 7.

Number of sessions and average reduction in CORE-OM scores by rating of psychological mindedness, motivation, and alliance

Therapist rated variables	Number of sessions: (Range)	Number of sessions: M (SD)	Sessional reduction in CORE-OM scores M (SD)
Psychological mindedness			
Poor	1- 39	6.41 (3.83)	1.22 (1.64)
Moderate	1-105	6.67 (4.58)	1.64 (1.71)
Good	1-117	6.57 (4.13)	2.00 (1.78)
Motivation			
Poor	1-29	5.92 (3.20)	0.91 (1.46)
Moderate	1-105	6.51 (4.65)	1.51 (1.82)
Good	1-117	6.64 (4.20)	1.95 (1.73)
Alliance			
Poor	1-18	5.63 (2.89)	1.16 (1.61)
Moderate	1-105	6.27 (4.45)	1.54 (1.89)
Good	1-117	6.68 (4.25)	1.91 (1.72)

Clients rated *poor* in psychological mindedness, motivation, and alliance had a more restricted range of sessions, although the mean difference was similar to the moderate and good groups. As psychological mindedness, motivation, and alliance improved, then the mean reduction of CORE-OM scores per session increased. ANOVAs revealed no significant difference in number of sessions attended at different levels of psychological mindedness (F (2,18204) = 2.32, p=0.09, ηp^2=0.00). There was a significant difference in the number of sessions attended between motivational levels (F (2, 18233) = 7.72, p=0.00, ηp^2[3]=0.00). Post-hoc comparisons revealed that significant differences occurred between poor and moderate (p=0.00) and poor and good levels (p=0.00), although effect size was 0.00. There was no significant difference between

[3] ηp^2 = Effect size partial eta squared

moderate and good levels of motivation (p=0.08). There was a significant difference in number of sessions attended between alliance ratings (F(2, 18219) = 18.19, p=0.00, η_p^2=0.00). Post-hoc comparisons revealed significant differences between all levels (poor-moderate: p=0.33, poor-good: p=0.00, moderate-good: p=0.00), although effect size was 0.00.

A series of ANCOVAs controlling for pre-treatment CORE-OM scores showed significant differences in the average change in CORE-OM scores per session between poor, moderate, and good ratings of psychological mindedness (F (2, 18201)=253.99, p=0.00, η_p^2=0.03), motivation (F (2,18230)=260.10, p=0.00, η_p^2=0.03), and alliance (F (2,18216)=111.41, p=0.00, η_p^2=0.01). Post-hoc comparisons showed significant differences (p=0.00) between all levels of psychological mindedness, motivation, and alliance (Appendix B8). There was a small to medium effect of psychological mindedness and motivation on change per session and a very small effect of alliance. There was a larger significant effect of the covariate (i.e., pre-treatment CORE-OM scores) on average session change (F (1,18230) = 2169.67, p=0.00, η_p^2=0.11).

Summary ratings of psychological mindedness, motivation and alliance

This section reports on the combined effect of psychological mindedness, motivation, and alliance. Table 8 shows the range of number of sessions, mean number of sessions and the mean reduction in CORE-OM scores by session. A similar pattern was found for the summary variable as identified in the three individual variables, in that a greater reduction of CORE-OM scores per session was found as summary ratings improved.

Table 8.

Number of sessions and average reduction in CORE-OM scores by summary rating

Therapist rated variable	Number of sessions: (Range)	Number of sessions: M (SD)	Sessional reduction in CORE-OM scores: M (SD)
Poor Overall (rating 3-5)	1-39	6.07 (3.51)	1.12 (1.69)
Moderate Overall (rating 6-7)	1-105	6.54 (4.66)	1.54 (1.77)
Mixed (rating 8)	1-105	6.89 (4.39)	1.74 (1.64)
Good Overall (rating 9)	1-117	6.56 (4.14)	2.04 (1.77)

Controlling for pre-CORE-OM scores, an ANCOVA showed a significant difference in mean session reduction in CORE-OM scores between levels of summary ratings ($F(3,18161)=209.40$, $p=0.00$, $\eta p^2=0.03$). Post-hoc comparisons showed significant difference ($p=0.00$) between all levels of summary ratings. As with the individual variables, there was a larger effect of the covariate, pre-treatment CORE-OM scores, upon post-treatment CORE-OM scores ($F(1,18161) = 2205.05$, $p=0.00$, $\eta p^2=0.11$).

A small effect of psychological mindedness ($\eta p^2=0.03$), motivation ($\eta p^2=0.03$), and alliance ($\eta p^2=0.01$) upon average CORE-OM session change (therapy efficiency) was identified. The summary rating produced similar effect sizes ($\eta p^2=0.03$). However, there was a larger effect of pre-treatment CORE-OM scores ($\eta p^2=0.11$).

Research question 4. Is there a differential effect of psychological mindedness, motivation, and alliance on outcomes, as a function of treatment model?

The regression model in hypothesis 1 showed that treatment model had no significant effect upon post-treatment CORE-OM scores. This section focuses on the

question as to whether therapists rate psychological mindedness, motivation, and alliance differently in diverse treatment models and, if so, whether differential ratings impact upon outcomes.

Ratings of psychological mindedness, motivation, and alliance by treatment model. The frequencies and percentages of poor, moderate, and good ratings of psychological mindedness, motivation, and alliance are reported for each treatment type in Table 9.

Table 9.

Psychological mindedness, motivation, and alliance ratings by treatment type

Therapist rated variable	Treatment model					
	Multimodal N (%)	Integrative N (%)	Supportive N (%)	CBT N (%)	Psycho-dynamic N (%)	BST N (%)
Psychological mindedness						
Poor	586 (5.4)	213 (8.2)	163 (6.8)	98 (7.8)	26 (3.7)	33 (8.1)
Moderate	3778 (34.7)	992 (38.3)	797 (33.2)	424 (33.9)	257 (37)	154 (37.6)
Good	6496 (59.8)	1382 (53.4)	1442 (60.0)	730 (58.3)	412 (59.3)	222 (54.3)
Motivation						
Poor	249 (2.3)	89 (3.4)	79 (3.3)	47 (3.8)	12 (1.7)	12 (2.9)
Moderate	2133 (19.6)	686 (26.5)	479 (19.8)	294 (23.5)	152 (21.7)	85 (20.7)
Good	8485 (78.1)	1813 (70.1)	1859 (76.9)	912 (72.8)	535 (76.5)	313 (76.3)
Alliance						
Poor	97 (0.9)	40 (1.5)	39 (1.6)	26 (2.1)	6 (0.9)	7 (1.7)
Moderate	1802 (16.6)	639 (24.7)	449 (18.7)	277 (22.1)	154 (22.1)	89 (21.8)
Good	8971 (82.5)	1908 (73.8)	1919 (79.7)	949 (79.8)	536 (77)	312 (76.1)

Chi square tests showed a significant difference in ratings between treatment models for psychological mindedness (X^2 (10, N=18,205) = 73.93, p=0.00, v=0.05), motivation

(X^2 (10, N=18,234) = 95.15, p=0.00, v=0.05), and alliance (X^2 (10, N=18,220) = 140.34, p=0.00, v=0.06), although effect sizes were extremely small. Post-hoc 2 x 2 chi square comparisons revealed that CBT and integrative treatments had a higher number of clients rated as *poor* in psychological mindedness, motivation, and alliance (Appendix B9). Psychodynamic and multimodal treatments had significantly less clients with *poor* ratings of psychological mindedness, motivation, and alliance (Appendix B9). A full list of significant differences and statistical analyses can be found in Appendix B9.

Ratings of psychological mindedness, motivation, and alliance, and the impact on outcomes by treatment model. Recall that the mean change in CORE-OM scores from pre- to post-treatment for the study-specific dataset was 9.27. This value was used to calculate whether clients had below or above average change. Chi square tests were used to consider whether there were any differences between treatment models in below or above average change at different levels of psychological mindedness, motivation, and alliance. There were no significant differences between treatment models in above or below average change when clients were rated as *poor* in psychological mindedness (X^2(5, 1118) = 10.80, p=0.06, V=0.10) motivation (X^2(5,488) = 4.49, p=0.48, V = 0.10), and alliance (X^2(5,215) = 1.64, p = 0.90, V = 0.09).

There were no significant differences between treatment models in above or below average change when clients were rated as *moderate* in psychological mindedness (X^2(5,6402) = 3.69, p=0.59, V = 0.02) motivation (X^2(5,3828) = 1.16, p = 0.95, V = 0.02), and alliance (X^2(5,14954) = 2.40, p = 0.79, V = 0.03).

When psychological mindedness, motivation, and alliance were rated as *good*, there were some significant differences in average change between treatment models. BST had a significantly lower number of clients with below average change than other

treatments when psychological mindedness was rated as *good* (X^2 (1, N=10,683) = 4.15, p=0.05, V=0.02). There were significantly more clients with *good* ratings of motivation and below average change in the psychodynamic group (X^2 (2, N=13,916) = 4.49, p=0.03, V=0.02) and integrative group (X^2 (2, N=13,916) = 4.26, p=0.04, V=0.02). Integrative treatment also had a significantly higher number of clients with *good* ratings of alliance and below average change than other treatments (X^2 (2, N=14,594) = 4.79, p=0.03, V=0.02). Multimodal treatment had a higher number of clients rated as *good* motivation with above average change than other treatments (X^2 (2, N=13,916) = 6.17, p=0.01, V=0.02).

In summary, there were significant differences in therapist ratings of psychological mindedness, motivation, and alliance between treatment types. However, effect sizes were extremely small. When clients were rated as *poor* or *moderate* in psychological mindedness, motivation, and alliance, there was no significant difference in treatment model and outcomes. There were some significant differences between treatment models when clients were rated as *good*. Effect sizes were small for all significant differences.

Research question 5: Is there therapist variability in the rating of psychological mindedness, motivation, and alliance?

The study-specific sample comprised 789 therapists. Only therapists with more than 10 clients in the final sample were considered in this analysis to allow means to be generated and patterns of rating to be identified. This left 320 therapists with between 11 and 381 clients.

There was large variability in the percentage of clients rated as *poor*, *moderate* and *good* in psychological mindedness, motivation, and alliance for each therapist. The

percentage range and median percentage of therapist ratings of *poor*, *moderate* and *good* ratings of psychological mindedness, motivation, and alliance are reported in Table 10.

Table 10.

Therapist ratings of psychological mindedness, motivation, and alliance

	Percentage of clients rated by therapists in each category					
Variable	Poor ratings		Moderate ratings		Good ratings	
	Range %	Median %	Range %	Median %	Range %	Median %
Psychological mindedness	0 - 41.7	4.8	0 - 89.7	37.2	7.1 - 100	56.4
Motivation	0 - 26.8	0.6	0 - 83.3	19.6	15.8 - 100	77.2
Alliance	0 - 23.1	0.0	0 - 83.3	17.8	16.7 - 100	80.7

Table 10 shows a large range of percentages for each variable. There was a smaller percentage range for *poor* ratings. However some therapists did not rate any clients as *poor* (0%), whilst other therapists rated as many as 41.7% of their clients as *poor* (psychological mindedness). Further descriptive analysis showed that a large number of therapists did not rate any clients as *poor* in psychological mindedness (29.1%), motivation (49.1%), and alliance (71.6%). Again a rating of *poor* was least likely within alliance ratings and most common within psychological mindedness. The mean percentage of *poor* ratings was 6.83 (SD = 7.78) for psychological mindedness, 2.84 (SD = 4.16) for motivation, and 1.29 (SD = 2.84) for alliance. The median ratings were lower for all three variables; this statistic and the relative high standard deviations suggest large variability between therapists.

For *moderate* ratings, there was again large variability between therapists with some therapists not rating any clients as *moderate* and others rating as many as 89.66% of clients as *moderate*. No therapist rated all clients as either *poor* or *moderate*. The mean

percentage of *moderate* ratings was 36.83 (SD= 19.05) for psychological mindedness, 23.27 (SD=16.33) for motivation, and 20.84 (SD=16.55) for alliance. Again, the relative high standard deviations and difference between mean and medians suggest large variability between therapists.

All therapists rated at least two clients as *good* in psychological mindedness, motivation, and alliance so no zero values were present and the minimum percentage was consequently higher. The maximum value was also higher as some therapists rated all of their clients as *good* in psychological mindedness (N=5, 2%), motivation (N =6, 2%), and alliance (N=19, 6%). The mean percentage of good ratings was 56.35 (SD = 22.17) for psychological mindedness, 73.96 (SD =17.88) for motivation and 77.83 (SD = 17.31) for alliance. Again large standard deviations and percentage ranges suggested high therapist variability in ratings.

Discussion

The aims of the current study were to consider therapist ratings of client psychological mindedness, motivation, and alliance during routine practice, and whether such ratings predicted therapeutic outcomes and efficiency of therapy. The study also aimed to consider whether there was a differential effect of treatment model on therapist ratings of psychological mindedness, motivation, and alliance and the impact of such ratings on outcomes.

Main findings

The current research found that only a small number of clients were rated as *poor* in psychological mindedness, motivation, and alliance. Pre-post improvements in CORE-OM scores were significantly larger for clients rated as higher in psychological mindedness, motivation, and alliance.

Client rated pre-treatment severity was the largest predictor of post-treatment outcomes, followed by motivation and psychological mindedness. Although alliance was a significant predictor of outcomes, it accounted for a smaller percentage of the variance and was of a similar predictive value as demographic variables such as age. Therapy was most efficient when psychological mindedness, motivation, and alliance were rated as good. There was a small to medium effect of psychological mindedness and motivation on therapy efficiency and a significant but very small effect of alliance on efficiency. There was a significant but limited effect of treatment model on ratings of psychological mindedness, motivation, and alliance and a limited impact of the interaction between treatment model and psychological mindedness, motivation, and alliance on outcomes. As expected, there was a large amount of therapist variability in the rating of psychological mindedness, motivation, and alliance.

Therapist ratings of psychological mindedness, motivation, and alliance

The results suggested that therapists are likely to rate clients positively in routine practice. *Poor* ratings were provided more frequently for psychological mindedness and were least likely for alliance. Psychological mindedness has been considered as a prerequisite to therapy motivation and alliance (Rosenbaum & Horowitz, 1983). Therefore it is surprising that a large number of clients were perceived to have *poor* psychological mindedness, but still had *moderate* or *good* ratings of motivation and alliance. Psychological mindedness is generally perceived to be a more static client variable whereas the therapist may be more able to influence alliance and motivation. As such, therapists may be more reluctant to identify motivation or alliance as *poor* in case this reflects negatively upon their practice. It is also possible that therapists perceive psychological mindedness to be less important than motivation or alliance. The

current research suggests that therapists do discriminate between psychological mindedness, motivation, and alliance.

The relationship of psychological mindedness, motivation, and alliance to outcomes

Psychological mindedness, motivation, and alliance all significantly predicted therapeutic outcomes. This is consistent with research (Conte et al., 1990; Conte & Ratto, 1997; McCallum & Piper, 1990; McCallum & Piper, 1997; McBride et al., 2010; McCallum et al., 2003; Nyklicek et al., 2010; Piper et al., 1998; Piper et al., 1994; Rosenbaum & Horowitz, 1983) and provides further evidence that all three variables are important for positive psychotherapeutic change to occur.

Clients rated as *good* in psychological mindedness are likely to be able to self-reflect and have insight into their thoughts, feelings, and behaviour, which is likely to be conducive to better outcomes and more efficient therapy. Clients rated as *good* in motivation may be more ready to change and more committed to therapy, which is again likely to be linked to better outcomes and more efficient therapy. It is of note that motivation was more predictive of outcomes than psychological mindedness. Motivation is perceived to be the most dynamic of the two client characteristics and a number of interventions are available which target client motivation within treatment. Therefore the finding that client motivation is the second largest predictor of outcomes suggests an important role for such motivational treatments in improving treatment outcomes especially for clients with low motivation at pre-treatment.

It is somewhat surprising that alliance was not a larger predictor of outcomes given the plethora of research consistently suggesting that a good alliance is strongly related to positive treatment outcomes (Horvath & Bedi, 2002; Horvath & Symonds, 1991; Martin

et al., 2000). However, the results did suggest a larger treatment effect size when alliance was rated as *good* as compared to *poor*, confirming that there was an effect of alliance, albeit a smaller effect than motivation and psychological mindedness. A number of past studies have suggested that motivation is as important as alliance in predicting outcomes (Scheel, 2011), whilst other studies have found motivation to be a stronger predictor than alliance (Zuroff et al. 2007). The current study provides further support that client characteristics such as psychological mindedness and motivation may be as important as alliance. It is possible that the limited effect of alliance upon outcomes is due to the smaller number of *poor* ratings of alliance and alliance being rated by the therapist rather than the client. Research has shown that client ratings of alliance are a better predictor of outcomes (Horvath & Symonds, 1991; Johansson & Eklund, 2006). Further studies using client ratings of alliance would be necessary in order to make strong conclusions as to whether client characteristics are more or equally important to the alliance.

The findings of this study suggest that therapists perceive motivation as fundamental to therapy progress. This is consistent with research suggesting that therapists perceive client characteristics as most important to therapy outcomes (Gurman, 1977; Horowitz et al., 1984; Marmar et al., 1986). The findings suggest that identifying a client's motivation and readiness for change at the beginning of therapy may be helpful as suggested by the transtheoretical model of change (Prochaska & Diclemente, 1982). The findings have implications for client suitability to treatment and the possible requirement of preliminary work pre-therapy to increase psychological mindedness and motivation in order to improve treatment outcomes.

Interaction between pre-treatment symptom severity and psychological mindedness, motivation, and alliance

The finding that pre-treatment severity was the main predictor of outcomes was consistent with previous research (Saxon & Barkham, 2012). Mixed research exists regarding the relationship between pre-treatment symptom severity and psychological mindedness, motivation, and alliance. The current research supports an inverse relationship between intake severity and psychological mindedness, motivation, and alliance in that client-rated symptom severity was higher when psychological mindedness, motivation, and alliance was low. A causal relationship cannot be identified as it is possible that increased symptom severity leads to *poor* ratings of psychological mindedness, motivation, and alliance as symptoms of depression and anxiety for example, may limit ability to self-reflect, engage and build relationships. However, it is also possible that limited ability to self-reflect, engage in treatment and build relationships have led to increased symptom severity. The current study found a small but significant interaction effect of intake severity and psychological mindedness, motivation, and alliance at all ratings of symptom severity suggesting that an awareness of these client factors, and the interaction between them, is important to therapeutic change. As clients were more likely to be rated as *poor* in psychological mindedness, motivation, and alliance as symptom severity increased, this suggests that motivational work and increased attention to psychological mindedness and alliance may be particularly important for clients experiencing greater psychological distress at treatment commencement.

Therapy efficiency and psychological mindedness, motivation, and alliance.

Therapy was most efficient where psychological mindedness, motivation, and alliance were high. However, clients with higher psychological mindedness and alliance also experienced a larger number of sessions which may suggest that good psychological mindedness and alliance are harder to achieve in shorter periods of

therapy or that clients with lower psychological mindedness and alliance receive less sessions. Clients at different levels of motivation did not have a significantly different number of sessions, suggesting that positive motivation can be achieved in fewer sessions or that motivation is not important when establishing the amount of sessions required. Therefore, building a good relationship and enabling clients to understand psychological explanations of their difficulties is a complex process, which for some clients may take longer. Motivation appears to be more easily understood and accessed within shorter time periods. It is possible that this is due to the popularity of techniques such as motivational interviewing, which are as applicable to shorter-term interventions and are often featured in most therapeutic interventions.

Clients rated as good in psychological mindedness, motivation, and alliance achieved more change per session than clients rated as poor. The findings suggest that psychological mindedness, motivation, and alliance are important characteristics to consider when negotiating treatment length. If psychological mindedness, motivation, and alliance are poor, clients may need additional time to develop self-reflection, increase motivation or for additional attention to be paid to the therapeutic relationship in order for therapy to be more efficient within the remaining sessions.

The relationship between treatment model, psychological mindedness, motivation, and alliance

Although the significant differences between treatment models, in ratings of psychological mindedness, motivation, alliance, and the interaction with outcomes, had only a small effect they are discussed here in order to inform the debate regarding the relevance of psychological mindedness, motivation, and alliance to different treatment models.

A higher number of clients were rated as *poor* in psychological mindedness, motivation, and alliance in CBT and integrative therapy than all other treatment models and a lower number of clients rated as *poor* in psychological mindedness, motivation, and alliance in psychodynamic and multimodal treatment. The results suggest that clients with *poor* psychological mindedness, motivation, and alliance are also more likely to have more severe symptoms and therefore may be receiving more complex therapy so may be more likely to be in multimodal treatment. It is also possible that clients *poor* in psychological mindedness, motivation, and alliance may be more likely to be allocated to CBT as it is perceived to require less insight and may be more likely to include motivational elements.

When psychological mindedness was rated as *good*, BST was more effective than all other treatments. It is likely that clients with a high level of psychological mindedness had an existing good understanding of their thoughts, feelings and behaviours which facilitated positive outcomes during short-term interventions. When motivation was *good*, psychodynamic and integrative therapy were less effective than other treatments. It is possible that when motivation was high, clients were more goal-orientated and therefore benefited more from more task-focused therapy such as CBT or BST. This is consistent with the assimilation model (Stiles, 2001), which suggests that different therapies may be more appropriate at different levels of assimilation. For example, clients with less insight, who are likely to be less motivated if they are uncertain of the problem, would benefit more from psychodynamic therapy whereas clients with insight and problem clarification may be more likely to benefit from more goal-focused therapy such as BST, CBT, supportive or person centred therapy. When alliance was *good,* integrative therapy was less effective than other treatments and multimodal therapy was more effective. This suggests that when alliance is *good*, the use of multiple treatments

is more effective than integrating treatments. However, there is limited evidence as to how therapists made decisions about the rating of treatment model.

Effect sizes were limited for all treatment model effects and therefore findings should be treated with caution. However, the findings do provide interesting results within regard to the relationship between treatment model and psychological mindedness, motivation, and alliance which would warrant further follow up in future research, especially given the clinical implications of assisting clients in finding appropriate treatment at different levels of psychological mindedness, motivation, and alliance.

Therapist variability in ratings of clients

The large variability in therapist ratings of client psychological mindedness, motivation, and alliance suggests it would be useful for future research to utilise multi-level modelling to consider how therapist variables affect ratings of psychological mindedness, motivation, and alliance. Meier et al. (2005) found that more experienced therapists were more likely to provide more varied alliance ratings than less experienced clients which may allow more critical or realistic appraisal. It would also be useful for future research to use client and observer ratings to consider the accuracy of therapist perceptions of psychological mindedness, motivation, and alliance.

Strengths and Limitations

The current study allowed the analysis of a sample which is historically difficult to research. As supported in the current study, *poor* ratings of psychological mindedness, motivation, and alliance are less likely to be provided by therapists. Clients lower in these variables are also more likely not to complete treatment, making it difficult to collect a large enough sample to make conclusions about the impact of psychological mindedness, motivation, and alliance. The current research is, therefore, the first study

to consider these variables within a large sample. A further strength of the study is that data was collected as part of routine practice, which provides information as to how therapists really rate clients and the impact of these ratings upon outcomes. This also allows the study conclusions to have strong implications for both theory and practice. Finally, no studies to date have researched all three variables, psychological mindedness, motivation, and alliance within the same research, which allows consideration of the conceptual overlap, interaction and unique effect of the variables.

There are a number of limitations to the current study. Firstly, a large amount of data was deleted from the original database (n=51,988; 74%). This has implications for the generalisation of the study findings, particularly as a large amount of data was deleted due to a lack of post-treatment information (n=47,099; 67%). It is possible that therapists were more likely to provide post-treatment information if the therapy outcome was favourable which would provide a positive bias, potentially suggesting a higher treatment effect than would otherwise occur.

A further limitation is the therapist rating of psychological mindedness, motivation, and alliance. The study only utilised therapist ratings of psychological mindedness, motivation, and alliance. Although this provided information regarding how therapists in routine practice rate clients, it is possible that clients may have provided different ratings. It would be useful for future research to triangulate information by including client ratings and observer ratings, as this would inform research into the convergence or divergence of client-therapist ratings. There is limited research into whether client or therapist ratings of psychological mindedness or motivation are most predictive of outcomes. However, the alliance literature suggests that client ratings of alliance are more predictive of outcomes than therapist ratings (Johansson & Eklund, 2006). The rating of psychological mindedness, motivation, and alliance was a unitary rating of

poor, moderate, or good, and had not been validated in previous research, therefore reliability and validity of the measurement is unclear. If the measure is not reliable or valid this has implications for the study results as it is possible that different therapists would have provided different ratings and that something other than psychological mindedness, motivation, and alliance, was being reported. The use of a well-validated measure of psychological mindedness, motivation, and alliance would be more time-consuming for therapists and clients in routine practice; however would provide more in-depth and reliable information regarding the three variables.

A further limitation is that the treatment model was defined only by therapists. It was not possible to consider whether the stated model was accurately identified and adhered to, or whether this was the therapist's interpretation of the treatment model. As such the limited variance explained by treatment model may have been due to a lack of distinct therapeutic models. This is particularly likely in practice-based research where therapists may use a variety of models and integrative techniques. Many therapists within the study indicated delivering a number of treatment models and it was necessary to recode these variables for ease of analysis It is possible that the limited effect of treatment model is a product of a lack of distinct therapeutic models in addition to the recoded variable rather than a true limited effect of treatment model. This again would be useful to consider in further work.

Psychological mindedness, motivation, and alliance were rated at the end of therapy and therefore it is possible that therapist ratings of the three variables were impacted by their perceptions of the client's improvement during therapy. Research has suggested that motivation, alliance, and even psychological mindedness can improve during therapy (Nyklicek et al., 2010; Rosenbaum & Horowitz, 1983); therefore different results may occur if these variables were rated at the beginning of therapy. It is also

possible that increased psychological mindedness, motivation, and alliance may be a product of clinical change rather than a cause of clinical change. There is evidence that a reduction in symptoms can lead to improved alliance (Turner, Bryant-Waugh, & Marshall, 2015). As such a causal explanation of the link between psychological, mindedness, motivation, alliance, and outcomes cannot be provided.

Finally, it is recognised that the order in which variables were entered into the regression analysis is likely to have impacted upon the results. Pre-treatment CORE-OM scores were entered into the model last despite prior analyses suggesting this had the largest effect on post-treatment CORE-OM scores. It is likely that if entered into the model first, pre-treatment CORE-OM scores may have accounted for a larger variance, leaving a smaller variance being accounted for by motivation, psychological mindedness, and alliance, as such this should be treated with caution.

Recommendations for Future Research

The current study suggests a number of areas for future research. It would be useful to conduct further research into the relationship between psychological mindedness, motivation, alliance, and outcomes using multiple ratings of the three variables, including client ratings and observer ratings as well as the therapist ratings used in the current study. It would also be useful to consider the use of well validated psychometric questionnaires in the measurement of psychological mindedness, motivation, and alliance in order to provide a valid and reliable outcome with a broader range of ratings allowing for increased discrimination between clients. The current study found an interaction between pre-treatment severity, psychological mindedness, motivation, and alliance. It would be useful to consider whether if one variable is rated as *poor*, other variables become more important; for example if alliance is more important when motivation is *poor*, as this would be important in informing therapeutic approaches and

priorities of treatment. Finally, the current study showed a large range of therapist variability in ratings of psychological mindedness, motivation, and alliance. To inform clinical practice it would be useful to undertake further research to consider the reasons for this variability, as well as utilising multilevel modelling to further consider therapist effects in the rating of psychological mindedness, motivation, and alliance.

Theoretical Implications

The current study provides increased knowledge regarding the construct of psychological mindedness, motivation, and alliance and how these variables relate to each other and to therapeutic outcomes. The results suggest that motivation may be central to therapeutic change and it is possible that good motivation may impact on the development and improvement of both psychological mindedness and alliance. This will require further consideration in future research. The current research also adds to the theoretical literature regarding the utility of therapist ratings of client characteristics in predicting outcomes. A significant but smaller effect of alliance upon outcomes was found. Much of the existing research would suggest a larger effect of alliance and this might be a result of therapist ratings being less predictive of alliance than client ratings (Horvath & Symonds, 1991). The research also adds to the theoretical literature in regards to the limited difference in treatment outcomes and ratings of psychological mindedness, motivation, and alliance between treatment models (Ardito & Rabellino, 2011; McCallum et al., 2003; Prochaska & DiClemente, 1982). Finally the study adds to the practice-based evidence for the effectiveness of psychological therapies across a variety of treatment models.

Clinical implications

The research suggests a need for practitioners to identify and attend to psychological mindedness, motivation, and alliance regardless of therapeutic model, in order to improve therapy outcomes and efficiency. The findings suggest that there continues to be an important role for motivational techniques and this is important to consider pre-therapy and throughout therapy. The impact of symptom severity, psychological mindedness, motivation, and alliance may also be important for therapists to take into account at assessment and when considering allocation to treatment model. Finally the research into the efficiency of therapy has implications for services in consideration of how many sessions to offer clients. The current research suggests that clients with poor psychological mindedness, motivation, and alliance experience a smaller change per session. However, clients low in psychological mindedness and alliance were also likely to receive less sessions suggesting that they may require more sessions to improve psychological mindedness and alliance and improve outcomes. This has implications for service protocols regarding optimum session numbers.

Conclusions

Routine practice data suggests that therapists do discriminate between client psychological mindedness, motivation, and alliance when providing post-therapy ratings of clients. Psychological mindedness, motivation, and alliance are all important contributors to therapeutic change and therapy efficiency. Pre-treatment severity was the largest predictor of outcomes and efficiency, followed by motivation and psychological mindedness, with alliance being of smaller predictive value. There was no significant predictive value of treatment model upon outcomes and only limited differential effect of treatment model upon ratings of psychological mindedness, motivation, and alliance. The results suggest that psychological mindedness, motivation, and alliance should all be attended to within therapeutic treatment and indicates that motivation in particular

may have a key role in outcomes as well as a potential role in the development of psychological mindedness and alliance.

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Appendices

Appendix B1: Ethical approval for the use of dataset

Appendix B2: University research panel approval

Appendix B3: CORE-OM

Appendix B4: CORE-A

Appendix B5: CORE-EOT

Appendix B6: List of effect sizes used and critical values

Appendix B7: Regression analysis for summary variables

Appendix B8: ANCOVA Post-hoc comparisons of average change between levels of psychological mindedness, motivation, and alliance

Appendix B9: Chi Square results of psychological mindedness, motivation, and alliance ratings by treatment model

Appendix B1. Ethical approval for use of dataset (2009)

Leeds (East) Research Ethics Committee
Room 5.2, Clinical Sciences
Building St James's
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Beckett Street
Leeds
LS9 7TF

Tel: 0113 2065652
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17 June 2009

Professor Michael Barkham
Professor of Clinical and Counselling Psychology

University of Sheffield
Centre for Psychological Services Research
Department of Psychology
Western Bank
S10 2TN

Dear Professor Barkham

Study title:	**An evaluation of the effectiveness of the psychological therapies as delivered in routine practice settings within primary and NHS service settings.**
REC reference:	**05/Q1206/128**
Amendment number:	**2**
Amendment date:	**29 May 2009**

The above amendment was reviewed at the meeting of the Sub-Committee held on 16 June
2009.

Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Indeminity Arrangements for University of Sheffield		22 May 2009
Letter from University of Sheffield confirming Sponsorship		22 May 2009
Notice of Substantial Amendment (non-CTIMPs)		29 May 2009

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

R&D approval

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D
approval of the research.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

05/Q1206/128: Please quote this number on all correspondence

Yours sincerely

Miss Amy Beckitt
Committee Assistant Co-ordinator
E-mail: Amy.Beckitt@leedsth.nhs.uk

Appendix B2. University Research Panel Approval

DEPARTMENT OF PSYCHOLOGY.
CLINICAL PSYCHOLOGY UNIT.

Doctor of Clinical Psychology (DClin Psy) Programme
Clinical supervision training and NHS research training
& consultancy.

Clinical Psychology Unit
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26th March 2015
Caroline Dunsmuir-White
Trainee Clinical Psychologist
Department of Psychology
Western Bank

Project title: Therapist's perceptions of factors contributing to patient change in contrasting psychological therapies.

6 digit URMS number: 143988

Dear Caroline Dunsmuir-White,
LETTER TO CONFIRM THAT THE UNIVERSITY OF SHEFFIELD IS THE PROJECT'S RESEARCH GOVERNANCE SPONSOR

The University has reviewed the following documents:

1. A University approved URMS costing record;
2. Confirmation of independent scientific approval;
3. Confirmation of independent ethics approval.

All the above documents are in place. Therefore, the University now **confirms** that it is the project's research governance sponsor and, as research governance sponsor, **authorises** the project to commence any non-NHS research activities. Please note that NHS R&D approval will be required before the commencement of any activities which do involve the NHS.

You are expected to deliver the research project in accordance with the University's policies and procedures, which includes the University's Good Research & Innovation Practices Policy: www.shef.ac.uk/ris/other/gov-ethics/grippolicy, Ethics Policy: www.sheffield.ac.uk/ris/other/gov-ethics/ethicspolicy and Data Protection Policies: www.shef.ac.uk/cics/records

Your Supervisor, with your support and input, is responsible for monitoring the project on an ongoing basis. Your Head of Department is responsible for independently monitoring the project as appropriate. The project may be audited during or after its lifetime by the University. Monitoring responsibilities are listed in Annex 1.

Yours sincerely

Dr Andrew Thompson
Director of Research Training, Clinical Psychology Unit

Cc: Professor Gillian Hardy (supervisor);
Professor Michael Barkham (supervisor);
Professor Paul Overton (Head of Department).

Appendix B3: CORE-OM

CLINICAL **O**UTCOMES in **R**OUTINE **E**VALUATION

OUTCOME MEASURE

Site ID

letters only | numbers only

Client ID

Therapist ID | numbers only (1) | numbers only (2)

Sub codes

D D / M M / Y Y Y Y

Date form given

Age | Male | Female

Stage Completed

S Screening
R Referral
A Assessment
F First Therapy Session
P Pre-therapy (unspecified)
D During Therapy
L Last therapy session
X Follow up 1
Y Follow up 2

Stage

Episode

IMPORTANT - PLEASE READ THIS FIRST

This form has 34 statements about how you have been OVER THE LAST WEEK. Please read each statement and think how often you felt that way last week. Then tick the box which is closest to this.

Please use a dark pen (not pencil) and tick clearly within the boxes.

	Over the last week	Not at all	Only Occasionally	Sometimes	Often	Most or all the time	OFFICE USE ONLY
1	I have felt terribly alone and isolated	0	1	2	3	4	F
2	I have felt tense, anxious or nervous	0	1	2	3	4	P
3	I have felt I have someone to turn to for support when needed	4	3	2	1	0	F
4	I have felt O.K. about myself	4	3	2	1	0	W
5	I have felt totally lacking in energy and enthusiasm	0	1	2	3	4	P
6	I have been physically violent to others	0	1	2	3	4	R
7	I have felt able to cope when things go wrong	4	3	2	1	0	F
8	I have been troubled by aches, pains or other physical problems	0	1	2	3	4	P
9	I have thought of hurting myself	0	1	2	3	4	R
10	Talking to people has felt too much for me	0	1	2	3	4	F
11	Tension and anxiety have prevented me doing important things	0	1	2	3	4	P
12	I have been happy with the things I have done.	4	3	2	1	0	F
13	I have been disturbed by unwanted thoughts and feelings	0	1	2	3	4	P
14	I have felt like crying	0	1	2	3	4	W

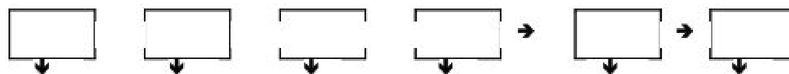
Please turn over

Over the last week

#	Item	Not at all	Only Occasionally	Sometimes	Often	Most or all the time	OFFICE USE ONLY
15	I have felt panic or terror	0	1	2	3	4	P
16	I made plans to end my life	0	1	2	3	4	R
17	I have felt overwhelmed by my problems	0	1	2	3	4	W
18	I have had difficulty getting to sleep or staying asleep	0	1	2	3	4	P
19	I have felt warmth or affection for someone	4	3	2	1	0	F
20	My problems have been impossible to put to one side	0	1	2	3	4	P
21	I have been able to do most things I needed to	4	3	2	1	0	F
22	I have threatened or intimidated another person	0	1	2	3	4	R
23	I have felt despairing or hopeless	0	1	2	3	4	P
24	I have thought it would be better if I were dead	0	1	2	3	4	R
25	I have felt criticised by other people	0	1	2	3	4	F
26	I have thought I have no friends	0	1	2	3	4	F
27	I have felt unhappy	0	1	2	3	4	P
28	Unwanted images or memories have been distressing me	0	1	2	3	4	P
29	I have been irritable when with other people	0	1	2	3	4	F
30	I have thought I am to blame for my problems and difficulties	0	1	2	3	4	P
31	I have felt optimistic about my future	4	3	2	1	0	W
32	I have achieved the things I wanted to	4	3	2	1	0	F
33	I have felt humiliated or shamed by other people	0	1	2	3	4	F
34	I have hurt myself physically or taken dangerous risks with my health	0	1	2	3	4	R

THANK YOU FOR YOUR TIME IN COMPLETING THIS QUESTIONNAIRE

Total Scores



Mean Scores
(Total score for each dimension divided by number of items completed in that dimension)

(W) (P) (F) (R) All items All minus R

Appendix B4: CORE-A

CLINICAL OUTCOMES in ROUTINE EVALUATION

THERAPY ASSESSMENT FORM v.2

Site ID ☐☐☐☐ **Age** ☐☐

Client ID letters ☐☐ numbers ☐☐☐☐☐☐☐ **Male** ☐ **Female** ☐

Sub Codes TH ID number ☐☐☐ SC2 numbers ☐☐☐ SC3 numbers ☐☐☐ **Employment** ☐ ☐

Referrer(s) ☐☐ ☐☐ ☐☐ **Ethnic Origin** ☐ ☐

Referral date D D / M M / Y Y Y Y

First assessment date attended D D / M M / Y Y Y Y

Last assessment date D D / M M / Y Y Y Y

Total number of assessments ☐

Previously seen for therapy in this service? Yes ☐ No ☐ **Episode** ☐

Months since last episode ☐☐☐

Is this a follow-up/review appointment? Yes ☐ No ☐

Relationships/support *Please tick as many boxes as appropriate*

Living alone (not including dependents)	☐	Full time carer (of disabled/elderly etc)	☐
Living with partner	☐	Living in shared accommodation (eg lodgings)	☐
Caring for children under 5 years	☐	Living in temporary accommodation (eg hostel)	☐
Caring for children over 5 years	☐	Living in institution/hospital	☐
Living with parents/guardian	☐	Other ☐	
Living with other relatives/friends	☐		

Current/previous use of services for psychological problems?
Please tick as many boxes as appropriate

		Concurrent	< 12 mths	> 12 mths
Primary	GP or other member of primary care team (eg practice nurse, counsellor)	☐	☐	☐
Secondary	In primary care setting	☐	☐	☐
	In community setting	☐	☐	☐
	In hospital setting on sessional basis	☐	☐	☐
	Day care services (eg day hospital)	☐	☐	☐
	Hospital admission < = 10 days	☐	☐	☐
	Hospital admission > = 11 days	☐	☐	☐
Specialist	Psychotherapy/psychological treatments from specialist team (sessional)	☐	☐	☐
	Attendance at day therapeutic programme	☐	☐	☐
	Inpatient treatment	☐	☐	☐
Other	Counsellor in eg voluntary, religious, work, educational setting	☐	☐	☐

Is the client currently prescribed medication to help with their psychological problem(s)? Yes ☐ No ☐

If yes, please indicate type of medication:

Anti-psychotics (neuroleptics/major tranquillizers) ☐ Anti-depressants ☐ Anxiolytics/Hypnotics (minor tranquillizers) ☐ Other ☐

Brief description of reason for referral

Identified Problems/Concerns

Severity	Problem	< 6 months	6-12 months	> 12 months	Recurring/ continuous
☐	Depression	☐	☐	☐	☐
☐	Anxiety/Stress	☐	☐	☐	☐
☐	Psychosis	☐	☐	☐	☐
☐	Personality Problems	☐	☐	☐	☐
☐	Cognitive/Learning	☐	☐	☐	☐
☐	Eating Disorder	☐	☐	☐	☐
☐	Physical Problems	☐	☐	☐	☐
☐	Addictions	☐	☐	☐	☐

Severity	Problem	< 6 months	6-12 months	> 12 months	Recurring contin.
☐	Trauma/abuse	☐	☐	☐	☐
☐	Bereavement/loss	☐	☐	☐	☐
☐	Self esteem	☐	☐	☐	☐
☐	Interpersonal/relationship	☐	☐	☐	☐
☐	Living/Welfare	☐	☐	☐	☐
☐	Work/Academic	☐	☐	☐	☐
☐	Other *(specify below)*	☐	☐	☐	☐

Risk	None	Mild	Mod	Sev
Suicide	☐	☐	☐	☐
Self Harm	☐	☐	☐	☐
Harm to others	☐	☐	☐	☐
Legal/Forensic	☐	☐	☐	☐

ICD-10 CODES

	F/Z	Main code	Sub-code		F/Z	Main Code	Sub-code
1	☐	☐☐	. ☐	3	☐	☐☐	. ☐
2	☐	☐☐	. ☐	4	☐	☐☐	. ☐

What has the client done to cope with/avoid their problems? *Please tick, and then specify actions*

Positive actions ☐

Negative actions ☐

Assessment outcome ***(tick one box only)***

- Assessment/one session only ☐
- Accepted for therapy ☐
- Accepted for trial period of therapy ☐
- Long consultation ☐
- * Referred to other service ☐
- * Unsuitable for therapy at this time ☐

***If the client is not entering therapy give brief reason**

Appendix B5: CORE-EOT

CLINICAL OUTCOMES in ROUTINE EVALUATION

END OF THERAPY FORM v.2

Site ID ☐☐☐☐

Client ID letters ☐☐ numbers ☐☐☐☐☐☐☐

Sub Codes Therapist ID ☐☐☐ SC4 numbers ☐☐☐ SC5 numbers ☐☐☐

Date therapy commenced D D / M M / Y Y Y Y

Date therapy completed D D / M M / Y Y Y Y

Number of sessions planned ☐☐☐

Number of sessions attended ☐☐☐

Number of sessions unattended ☐☐☐

What type of therapy was undertaken with the client? *Please tick as many boxes as appropriate*

Psychodynamic	☐	Person-centred	☐
Psychoanalytic	☐	Integrative	☐
Cognitive	☐	Systemic	☐
Behavioural	☐	Supportive	☐
Cognitive/Behavioural	☐	Art	☐
Structured/Brief	☐	Other *(specify below)*	☐

What modality of therapy was undertaken with the client? *Please tick as many boxes as appropriate*

Individual	☐	Family	☐
Group	☐	Marital/Couple	☐

What was the frequency of therapy with the client?

More than once weekly	☐	Less than once weekly	☐
Weekly	☐	Not at a fixed frequency	☐

Which of the following best describes the ending of therapy?

Unplanned	☐	**Planned**	☐
Due to crisis	☐	Planned from outset	☐
Due to loss of contact	☐	Agreed during therapy	☐
Client did not wish to continue	☐	Agreed at end of therapy	☐
Other unplanned ending *(specify below)*	☐	Other planned ending *(specify below)*	☐

Review of Identified Problems/Concerns

Severity	Problem	Therapy Issue	Severity	Problem	Therapy Issue
☐	Depression	☐	☐	Trauma/Abuse	☐
☐	Anxiety/Stress	☐	☐	Bereavement/Loss	☐
☐	Psychosis	☐	☐	Self esteem	☐
☐	Personality Problems	☐	☐	Interpersonal/relationship	☐
☐	Cognitive/Learning	☐	☐	Living/Welfare	☐
☐	Physical Problems	☐	☐	Work/Academic	☐
☐	Eating Disorder	☐	☐	Other *(specify below)*	☐
☐	Addictions	☐			

Risk

	None	Mild	Mod	Sev
Suicide	☐	☐	☐	☐
Self Harm	☐	☐	☐	☐
Harm to others	☐	☐	☐	☐
Legal/Forensic	☐	☐	☐	☐

Contextual Factors

	Poor	Moderate	Good
Motivation	☐	☐	☐
Working Alliance	☐	☐	☐
Psychological Mindedness	☐	☐	☐

Benefits of Therapy

	Improved Yes	Improved No	Not addressed		Improved Yes	Improved No	Not addressed
Personal insight/understanding	☐	☐	☐	Control/planning/decision making	☐	☐	☐
Expression of feelings/problems	☐	☐	☐	Subjective well-being	☐	☐	☐
Exploration of feelings/problems	☐	☐	☐	Symptoms	☐	☐	☐
Coping strategies/techniques	☐	☐	☐	Day to day functioning	☐	☐	☐
Access to practical help	☐	☐	☐	Personal relationships	☐	☐	☐
Other benefits	☐						

Tick box and then specify below

Has contact with this service resulted in a change of medication? Yes ☐ No ☐ Not applicable ☐

If yes, is this change likely to be of benefit to the client? Yes ☐ No ☐

Details of change: Started ☐ Discontinued ☐ Increased ☐ Decreased ☐ Modified ☐

Has the client been given a follow-up appointment? Yes ☐ No ☐

Number of months until appointment ☐☐

Appendix B6: List of effect sizes used and critical values

Cohen's d (d)

0.2 = small effect

0.5 = medium effext

0.8 = large effect

Cramer's v (v)

0.1 = small

0.3 = medium

0.5 = large

Partial eta squared (ηp^2)

0.01 = small

0.06 = medium

0.14 = large

Correlation coefficient (r)

0.10 = small

0.30 = medium

0.50 = large

Appendix B7: Regression analysis for summary variables

Coefficients of predictors within the regression model

Predictor	Unstandardised B	St. Error	Standardised Beta	Significance (p)	Effect size (d)
Constant	4.66	0.38		0.00	
Pre-treatment CORE-OM score	0.39	0.01	0.40	0.00	0.87
Summary of psychological mindedness, motivation, and alliance	-1.87	0.04	-0.30	0.00	-0.63
Age	0.03	0.00	0.07	0.00	0.14
Number of sessions	0.10	0.01	0.07	0.00	0.14
Number of mh conditions pre	0.19	0.03	0.05	0.00	0.08
Gender	-0.30	0.09	-0.02	0.00	-0.04
Ethnic origin	0.75	0.21	0.02	0.00	0.04
CBT	-0.31	0.24	-0.01	0.21	-
Pre-severity	-0.03	0.06	-0.00	0.64	-
Supportive	0.28	0.22	0.02	0.21	-
Integrative	0.24	0.22	0.01	0.27	-
Multimodal	-0.03	0.20	-0.00	0.87	-
BST	0.02	0.32	0.00	0.05	-

Appendix B8: ANCOVA Post-hoc comparisons of average change between levels of psychological mindedness, motivation, and alliance

Psychological mindedness

Comparison Variables		Significance (p)	Effect Size (d)
Poor	Moderate	0.00	0.26
Moderate	Good	0.00	0.21
Good	Poor	0.00	0.48

Motivation

Comparison Variables		Significance (p)	Effect Size (d)
Poor	Moderate	0.00	0.40
Moderate	Good	0.00	0.25
Good	Poor	0.00	0.71

Alliance

Comparison Variables		Significance (p)	Effect Size (d)
Poor	Moderate	0.00	0.22
Moderate	Good	0.00	0.20
Good	Poor	0.00	0.46

Appendix B9: Chi Square results of psychological mindedness, motivation, and alliance ratings by treatment model

Significance of difference in psychological mindedness ratings

Comparison Variables		Significance (p)	Effect Size (phi)
Psychodynamic	All other therapies	0.02	0.02
BST	All other therapies	0.10	0.02
Supportive/person-centred	All other therapies	0.06	0.02
CBT	All other therapies	0.03	0.02
Integrative	All other therapies	0.00	0.05
Multimodal	All other therapies	0.00	0.04

Significance of difference in motivation ratings

Comparison Variables		Significance (p)	Effect Size (phi)
Psychodynamic	All other therapies	0.26	0.01
BST	All other therapies	0.95	0.00
Supportive/person-centred	All other therapies	0.06	0.02
CBT	All other therapies	0.00	0.03
Integrative	All other therapies	0.00	0.06
Multimodal	All other therapies	0.00	0.05

Significance of difference in alliance ratings

Comparison Variables		Significance (p)	Effect Size (phi)
Psychodynamic	All other therapies	0.05	0.02
BST	All other therapies	0.15	0.02
Supportive/person-centred	All other therapies	0.10	0.02
CBT	All other therapies	0.00	0.03
Integrative	All other therapies	0.00	0.07
Multimodal	All other therapies	0.00	0.08