The role of the therapeutic alliance in the treatment of substance misuse: A critical review of the literature

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Abstract

Background: In the past two decades, a number of studies investigating the role of the therapeutic alliance in drug treatment have been published and it is timely that their findings are brought together in a comprehensive review.

Aims: This paper has two principal aims: 1) to assess the degree to which the relationship between drug user and counsellor predicts treatment outcome and 2) to critically examine the evidence on determinants of the quality of the alliance.

Method: Peer reviewed research located using the literature databases Medline, PsycInfo and Ovid Full Text Mental Health Journals using predefined search-terms and published in the past 20 years is considered. Further papers were identified from the bibliographies of relevant publications.

Findings: A key finding is that the early therapeutic alliance appears to be a consistent predictor of engagement and retention in drug treatment. With regard to other treatment outcomes, the early alliance appears to influence early improvements during treatment, but it is an inconsistent predictor of post-treatment outcomes. There is relatively little research on the determinants of the alliance. In studies that are available, clients' demographic or diagnostic pre-treatment characteristics did not appear to predict the therapeutic alliance, whereas modest but consistent relationships were reported for motivation, treatment readiness and positive previous treatment experiences.

Conclusions: The therapeutic alliance plays an important role in predicting drug treatment process outcomes, but too little is known about what determines the quality of the relationship between drug users and counsellors.

Keywords: Review, alliance, retention, treatment outcomes

Introduction

The quality of the therapeutic relationship is a significant predictor of psychotherapy and counselling outcomes in clients presenting with a variety of non-psychotic disorders across different treatment modalities (Horvath and Symonds 1991; Martin et al. 2000) and the therapeutic alliance is seen as an essential ingredient of any psychotherapy and counselling (Gaston 1990) Several reviews on the therapeutic alliance in generic psychotherapy or counselling settings have already been carried out covering a range of issues including the historical and conceptual dimensions of the alliance (Horvath and Luborsky 1993), definition of the concept, measurement issues and the relationship between the alliance and psychotherapy outcomes (Horvath and Symonds 1991; Marziali and Alexander 1991; Martin, Garske et al. 2000), therapy characteristics and techniques (Ackerman and Hilsenroth 2003), the impact of the alliance on outcomes in short term dynamic therapy (Crits-Christoph and Connolly 1999), as well as the role of the alliance in behaviour therapy (Sweet 1984) and cognitive therapy (Waddington 2002). No such reviews have been undertaken in the field of drug treatment research, although there are a number of factors which argue for the particular importance of the therapeutic relationship for substance using clients.

Perhaps the most important of these factors is the difficulty engaging and retaining drug using clients in treatment (Simpson, Joe, Rowan-Szal et al. 1997; Stanton 1997; Gossop et al. 1999; Joe, Simpson and Broome 1999). As discussed later, there are now first indications that a supportive therapeutic relationship may enhance such engagement and retention (Broome et al. 1999; Joe et al. 2001). Moreover, it has been suggested that the therapeutic relationship may serve as a model for improved relationships outside therapy (Greenson 1965; Henry and Strupp 1994) which in turn may improve outcomes. This is important since many drug using clients report unsatisfactory relationships with their social environment and a history of poor social and family relationships has been strongly implicated in the aetiology of drug use (Bell et al. 1996). Furthermore, the presence of a strong social network during and after treatment has been linked consistently to sustained improvements in drug use after treatment (Hser et al. 1999; Simpson et al. 2000; Broome et al. 2002).

It has been suggested that the nature of some drug treatment approaches which require the therapist to take an active educational and confrontational role may present challenges to developing a working therapeutic relationship (Millman 1986). Added to this, further relationship challenges arise since many clients deny the extent of the problem, are hostile towards the therapist or other clients, do not want to be in treatment and have a history of treatment failures (Joe et al. 1998).

Aim of the review

In the past two decades, a number of studies investigating the role of the therapeutic alliance in drug treatment have been published and thus it is timely that the findings of these studies are brought together in a comprehensive review. This paper has two principal aims: 1) to assess the degree to which the relationship between drug user and counsellor predicts the progress and outcomes of treatment and 2) to critically examine the evidence on which variables contribute to the development of a successful alliance.

Method

The review critically appraises the extent to which research efforts have identified predictors of successful therapeutic alliances and have evaluated the impact of the therapeutic alliance on drug treatment outcome. All peer reviewed research published in English during the past 20 years on these topics is considered. However, case studies and studies investigating the alliance in group or family treatment rather than individual treatment were excluded. The electronic databases Medline, PsycInfo and Ovid Full Text Mental Health Journals were searched using a list of relevant terms (see Table 1). Each search contained a minimum of one term from Area 1 and one term from Area 2. The bibliographies of relevant publications were studied to locate further literature. A meta-analytic approach was not adopted because the eighteen identified studies falling within the remit of this review varied widely with regard to therapeutic approach, methodological approach, definition of study outcomes, and the timing of assessments. Moreover, many studies did not include a quantifiable relationship between the alliance and outcome necessary for meta-analysis and this would have led to the exclusion of some of the most relevant studies. The purpose of the current review is to present a broad picture of the available evidence and also to highlight gaps in the knowledge that need to be addressed.

(insert Table 1 about here)

The role of the alliance in predicting drug treatment outcomes

The first part of the paper reviews studies investigating the relationship between the therapeutic alliance and treatment retention, engagement and outcomes in treatment (see Table 2).

Retention. The question of whether better therapeutic alliances early in drug treatment predict longer treatment retention and completion has been addressed by a number of studies (Luborsky et al. 1995; Tunis et al. 1995; Belding et al. 1997; Carroll et al. 1997; Simpson, Joe, Rowan-Szal et al. 1997; Barber et al. 1999; De Weert-Van Oene et al. 1999; Petry and Bickel 1999; Barber et al. 2001; De Weert-Van Oene et al. 2001; Fenton et al. 2001). A common feature of these studies is that they measure the alliance early in treatment and only at one or two time points, which may not adequately reflect the changing nature of relationships. Few studies follow the course of the alliance throughout treatment, a point which will be highlighted later in this review. Where relationships were found they were mostly of a moderate effect size explaining around 5-15% of the variance, which is comparable to the effect sizes found by meta-analysis investigating the alliance-outcome relationships (Horvath and Symonds 1991; Martin, Garske et al. 2000). However, apart from this, the studies vary greatly in methodological approach and analysis. There is some disagreement as to which rater perspective, which instrument, and which time point is the most predictive. Fenton et al. (2001) obtained client, counsellor and observer ratings of the alliance after the second therapy session using the Working Alliance Inventory (WAI). They found that only observer ratings, but not client and counsellor ratings, predicted retention in treatment. Barber et al. (1999), on the other hand, found that both client and therapist versions of the California Psychotherapy Alliance Scales (CALPAS) after the second session predicted retention. The latter study did not find this relationship for ratings after the fifth session and neither was there a relationship when using the Helping Alliance Questionnaire (HAq) after the second or fifth session, although, as discussed below, HAq and CALPAS fifth session scores were more predictive of actual treatment outcomes. In contrast, DeWeert et al. (1999; 2001) found that third session client ratings on the HAq of the alliance did predict retention in inpatient and outpatient treatment. Moreover, Petry & Bickel (1999)

also found a relationship between third session client and therapist ratings of the alliance and treatment completion.

An interesting interaction of the alliance with psychiatric problems was also reported by Petry & Bickel (1999): Completion was predicted by an interaction between the therapist rated alliance and psychiatric severity. For clients with no or few psychiatric problems, the alliance was not related to treatment completion status. However, amongst those with moderate to severe psychiatric problems 75% of those with a good alliance but only 25% of those with a weak alliance completed treatment. It is not clear from the study whether high psychiatric severity clients who established good relationships with their therapists and those who did not differed according to the level of interpersonal behaviour problems. This interaction is a particularly important finding which warrants further investigation, as recent research has shown that the prevalence of dual diagnosis, ie concurrent diagnoses of drug dependence and psychiatric illness, is high (Marsden et al. 2000; Franken and Hendriks 2001; Virgo et al. 2001). An interaction of the alliance with treatment modality was reported by Barber et al. (2001). They found that retention was improved by a good alliance in drug counselling and psychodynamic treatment, but retention was worse for those with good relationships in cognitive therapy treatment. However, this study was the only one mentioning an effect of treatment philosophy, although there were several studies in similar settings (cf Table 2), thus the interpretation of this finding is difficult.

In contrast to the previously mentioned studies, two studies failed to find a significant relationship between the alliance and retention (Tunis, Delucchi et al. 1995; Belding, Iguchi et al. 1997). Both studies assessed the alliance at a later stage in treatment (after months 1 and 3, or months 4 and 6, respectively), and included only clients retained beyond these points. The problem with this approach is that the failure to build a strong alliance early on in treatment may be partly responsible for the typically large dropout rates in the first few months. It is thus possible that clients with less optimal alliances may have left by the time the alliance and retention were assessed for the first time, and that the alliance is less important for retention in later stages of treatment. However, the studies also had small sample sizes of $n<50$ and thus lacked the power to find small effects. In contrast, Simpson et al. (1997) found a small but significant relationship between the late alliance (week 8) and retention for clients staying beyond the third month, but their study had much greater power to detect such small effects ($n>500$).

It is difficult to say exactly under which circumstances the alliance predicts retention. This is due firstly to the methodological problems of the studies that did not find a alliance-retention relationship and secondly the considerable differences in sample, setting, design, and analytical methods in studies that found relationships, but not for all rater/assessment point/instrument combinations. The relationship between the early alliance and retention in drug treatment appears a broadly consistent finding, which appears largely independent of measurement approach, as there are studies for each instrument and rater perspective combination that found a relationship between the alliance and retention. This is in contrast to findings in the psychotherapy field that the therapist rated alliance is less predictive of outcome than client alliance ratings (Horvath and Symonds 1991).

Further research should address the open methodological questions of alliance measurement highlighted in this review, for example why in some studies certain instruments fail to show a relationship with outcome, whether and why different raters have different views of the alliance, and whether clients, therapists or observers make the more predictive ratings. It is important that potential moderators of the alliance-outcome relationship are investigated further, as studies looking specifically at such effects have found interactions of the alliance with treatment and client factors (Hser, Grella et al. 1999; Petry and Bickel 1999; Barber, Luborsky et al. 2001). Research is also needed on the alliance later in treatment and on whether the course of the alliance over time is associated with retention in drug treatment.

Engagement in treatment. A consistent finding in the drug treatment literature is that successful engagement of clients in the treatment process predicts positive treatment outcomes over and above other client factors (Simpson et al. 1995; Simpson, Joe and Rowan-Szal 1997; Fiorentine 1998; Joe, Simpson and Broome 1999; Joe, Simpson, Greener et al. 1999). Several of the early alliance theorists have suggested that a positive early alliance is desirable or even essential for clients to become engaged in treatment (Greenson 1965; Strupp 1969; Luborsky, Barber et al. 1995). To date, there are only a handful of studies on the effect of the therapeutic relationship on client engagement in drug treatment, and some of these studies have employed unvalidated measures consisting of only a few items to capture the quality of the relationship.

Nevertheless, three studies reported positive association between good therapeutic relationships and treatment engagement (Connors et al. 1997; Simpson, Joe, Rowan-Szal et al. 1997; Fiorentine et al. 1999), whereas only one found no association (Tunis, Delucchi et al. 1995), see Table 2. Fiorentine and colleagues (1999) examined predictors of client engagement, operationalised as the product of session attendance and weeks retained in outpatient drug free counselling treatment. The client-reported alliance was measured only once at eight months using four items concerned with counsellor caring and helpfulness. For women, all items were related to treatment engagement, but the strongest association was with counsellor caring. For men, helpfulness was related to engagement, but caring was not. This finding could suggest subtle alliance differences between women and men; women may respond better to an empathic counselling style whereas men may respond to a more utilitarian style. However, due to the timing of the client-counsellor relationship assessment it is impossible to determine whether clients who are easily engaged establish better relationships or whether, as the author suggests, good relationships lead to better engagement. No relationship was found between the alliance late in treatment and concurrent treatment participation (Tunis et al 1995). However, clients were included only if they had remained in treatment for at least three month and it is thus possible that any influence of the alliance on participation might already have led clients to disengage by the time the study started. Simpson and colleagues (1997) found that counsellor rated "rapport" at two months into treatment was positively related to concurrent session attendance in clients who were retained in treatment. However, as in Tunis et al.'s study, clients who dropped out before the third month were excluded. Those who were particularly difficult to engage early on, and so could have been the focus of engagement research were thus not considered adequately in any of the three studies. A notable exception is a prospective alcohol treatment study, in which there was a positive relationship between the alliance early in treatment and later attendance and participation in treatment (Connors, Carroll et al. 1997).

(insert Table 2 about here)

Drug use outcomes**.** Inconsistent results have been reported with regard to the relationship of alliance and treatment outcomes over and above the effect of retention. Several studies reported no relationship between the client or counsellor rated early alliance and in-treatment or post-treatment drug use in outpatients (Belding, Iguchi et al. 1997; Barber, Luborsky et al. 2001). In contrast, other outpatient studies found that counsellor rated rapport averaged across treatment predicted various post-treatment drug use

outcomes (Joe, Simpson et al. 2001), and counsellor rated rapport in months 1 and 2 predicted lower levels of subsequent in-treatment drug use in months 2 and 3 (Simpson, Joe, Rowan-Szal et al. 1997). Inconsistent findings were also reported by Fenton et al. (2001) and Hser et al. (1999). Fenton et al. reported that the third session alliance predicted in-treatment abstinence during outpatient drug free treatment if assessed by an observer, not if rated by therapist or client. Hser et al.'s study compared different treatment settings and found that the early client rated alliance strongly predicted 12-month post-treatment abstinence in residential treatment settings, but not, as in Fenton et al.'s study, in outpatient settings (Hser, Grella et al. 1999). Later (3rd month) alliance ratings by clients were related to concurrent and later assessments of improvement in drug use outcome, although not if controlled for earlier improvements.

Only weak and difficult to interpret relationships between the alliance on one hand and drug use and psychiatric outcomes on the other were found amongst cocaine users in a six-month outpatient programme of drug treatment (Barber, Luborsky et al. 1999). Results were similar for completers and non-completers, with slightly stronger alliance-outcome relationships found for completers. Session 5 alliance measurements with the HAq were weakly associated with in-treatment drug use at one month (probably concurrent measurement), but not at 6 months. Session 2 alliance assessments and assessments using the CALPAS did not show relationships with drug use outcomes. Relationships were also only found for client but not for therapist ratings. The authors pointed out that there was limited variability in the alliance scores of both clients and therapists, which could have influenced the chance of finding positive relationships.

There are few firm conclusions that can be drawn from these contradictory results. It appears that the alliance measured early on (sessions 2 and 3) is an inconsistent predictor of post-treatment outcomes, but may influence how clients progress early in treatment. The alliance predicted long term drug use outcome in only one study, although with N=789 this study was one of the largest studies reviewed (Hser, Grella et al. 1999). Temporally closer alliance and outcome measures were generally more strongly related, as findings were that the alliance after the first month and alliance scores averaged across treatment were related to concurrent and later drug use improvements. It has been suggested that the alliance measured later on could be an indicator of good treatment progress and client satisfaction rather

than a predictor of positive outcomes (Belding, Iguchi et al. 1997). Rater perspective, alliance instrument and treatment setting may play a role, but further investigation would be needed to clarify the exact nature of the relationships.

Other treatment outcomes: Little attention has been paid to whether the strength of the alliance influences clients' various other problem areas such as criminal justice involvement, their social relationships and support networks or their health. Two studies report on the effect of the alliance on psychological/psychiatric symptoms. The client rated alliance at sessions 2 and 5, interacting with retention, predicted improvements of depressive symptoms, but not overall psychiatric severity, at one and six months in treatment (Barber, Luborsky et al. 1999). Therapist ratings were unrelated to psychiatric outcomes. Belding et al. (1997) reported no relationship between the early client and therapist rated alliance and improvements in psychological problems. A fourth study used an outcome measure computed from existing scales of another instrument, namely self esteem minus anxiety and depression scores, which they called psychological functioning (Bell et al. 1997). It is not clear how the authors justified this and no validation of this new scale was reported. The alliance was measured after intake, at 2 weeks and 4 weeks, using a 6-item instrument developed by the authors to capture therapeutic connection. Little further information about this instrument was provided, apart from a satisfactory internal consistency. The authors reported a relationship between the alliance and a change in psychological functioning but did not specify at which point the alliance was measured. Higher counselling rapport averaged across treatment predicted lower post-treatment illegal activity and arrests, even when controlled for treatment retention and satisfaction (Joe, Simpson et al. 2001).

Client, therapist and treatment predictors of the quality of the therapeutic relationship

The second aim of the paper was to review studies on determinants of the therapeutic alliance, an area in which there has been far less research to date than on the alliance-outcome relationship. The evidence on client determinants, therapist determinants and treatment setting determinants of the alliance is presented in turn (see Table 3).

Client predictors. A large number of studies have examined client pre-treatment characteristics that may be associated with the development of the therapeutic relationship. Overall, research has failed to find any relationship with client demographic variables. No associations were found with gender (Luborsky et al. 1996; Belding, Iguchi et al. 1997; De Weert-Van Oene, De Jong et al. 1999), age (Luborsky, Barber et al. 1996; Belding, Iguchi et al. 1997; De Weert-Van Oene, De Jong et al. 1999), race (Luborsky, Barber et al. 1996; Belding, Iguchi et al. 1997; Connors et al. 2000), marital status or employment (Luborsky, Barber et al. 1996; Belding, Iguchi et al. 1997). Connors et al. (2000) found a small relationship between female client gender and positive therapist rated early alliance, but not client rated alliance.

Neither were diagnostic variables such as drug use (Luborsky, Barber et al. 1996; Belding, Iguchi et al. 1997; Barber, Luborsky et al. 1999; De Weert-Van Oene, De Jong et al. 1999; Connors, DiClemente et al. 2000), psychological symptoms or psychiatric severity predictive of the early alliance (Luborsky, Barber et al. 1996; Belding, Iguchi et al. 1997; Barber, Luborsky et al. 1999; De Weert-Van Oene, De Jong et al. 1999). This appears independent of the instruments used in assessing alliance and predictors.

Client predictors for the early alliance tended to be either related to experiences in previous treatment attempts (De Weert-Van Oene, De Jong et al. 1999) or related to motivation or readiness for treatment (Joe, Simpson et al. 1998; Connors, DiClemente et al. 2000). DeWeert et al. (1999) found relationships between the early alliance and the number of previous treatment episodes, with clients with more previous treatment scoring lower on the HAq Helpfulness subscale, but clients with previously *completed* treatment episodes scored higher on the Cooperation subscale. Joe et al. (1998) reported that pre-treatment motivation is a good predictor of client-counsellor rapport at one and three months in residential and outpatient drug free sample, but no relationship was found for methadone maintenance clients.

(insert Table 3 about here)

Therapist predictors. Only one study examined therapist characteristics as predictors of the alliance in substance misuse treatment. No relationship was found between client or therapist ratings of the alliance and therapist age, gender or education (Connors, DiClemente et al. 2000).

Treatment modality. Although this was not one of their research questions, Crits-Christoph et al. (1999) found that treatment modality (individual drug counselling, cognitive therapy or psychodynamic counselling) was unrelated to the client or therapist reported alliance in the 2nd and 5th sessions.

Discussion

A key conclusion from this review is that early therapeutic alliance appears to be a consistent predictor of engagement and retention in drug treatment. Although the strength of the relationship of the alliance to retention and engagement in the reviewed studies was typically of moderate size (correlations were typically between r=0.15 and r=0.30), it appeared to be robust in so far as only two studies did not find such a relationship, and these studies had significant methodological problems including small sample sizes. There is some evidence that a good therapeutic relationship may be especially important in retaining drug using clients with psychiatric co-morbidity. With regard to other treatment outcomes, there are indications that early alliance may influence early improvements in treatment, but that it is an inconsistent predictor of post-treatment outcomes. Temporally closer alliance and outcome measures were more strongly related, and findings indicated that alliance measured after the first month and alliance scores averaged across treatment were related to concurrent and later drug use improvements. This review appears to confirm for drug treatment previous findings in psychotherapy research of the importance of the alliance in predicting treatment outcome, despite the fact that the outcomes studied in drug treatment research differed from those relevant to psychotherapy. This is an important result, as there are several characteristics of drug treatment that make it different from psychotherapy in general. For example, depending on the treatment setting it may be the therapist who effectively deprives the patient of his primary substance and this might have been expected to lead to tensions in the early relationship. In contrast, in psychotherapy the therapist might be more readily seen as a helping figure. However, in drug treatment, as in psychotherapy, evidence was found that the early therapeutic alliance is predictive of outcome and the size of the relationships reported are similar to those reported for the psychotherapy field (Horvath and Symonds 1991; Martin, Garske et al. 2000).

A major difficulty in interpreting studies in this area regards whether there is enough evidence that alliance has a causal impact on the outcome of therapy, or whether the association between the alliance

and outcome is spurious or even runs in the opposite direction with changes in symptoms influencing alliance. To date, this key question has not been addressed within the field of substance misuse research; however, there are two studies from the broader psychotherapy field that shed light on this issue and may provide pointers for the design of studies in drug treatment. Barber et al. (2000) investigated the causal relationship between alliance and depression outcome in a small sample of patients with generalised anxiety disorder, depression or personality disorder by assessing and controlling for early symptomatic improvements in levels of depression. The authors found that alliance predicted later depression outcome over and above early symptom improvement. Similarly, Klein et al (2003) investigated the relationship between the alliance and subsequent change in symptomatology in a large sample of chronically depressed patients controlling for two potential sources of spuriousness: a) early change in symptoms which may influence both alliance and subsequent change in symptoms and b) characteristics that may contribute to both poor alliance and poor outcome. Consistent with Barber et al.'s finding, early alliance predicted subsequent change even after controlling for prior and current symptom levels and a number of possible confounders including gender, chronicity of depression, and personality disorders. Such an approach of controlling for early improvements to measure the relationship between symptom change and alliance might be difficult to realise in many drug treatment studies, as the main outcomes of interest are usually not symptomatic improvements, but retention, compliance or post-treatment abstinence for which there is not baseline score. However an important early control variable might be whether the client actually feels that the treatment is helpful.

A second major conclusion of the review is that clients' demographic or diagnostic pre-treatment characteristics, as well as therapist age and gender, do not appear to play an important role in the prediction of the quality of the therapeutic alliance, although these findings have to be regarded as preliminary until more studies on the determinants of the alliance in drug treatment become available. Modest consistent relationships were reported for dynamic variables such as motivation, treatment readiness and positive previous treatment experiences. This is encouraging as, unlike demographic variables, these are variables that can be influenced by skilful treatment providers. In this context, motivational interviewing is just one technique that has been successfully used in recent years. One of the key assumptions in the use of motivational interviewing for facilitating change in substance use is that the therapeutic relationship is of crucial importance as the motivational state of the client can be

substantially influenced by a counselling style characterised by empathy and support of client autonomy. Miller and Rollnick asserted that “motivation for change can not only be influence by but in a very real sense arise from an interpersonal context” (Miller and Rollnick 2002, page 22).

We must conclude that a large proportion of the variability in therapeutic alliance remains unexplained. Studies in generic counselling and psychotherapy settings have identified additional predictors that have not yet been included in studies with drug using clients, the most important one being the quality of past and present social relationships (Moras and Strupp 1982; Gelso and Carter 1985; Kokotovic and Tracey 1990; Mallinckrodt 1995; Eames and Roth 2000; Kanninen et al. 2000; Mallinckrodt 2000). The findings of these studies consistently suggest that clients with more successful relationship histories, secure attachment style and better social support find it easier to establish a successful alliance with their therapists, which in turn is likely to have positive effects on retention and outcome. Other factors that have not yet been investigated concern client-counsellor matching. Research questions that future studies need to address include whether the process of allocation of therapists to clients (agency allocation, therapist choice of clients or client choice of therapist) or gender matching influences the alliance.

Further investigations are also needed to examine the course of the relationship over time and whether the course of the alliance plays a role in predicting drug treatment retention and outcome. Another area that deserves attention is the identification of moderators of the alliance-outcome relationship as studies looking specifically at such effects have found interactions of the alliance with treatment and client factors (Hser, Grella et al. 1999; Petry and Bickel 1999; Barber, Luborsky et al. 2001). The treatment setting and treatment philosophy may determine how much of a role the therapeutic relationship plays in explaining treatment retention and outcomes, but further investigation is needed to clarify the exact nature of the relationships. For this reason, future studies should pay special attention to include clear descriptions of treatment sample, treatment method as well as treatment philosophy, which are lacking in many current studies in the field of substance misuse treatment.

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Tables

Table 1. List of search terms: the therapeutic alliance in drug treatment

Area 1
Therapeutic alliance
Helping alliance
Working alliance
Therapeutic relationship
Therapy relationship
Counselling/counseling relationship
Working relationship
Client and counsellor/counselor and relationship
Client and therapist and relationship
Patient and counsellor/counselor and relationship
Patient and therapist and relationship
Rapport and counselling/counselling
Area 2
Substance (use or user or misuse or abuse or dependency or dependence)
Drug (use or user or misuse or abuse or dependency or dependence)
Heroin
Methadone
Cocaine
Crack
Stimulant
Narcotics
Addiction
Addictive

Table 2. Studies investigating the relationship between alliance and different drug treatment outcomes

Outcome	Authors	Alliance Measure	Assessment point	Effects	Sample	Treatment
Retention						
Time in treatment	Barber et al. 1999	HAq-II –P, HAq-II-T CALPAS-P, CALPAS-T	Sessions 2 & 5	CALPAS-P and -T at Session 2 but not Session 5 predicted retention	252 cocaine users	O/p IDC, DYN, CT
Time in treatment	Barber et al. 2001	HAq-II –P, CALPAS-P	Sessions 2 & 5	CALPAS-P & -T at Session 2. Interaction with modality: Positive: IDC and DYN, negative: CT	308 cocaine users	O/p, IDC, DYN, CT
Time in treatment	Carroll et al. 1997	VTAS-O	Session 2	TA predicts retention in clinical management but not CT	103 cocaine users with dual diagnosis	O/p CT and clinical management
Time in treatment	DeWeert-Van Oene et al. 1999	HAq-I-P	n=260 early, n=80 late alliance	Retention predicted by “Helpfulness” scale	340, drug & alcohol users	I/p and ODF
Time in treatment	DeWeert-Van Oene et al. 2001	HAq-I-P	3rd week	Explained 8% when controlled for intake	93 alcohol & drug users	I/p
Time in treatment	Fenton et al. 2001	WAI-O, -T and –C HARS-O,CALPAS-O, VTAS-O	2nd Session	Observer ratings predict retention, but client or counsellor ratings do not	46 cocaine users with comorbid alcohol use	O/p psychotherapy
Completion	Petry & Bickel 1999	HAq-II-P, HAq-II-T	For n=46 3rd Session, rest after treatment	Completers had higher scores for T and P version	114 opiate users	Buprenorphine & counselling
Completion	Petry & Bickel 1999	HAq-II-P, HAq-II-T	For n=46, 3rd Session, rest after treatment	T predicted retention in interaction with psychiatric severity. Main effect not sign.	114 opiate users	Buprenorphine & counselling
Time in treatment	Simpson et al. 1997	T-rated “rapport”	At 8 weeks	Positive correlation. Clients included if retained for 3 months	517 opiate user	O/p MM
Time in treatment	Belding et al. 1997	HAq-II-P, HAq-II-T	1 & 3 months	None	57 decreasing to 42	O/p
Completion	Tunis et al. 1995	CALPAS-P	4-6 months	None	41 decreasing to 20	O/p MM then detox
Engagement						
Treatment commitment	Broome, Simpson et al. 1999	P-rated, 5-items measuring “rapport”	1st month	Alliance predicted 3 month-outcome in RR, ODF & MM. Included those retained for 3 months.	1141 cocaine users (RR) & 718 (ODF), 689 opiate users (MM)	RR, ODF, o/p MM
Participation	Connors et al. 1997	WAI-P, WAI-T	After Session 2	Alliance predicted participation in o/p treatment, but not aftercare	698 alcohol o/p, 498 alcohol aftercare o/p	O/p alcohol counselling
Engagement	Fiorentine et al. 1999	P-rated, 3 items	8 months for retai-ned/non-retained	Better alliance predicted better engagement	302 mainly stimulant users	O/p IDC
Participation	Tunis et al. 1995	CALPAS-P	4-6 months	None	41 decreasing to 20	O/p MM then detox

(cont.)

Key: o/p=outpatient, i/p=inpatient, RR=residential rehabilitation, DC=day care, MM=methadone maintenance, IDC=drug counselling, DYN=dynamic therapy, CT= cognitive or cognitive behaviour therapy, o/c=outcome. Instruments: –T=Therapist version, -P patient version, -O=observer version

Table 2. Studies investigating the relationship between the alliance and drug treatment outcome (continued)

Outcome	Authors	Alliance Measure	Assessment point	Effects	Sample	Treatment
Psychiatric well-being						
Psychiatric o/c	Barber et al. 1999	HAq-II –P, HAq-II-T CALPAS-P, CALPAS-T	Sessions 2 & 5	HAq-II-P predicted depression o/c	252 cocaine users	O/p IDC, DYN, CT
Psychological functioning	Bell et al. 1997	P-rated, unvalidated 6-items, “connectedness”	1st, 2nd and 4th week	Effects found, but not specified at which time relationships were found	139 drug users	28-day RR, 28-day-DC
Psychiatric o/c	Belding et al. 1997	HAq-II-P, HAq-II-T	1 & 3 months	None	57 at 1 month, 42 at 3 month	O/p
Drug use outcomes						
Drug use at 3 & 6 months	Belding et al. 1997	HAq-II-P, HAq-II-T	1 & 3 months	Alliance at 3 months predicted later drug o/c, early alliance does not	57 at 1 month, 42 at 3 month	O/p
Post-treatment drinking o/c	Connors et al. 1997	WAI-P, WAI-T	After Session 2	Alliance predicted post-treatment drinking outcome	698 alcohol o/p, 498 alcohol aftercare o/p	O/p alcohol counselling
Post-treatment abstinence	Hser et al. 1999	P-rated, 5-items, measuring “rapport”	1st month	MM: better alliance=worse outcomes (but interaction: previous treatment with low rapport worst o/c, experienced with high rapport best o/c), in ODF&RR: better alliance=better o/c	789 cocaine users	O/p MM, long term and short term RR, ODF
Drug use	Barber et al. 1999	HAq-II –P, HAq-II-T CALPAS-P, CALPAS-T	Sessions 2 & 5	None	252 cocaine users	O/p IDC, DYN, CT
Other outcomes						
Various o/c	Fenton et al. 2001	WAI-T, WAI-P, WAI-O, VPPS-O, CALPAS-O, HA Rating Scale-O	3rd Session	Outcomes predicted by observer measures, not by WAI-P and WAI-T	46 cocaine users (of 90: 44 not used because of dropout)	O/p CT, IDC
Various post-treatment o/c	Joe et al. 2001	T-rated instrument measuring “rapport”	Averaged over treatment (up to 6 measurements)	Alliance predicted drug o/c and criminality	Two cohorts: 354 and 223	O/p MM & IDC
Various o/c	Luborsky et al. 1985	HAq-I	3rd Session	Alliance predicted outcomes	Opiate users	O/p MM & DYN, CT, IDC

Key: o/p=outpatient, i/p=inpatient, RR=residential rehabilitation, DC=day care, MM=methadone maintenance, IDC=drug counselling, DYN=dynamic therapy, CT= cognitive or cognitive behaviour therapy, o/c=outcome. Instruments: –T=Therapist version, -P patient version, -O=observer version

Table 3. Studies investigating the relationship between the alliance and client and therapist characteristics

Predictor	Authors	Alliance Measure	Assessment time point	Effects	Sample	Treatment
Client predictors						
Age	Connors et al. 2000	WAI-T, WAI-P	Session 2	In o/p sample & WAI-C only, significant positive predictor of o/p P-alliance in multivariate analysis	707 o/p, 480 a/c	O/p and a/c alcohol, CT, MET, TSF
Age	Petry & Bickel 1999	HAq-II-P, HAq-II-T	For n=46: 3rd Session, for rest after treatment	None	114 opiate users	Buprenorphine & counselling, o/p
Gender	Connors et al. 2000	WAI-T, WAI-P	Session 2	WAI-T higher for o/p females, but n.s. in multivariate analysis in a/c sample	707 o/p, 480 a/c	O/p and a/c alcohol, CT, MET, TSF
Gender	Belding et al. 1997	HAq-II-P, HAq-II-T	1 & 3 months	None	57 decreasing to 42	O/p
Gender	DeWeert-Van Oene et al. 1999	HAq-I-P	For n=260 early alliance, for 80 at 25 weeks	None	340 drug & alcohol users	I/p and ODF
Gender	Luborsky et al. 1996	HAq-II-P, HAq-II-T CALPAS-P, CALPAS-T	Sessions 2 & 5	None	246 cocaine users	DYN, CT, IDC, group counselling
Gender	Petry & Bickel 1999	HAq-II-P, HAq-II-T	For n=46: 3rd Session, for rest after treatment	None	114 opiate users	Buprenorphine & counselling, o/p
Ethnicity	Belding et al. 1997	HAq-II-P, HAq-II-T	1 & 3 months	None	57 decreasing to 42	O/p
Ethnicity	Connors et al. 2000	WAI-T, WAI-P	Session 2	None	707 o/p, 480 a/c	O/p and a/c alcohol, CT, MET, TSF
Ethnicity	Luborsky et al. 1996	HAq-II-P, HAq-II-T CALPAS-P, CALPAS-T	Sessions 2 & 5	None	246 cocaine users	DYN, CT, IDC, group counselling
Education	Connors et al. 2000	WAI-T, WAI-P	Session 2	Negatively predicted o/p P scores in multivariate analysis	707 o/p, 480 a/c	O/p and a/c alcohol, CT, MET, TSF
Previous treatment	DeWeert-Van Oene et al. 1999	HAq-I-P	For n=260 early alliance, for 80 at 25 weeks	Previous treatment completed – better alliance, not-completed – worse alliance	340 drug & alcohol users	I/p and ODF
Severity of drinking	Connors et al. 2000	WAI-T, WAI-P	Session 2	Negatively associated with T score, n.s. in multivariate analysis	707 o/p, 480 a/c	O/p and a/c alcohol, CT, MET, TSF
Pattern/severity of drug use	Barber et al. 1999	HAq-II-P, HAq-II-T, CALPAS-P, CALPAS-T	Sessions 2 & 5	None	252 cocaine users	O/p IDC, DYN, CT
Drug use	Luborsky et al. 1996	HAq-II-P, HAq-II-T CALPAS-P, CALPAS-T	Sessions 2 & 5	None	246 cocaine users	DYN, CT, IDC, group counselling

(cont.)

Key: o/p=outpatient, i/p=inpatient, a/c=after care. CT= cognitive or cognitive behaviour therapy, DC=day care, DYN=dynamic therapy, IDC=drug counselling, MM=methadone maintenance, ODF: outpatient drug free counselling, RR=residential rehabilitation, TSF=12-step programme, MET: Motivational Enhancement Therapy. Instruments: – T=Therapist version, -P patient version, -O=observer version, n.s.=not significant.

Table 3. Studies investigating the relationship between client and therapist characteristics at intake and the alliance (continued)

Predictor	Authors	Alliance Measure	Assessment time point	Effects	Sample	Treatment
Depression	Connors et al. 2000	WAI-T, WAI-P	Session 2	Positively predicted a/c P score in multivariate analysis, correlated but n.s. in multivariate analysis in o/p sample	707 o/p, 480 a/c	O/p and a/c alcohol, CT, MET, TSF
Psychiatric severity	Barber et al. 1999	HAq-II-P, Haq-II-T, CALPAS-P, CALPAS-T	Sessions 2 & 5	None	252 cocaine users	O/p IDC, DYN, CT
Psychiatric severity	Belding et al. 1997	HAq-II-P, HAq-II-T	1 & 3 months	None	57 decreasing to 42	O/p
Psychiatric severity	DeWeert-Van Oene et al. 1999	HAq-I-P	For n=260 early alliance, for 80 at 25 weeks	None	340 drug & alcohol users	I/p and ODF
Psychiatric severity	Luborsky et al. 1996	HAq-II-P, HAq-II-T CALPAS-P, CALPAS-T	Sessions 2 & 5	None	246 cocaine users	DYN, CT, IDC, group counselling
Social support	Connors et al. 2000	WAI-T WAI-P	Session 2	Correlated with P scores, n.s. in multivariate analysis.	707 o/p, 480 a/c	O/p and a/c alcohol, CT, MET, TSF
Treatment readiness	Connors et al. 2000	WAI-T, WAI-P	Session 2	Treatment readiness predicted WAI-P in multivariate analysis, not WAI-T	707 o/p, 480 a/c	O/p and a/c alcohol, CT, MET, TSF
Treatment readiness	Joe et al. 1998	P-rated instrument measuring “rapport”	1 & 3 months	In RR and ODF treatment readiness predicted alliance, but not in MM	2265 RR, 1791 ODF, 981 MM	RR, o/p MM, ODF
Therapist predictors						
Age	Connors et al. 2000	WAI-T, WAI-P	Session 2	Correlated with o/p P scores only, n.s. in multivariate analysis	707 o/p, 480 a/c	O/p and a/c alcohol, CT, MET, TSF
Gender	Connors et al. 2000	WAI-T, WAI-P	Session 2	None	707 o/p, 480 a/c	O/p and a/c alcohol, CT, MET, TSF
Education	Connors et al. 2000	WAI-T, WAI-P	Session 2	Correlated with a/c T scores only, n.s. in multivariate analysis	707 o/p, 480 a/c	O/p and a/c alcohol, CT, MET, TSF

Key: o/p=outpatient, i/p=inpatient, a/c=after care. CT= cognitive or cognitive behaviour therapy, DC=day care, DYN=dynamic therapy, IDC=drug counselling, MM=methadone maintenance, ODF: outpatient drug free counselling, RR=residential rehabilitation, TSF=12-step programme, MET: Motivational Enhancement Therapy. Instruments: – T=Therapist version, -P patient version, -O=observer version, n.s.=not significant