Predicting the early therapeutic alliance in the treatment of drug abuse

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ABSTRACT

Aims: To predict the early therapeutic alliance from a range of potentially relevant factors, including clients' social relationships, motivation and psychological resources, and counsellors' professional experience and ex-user status.

Design: The study recruited 187 clients starting residential rehabilitation treatment for drug misuse in three UK services. Counsellor and client information was assessed at intake, and client and counsellor ratings of the alliance were obtained during weeks 1, 2, and 3.

Measurements: The intake assessment battery included scales on psychological wellbeing, treatment motivation, coping strategies, and attachment style. Client and counsellor versions of the Working Alliance Inventory (WAI-S) were used for weekly alliance measurement. Hierarchical linear models were used to examine the relationship between alliance and predictor variables.

Findings: Clients who had better motivation, coping strategies, social support, and a secure attachment style were more likely to develop good alliances. Findings with regard to counsellor characteristics were not clear cut: clients rated their relationships with ex-user counsellors, experienced counsellors and male counsellors as better, but more experienced counsellors rated their alliances as worse.

Conclusions: The findings might give important leads as to what interventions lead to an improvement in the therapeutic alliance. Further work will need to establish whether the therapeutic alliance and ultimately treatment outcomes can be enhanced by working on improving clients' motivation and psychosocial resources.

Key words: therapeutic alliance, drug treatment

INTRODUCTION

Drug misuse has a major negative impact on an individual's physical and psychological well-being and, through its association with crime and social deprivation, on society as a whole. The number of drug users in treatment is steadily increasing (Department of Health 2001; 2003) and the importance of obtaining valid information on the effective treatment of drug use cannot be overstated. However, drug users are often considered to be a particularly difficult client group to engage and retain in treatment (Gossop, Marsden, Stewart and Rolfe 1999; Joe, Simpson and Broome 1999; Simpson, Joe, Rowan-Szal and Greener 1997; Stanton 1997).

The therapeutic relationship between client and therapist, or alliance, is seen as an essential component of generic psychotherapy and counselling (Gaston 1990). There is now good evidence that the quality of the therapeutic relationship is a significant predictor of treatment outcomes of clients presenting with a variety of non-psychotic disorders across different psychotherapeutic modalities (for two recent meta-analyses see Horvath & Symonds 1991; Martin, Garske and Davis 2000).

The relationship between the early therapeutic relationship on the one hand and the drug treatment process and outcomes on the other hand is also well documented (reviewed in Meier, Barrowclough and Donmall d.o.i. 10.111/j.1360-0443.2004.00935.x). Studies consistently found that better therapeutic alliance early in treatment predicts longer treatment retention or completion (Barber, Luborsky, Crits-Christoph, Thase, Weiss, Frank, Onken and Gallop 1999; Barber, Luborsky, Gallop, Crits-Christoph, Frank, Weiss, Thase, Connolly, Gladis, Foltz and Siqueland 2001; De Weert-Van Oene, De Jong, Jorg and Schrijvers 1999; De Weert-Van Oene, Schippers, De Jong and Schrijvers 2001; Fenton, Cecero, Nich, Frankforter and Carroll 2001; Luborsky, Barber, Siqueland, McLellan and Woody 1995; Petry & Bickel 1999; Simpson et al. 1997). Positive relationships have also been reported between a good therapeutic relationship and client engagement (Broome, Simpson and Joe 1999; Fiorentine, Nakashima and Anglin 1999; Simpson et al. 1997) and reduced in-treatment drug use (Gerstley 1988; Simpson et al. 1997).

Research has been much less successful in establishing what determines whether drug using clients and their counsellors develop good therapeutic relationships (Meier et al. d.o.i. 10.111/j.1360-0443.2004.00935.x). There are now several studies that have examined client pre-treatment characteristics expected to be associated with the development of the therapeutic relationship in drug treatment. Researchers generally did not find relationships with client demographic variables, such as gender (Belding, Iguchi, Morral and McLellan 1997; De Weert-Van Oene et al. 1999; Luborsky, Barber, Siqueland, Johnson, Najavits, Frank and Daley 1996), age (Belding et al. 1997; Connors, DiClemente, Dermen, Kadden, Carroll and Frone 2000; De Weert-Van Oene et al. 1999; Luborsky et al. 1996), ethnicity (Belding et al. 1997; Connors et al. 2000; Luborsky et al. 1996), or marital status and employment

(Belding et al. 1997; Luborsky et al. 1996). Similarly, diagnostic variables such as pre-treatment drug use (Barber et al. 1999; Belding et al. 1997; De Weert-Van Oene et al. 1999; Luborsky et al. 1996), or psychological problems (Barber et al. 1999; De Weert-Van Oene et al. 1999; Luborsky et al. 1996) were not related to the early alliance. However, some progress has been made when studying the association between therapeutic relationships and treatment motivation (Connors et al. 2000; Joe, Simpson and Broome 1998). Nevertheless, even in these studies, effect sizes were small and much of the variance in therapeutic alliance remained unexplained.

There are a number of client predictors of the alliance that have been investigated outside the field of drug misuse research. A consistent finding in the field of generic psychotherapy is that the quality of clients' current or past relationships predicts the quality of the therapeutic relationship. A number of studies found that clients with secure attachment style (ie who are comfortable with close emotional relationships) developed better therapeutic alliances (Dunkle & Friedlander 1996; Eames & Roth 2000; Mallinckrodt 2000; Mallinckrodt, Coble and Gantt 1995; Mallinckrodt, Gantt and Coble 1995). The quality of past and current social and family relationships was also related to the formation of the early alliance (Kokotovic & Tracey 1990; Moras & Strupp 1982). Others found a relationship between hostility or negative attitude and an inability to engage with the counsellor (Gomes-Schwartz 1978; Kokotovic & Tracey 1990; Marziali, Marmar and Krupnick 1981). The common feature amongst the constructs that show good predictive validity in and outside drug treatment, appears to be that they describe a client's psychological and psychosocial resources and fall broadly in four areas: motivation, treatment attitudes, and the quality of personal relationships.

The role of counsellor variables in the prediction of the alliance is poorly understood. There is only one study in the substance misuse field that included counsellor characteristics as predictors of alliance. No relationship was found between counsellor age, gender or education on the one hand and client or counsellor ratings of the alliance on the other hand (Connors et al. 2000). Amongst counsellor factors that might be expected to influence the alliance, perhaps the most salient is counsellor training and experience. However, the findings of three studies examining this relationship are entirely inconsistent. In one study counsellor experience interacted with client attachment style in predicting alliance. For clients with secure attachment style, counsellor experience did not make a difference, but for clients with non-secure attachments, more experienced counsellors had better client-rated alliances (Kivlighan, Patton and Foote 1998). The second study found that counsellor experience positively predicted client-rated therapeutic alliance, but were negatively associated with counsellor ratings (Mallinckrodt & Nelson 1991). Finally, in the third study, counsellor training and skill were positively related to counsellor rated alliance, but *not* related to client rated alliance (Hersoug, Hoglend, Monsen and Havik 2001). A counsellor variable specific to drug misuse research is whether counsellors are themselves ex-addicts. To date there is no research on whether ex-addict counsellors are able to develop more supportive therapeutic relationships with their clients. However, there is related research which indicates that there

may well be differences between ex-addict and non-addict counsellors that may affect the development of the relationship (LoSciuto, Aiken, Ausetts and Brown 1984). From personal experience, it seems that many UK agencies tend to operate a system of matching female clients to female counsellors, but that such matching is not usually offered to male clients. It is not clear whether same-sex pairs are able to establish a better alliance than mixed-sex pairs and this will be investigated.

The present study investigates whether client and counsellor characteristics that were found to predict the early therapeutic alliance in generic psychotherapy and counselling, but that have not been considered in drug treatment research, may be helpful in explaining the therapeutic relationship between drug using clients and their counsellors. Special attention will be paid to client motivation, attitudes towards treatment and social relationships, and to counsellor experience and ex-addict status. After controlling for demographic variables, drug use and past treatment experience, it was expected that variables on four client domains would predict better client counsellor relationships: psychological resources (coping strategies, self-efficacy, self-esteem), social relationships (social support, attachment security, hostility), attitudes and motivation (treatment readiness, desire for help, external pressure to seek treatment, treatment confidence, treatment expectations) and psychological wellbeing (number of psychological problems, depression, anxiety). In terms of counsellor predictors, it was expected that greater experience, having a formal counselling qualification, ex-user status and having a client of the same gender predict better client-counsellor relationships.

METHOD

The Counselling Project was a longitudinal cohort study of consecutive clients entering drug treatment in three residential treatment services between August 2002 and August 2003. These services were selected on the basis of their willingness and ability to accommodate a research project such as the Counselling Project. Two of these treatment services were 12-step (Minnesota model) programmes with scheduled durations of six months, the third was a modified therapeutic community with a schedule programme length of 9 months. In each of the services, clients underwent an intensive programme (4-8 hours daily) of one-to-one and group treatment sessions, as well as attending educational lectures. In the therapeutic community, the treatment programme also included housekeeping duties such as cooking and keeping house and grounds clean. Contact with treatment staff was not confined to scheduled sessions, but occurred on an ongoing informal basis.

Information about counsellors was gathered before the start of client recruitment. A member of staff brought the study to the attention of eligible new clients. Clients had the opportunity to ask questions and signed a consent form. Exclusion criteria were a) primary treatment focus other than drug addiction (e.g. primary alcohol addiction, gambling or eating disorders), b) inability to read the English language, c) age less than 18 years, and d) retained in treatment

for 5 days or less so that an interview could not be arranged. The latter resulted in the exclusion of 23 clients who left after an average length of stay of 4 days. Most of these clients had not received any one-to-one counselling by their primary counsellor, as normal treatment commitments only started after a 3-7 day initial orientation phase. Four eligible clients refused participation. The remaining clients (n=187) were recruited and assessed during the first week of treatment. This intake assessment consisted of a structured interview followed by a questionnaire, which clients completed with the researcher. Both clients and counsellors were each asked to complete questionnaires about the alliance on a fixed weekday every week. Only data collected during the intake assessment and in the first three weekly alliance questionnaires will be reported, as the focus of this paper is the alliance formation early in treatment. A least one alliance rating was available for 170 counsellors and 165 clients, with 109 counsellors and 105 clients providing all three ratings.

Instruments

The following domains were assessed during the intake assessment:

Coping behaviour was assessed by a questionnaire based on Coping Behaviours Inventory (Litman, Stapleton and Oppenheim 1983), which was developed for use with alcoholics. It uses 19 modified items to assess what coping behaviours clients use when they have cravings. Some of the original items were not relevant for drug users, for example "waiting it out until everything is shut", the remainder were modified using wording appropriate to drug users (eg. "keeping in the company of non-drinkers" changed to "…of non-users"). The internal consistency of the new shortened scale was Cronbach's α=0.88.The total score of the scale is used (named Coping Strategies Index), higher scores on this index indicate better coping strategies.

Self-efficacy, self-esteem, social support, hostility, treatment readiness, desire for help, (perceived) external pressure to seek treatment, depression, and anxiety. These scales were taken from the Texas Christian University Client Evaluation of Self and Treatment Scales (Simpson 1998). The scales have been used in the many large-scale US drug treatment studies. Information on psychometric properties is available (Joe, Broome, Rowan-Szal and Simpson 2002; Knight, Holcom and Simpson 1994). Each item is scored on a 5-point fully-anchored Likert Scale (1=disagree strongly to 5=agree strongly).

Adult attachment style was assessed using a modified version of the Relationship Questionnaire (Bartholomew & Horowitz 1991). The original instrument is a single-item measure consisting of four short vignettes, each describing one of four adult attachment prototypes (secure, preoccupied, fearful, dismissing). The RQ was slightly modified by breaking up vignettes into ten short sentences to allow clients to judge their agreement with each statement. The wording and response format were left unchanged. Ratings of the four attachment patterns using the RQ have shown stability over an 8 month test re-test period, but reliabilities were only moderate (Scharfe & Bartholomew 1998). Good discriminant validity was demonstrated by Griffin and Bartholomew (1994). Only the score on the subscale

"attachment security index" is considered here, as an indication of the capacity to build strong personal relationships.

Treatment confidence was assessed by three questions each rated from 0 to 100%: a) how likely did the client think it was that s/he would complete treatment as scheduled, b) how likely did the client think it was that s/he would make important changes in life, b) how likely did the client think it was s/he would use drugs again three months after leaving treatment.

Psychological symptoms were assessed using the Addiction Severity Index Psychiatric Scale (McLellan, Luborsky, Woody and O'Brien 1980). The instrument assesses whether clients ever and currently experienced any of nine symptoms mainly from the depression and anxiety spectrum. The Addiction Severity Index items do not attempt to diagnose psychiatric illness, but rather give an impression of the client's feeling of mental stability.

Treatment Expectations. The Treatment Expectations Questionnaire was developed to capture clients' negative expectations about treatment. It is based on a list of negative thoughts detailed in a paper by Liese & Beck (1995). Clients were asked to indicate how much they agreed (5-point Likert scale: strongly agree to strongly disagree) with 10 statements. The internal consistency of the scale was Cronbach's α=0.74 and there was a strong common factor with high loadings of all items on this factor. A total score was computed, the Treatment Expectations Index. Higher scores on this index indicate more negative treatment expectations.

Demographics. Information was obtained about the client's age and gender, as well as a number of other background variables not considered here.

Recent drug use. Clients were read a comprehensive list of drugs and asked whether, and for how many days per week, they had used each of these drugs in the 30 days prior to treatment.

Counsellor characteristics. The staff questionnaire was a one page questionnaire completed by all counsellors before client recruitment commenced. It captured counsellors' demographic characteristics (age, gender, ethnicity), professional training, number of months experience in working with drug users and number of months in the current role, ex-user status, and job satisfaction.

Early Alliance. The alliance was assessed weekly using the short 12-item client and counsellor version of the Working Alliance Inventory (WAI-S, Horvath 1991; Tracey & Kokotovic 1989). The reliability estimate for the WAI-S has been given as Cronbach's α=0.98 for the patient version and α=0.95 for the therapist version (Tracey & Kokotovic 1989; Tryon & Kane 1993). Test-retest reliability was r=0.83 across a two-week period (Tracey and Kokotovic, 1989). For the purpose of this study, the WAI-S scores for the first three weeks were used as an indicator of the early therapeutic alliance, higher scores indicating a better therapeutic alliance.

Statistical methods. Hierarchical linear models were used to assess the association between alliance scores and predictor variables. A three level model was used because the

data are repeated measurements on individuals who are nested within therapists. The unadjusted associations were calculated by fitting separate models for each independent variable. Then, the adjusted associations were calculated by fitting a model using a backward stepwise regression approach. The stopping criterion for the stepwise regression was that all variables remaining in the model had to have a P_value < 0.10. The hierarchical models were fitted using Proc Mixed in SAS.

Sample characteristics

Counsellors. Twenty-four counsellors, that is all counsellors at each of the three sites, treated the clients in the study, 8 (33%) in Agency A, 5 (21%) in Agency B, and 11 (46%) in Agency C. Counsellor characteristics are shown in Table 1.

(Insert Table 1 about here)

Clients. The total number of clients assessed in the study was 187. The sample characteristics can be found in Table 1. The clients were predominantly male and in their 20s or 30s (median age 29.6, range 18 to 52). The majority of clients had been using heroin on a daily basis (145, 77.5%) and were injecting drug users (125, 66.8%). A quarter of clients were involved in regular problematic alcohol use in addition to their primary drug problem. The sample was typical for UK drug treatment samples with regard to age, gender and drug use (Gossop, Marsden and Stewart 1998). Only 6% of clients had never been in contact with treatment services before and a third of clients had previous treatment experience in a residential rehabilitation service. Lifestyle variables pointed to unstable and unfavourable living circumstances for the majority of clients in the study: 27% were either homeless or in unstable living arrangements, over 40% had no school qualifications, and three quarters had been unemployed before treatment. Illegal activity was common, and three-quarters of clients had committed crimes in the three months before treatment entry. Levels of self reported psychological problems were high, and over half had been prescribed medication for psychological problems (excluding drugs used for substitution and detoxification).

RESULTS

The early alliance

The total scores of client and counsellor WAI ratings obtained in the first three weeks of treatment were used. Visual inspection of histograms suggested near-normal distributions with no outliers or extreme cases. The counsellor and the client alliance scores were not highly related (r=0.40, r=0.18 and r=0.29 for first, second and third week scores). Thus, it would not have been appropriate to combine them into a single alliance score, and the hypotheses were tested separately for the counsellor and the client rated alliance. Same-rater alliance scores showed relatively high stability over the first three weeks: wee 1 to 2 r=0.65;

week 2 to 3 r=0.67; and week 1 to 3 r=0.52 for therapist ratings; and week 1 to 2 r=0.65, week 2 to 3 r=0.72, and week 1 to 3 r=0.63 for client ratings.

Prediction of the therapeutic alliance from pre-treatment and counsellor variables

Approximately 39.3% of the total variation in counsellor ratings was due to within-counsellor variation but only 32.3% of the total variation in client ratings was due to within-client variation, although overall there was greater variability in client ratings. Univariate regressions showed a large number of significant relationships between predictor and control variables on the one hand and client and counsellor alliance scores on the other. The final model of counsellor alliance scores from the backward stepwise regression procedure included seven predictor variables (6 client and 1 counsellor predictors), which explained 37.5% of the total between-counsellor variation. For the client rated alliance there were seven predictors (4 client and 3 counsellor predictors) that explained 32.6% of the total between-client variation.

Prediction of the early *counsellor* rated alliance (Table 2)

Three indicators for good psychological resources were used in this study, self-esteem, self-efficacy, and the availability of coping strategies, which were expected to be positively related with alliance scores. In accordance with this, counsellors rated their relationship with clients who started treatment with more coping strategies as better than with clients who had fewer strategies for coping with problems. Self-efficacy and self-esteem were significant predictors in univariate regressions but not in the multivariate model.

The indicators for social relationships used in this study comprised social support, attachment security, and level of hostility. All three variables were significant predictors in the expected direction in univariate analysis. As expected, a secure attachment style significantly predicted the counsellor rated alliance in the multivariate model. Although better social support was a highly significant predictor of the alliance in univariate analysis, it was not significant in the multivariate model.

(Insert Table 2 about here)

The motivation variables were expected to positively predict the alliance. In support of the hypothesis, counsellors judged their relationships with clients who felt greater external pressure to be in treatment to be less successful and also reported better relationships with clients who had a greater desire for help. Treatment readiness predicted the alliance in the expected direction in univariate regression, but failed to reach significance in the multivariate model. Clients' negative attitudes and expectations towards treatment were expected to be negatively related to alliance ratings. The univariate relationships between the alliance and treatment expectations and treatment confidence were in the expected direction, yet neither variable predicted the counsellor rated alliance in the multivariate model.

The psychological wellbeing variables were significantly related to the counsellor rated alliance in univariate analysis, with more psychological problems related to poorer alliances. However, the variables failed to reach significance in the multivariate model.

Of the client control variables, gender showed to be a significant predictor. Counsellors rated their relationships with female clients as less successful than with male clients. Drug use and treatment history variables were unrelated to the counsellor rated alliance.

Higher levels of experience of the counsellors were expected to predict better therapeutic alliances. Contrary to expectations, whether or not counsellors had any formal counselling qualifications was unrelated to their alliance ratings. Another measure capturing experience, the length of time counsellors had worked in their current job was related to the alliance in the opposite direction to what was expected: the more experienced the counsellor was, the less positive they rated their alliances.

Ex-addict counsellors were expected to develop better alliances with their clients than non-addict counsellors. However, the variable failed to reach significance in the either the univariate or multivariate model. Whether or not clients were gender matched to their counsellors did not affect the therapeutic alliance.

Prediction of the early *client* rated alliance (Table 3)

None of the "psychological resources" self-esteem, self-efficacy, or the availability of coping strategies predicted client alliance scores, although self-efficacy predicted better therapeutic alliances in the univariate model.

As expected, better social support and secure attachment style were highly significant predictors of good client rated alliances even when adjusting for all other predictors. Clients with lower hostility levels reported better relationships with their counsellors, however this did not reach significance in the multivariate model.

Of the motivational variables, external pressure to be in treatment was the best predictor of the alliance. In accordance with the hypothesis, high-scoring clients who felt they were in treatment because of external pressure reported less successful relationships than clients who scored lower. Treatment readiness predicted the alliance in the expected direction in both the univariate and multivariate model, whereas desire for help, treatment confidence and fewer negative treatment expectations predicted better alliances only in the univariate analyses. In support of the hypothesis, clients who had more confidence in treatment reported better alliances in univariate analyses; but this relationship was not significant in the

multivariate analysis. The level of negative expectations about treatment was not predictive of the client rated alliance.

Psychological wellbeing was unrelated to the alliance in the multivariate analysis, although in the univariate analysis lower anxiety and depression scores tended to predict better alliances.

None of the demographic, drug use or treatment history control variables selected on the basis of the literature review were significant in the multivariate model.

The counsellor having a formal qualification predicted better client rated alliances in the multivariate model. As expected, clients also rated their relationships with ex-addict counsellors more favourably than with non-user counsellors.

DISCUSSION

The present study showed that a combination of client pre-admission variables and, to a lesser degree, variables relating to counsellor characteristics contribute to the early therapeutic alliance. The psychological and psychosocial client variables included in the current study emerged as strong predictors of the alliance, especially motivation, the availability of coping strategies, social support, and secure adult attachment style. As expected, better psychological resources and motivation were generally associated with more successful client-counsellor relationships.

The role of client characteristics in predicting the alliance

The finding that the motivational measures, i.e. external pressure, desire for help (counsellor model) and treatment readiness (client model) positively predict the alliance is in accordance with the previous literature (Connors et al. 2000; Joe et al. 1998). It has been suggested in these two papers that motivated clients may see the therapeutic endeavour in a more positive light and be more invested in the process of change. This is likely to lead to a better agreement with the counsellor about the goals and tasks to be achieved in treatment.

As expected, pre-admission social support from family and friends and secure attachment style also predicted better therapeutic alliances. This makes intuitive sense, because clients who have a history of successfully interacting with others would be more likely to establish a good relationship with their counsellor. There may well be underlying factors such as friendliness, helpfulness or conforming with social rules which enable clients to both attract social support and to develop positive relationships with their counsellors.

Drug use, treatment history and demographic variables played only a minor role in explaining the client or the counsellor rated alliance, which is in accordance with previous findings (Barber et al. 1999; Connors et al. 2000; Luborsky et al. 1996; Petry & Bickel 1999). Client

gender was the only demographic variable to have an effect in the multivariate model predicting the counsellor rated alliance. In contrast to Connors et al.'s (2000) findings, counsellors rated their relationships with male clients as better than that with female clients. Conversely, gender was unrelated to the client rated alliance, which is accordance with most previous studies (Belding et al. 1997; De Weert-Van Oene et al. 1999; Luborsky et al. 1996).

The results of the univariate analyses also suggested that counsellors might find clients with psychological problems more challenging and more difficult to engage in a relationship, and clients with psychological problems tended to rate their relationships as worse than clients without such problems. These findings are in contrast with two previous studies, where no association was found between psychological problems and either the client or the counsellor rated alliance (Barber et al. 1999; Luborsky et al. 1996). Both studies were conducted with cocaine users in US outpatient settings, which may be responsible for the difference in results. If confirmed, the finding that psychological problems are negatively related to the alliance is of importance because of the high levels of psychological problems typically found in UK drug treatment samples (Marsden, Gossop, Stewart, Rolfe and Farrell 2000). Most counsellors in drug services have not undergone any specialist training to deal with psychological or psychiatric problems (Meier, Donmall and Heller 2004), thus it would maybe not be surprising if counsellors felt at a loss when confronted with drug users who have such problems. A possible implication of this finding is the need for further research to investigate whether extra training concerning mental health issues might lead to more confidence, better therapeutic alliances and ultimately better treatment outcomes with this client group.

The role of counsellor variables in predicting the alliance

This study is one of the few research projects to include counsellor variables as potential predictors of the alliance, namely the counsellors' demographics, professional training and experience, ex-user status, job satisfaction, and whether the counsellor was gender matched to the client.

It was expected that ex-user counsellors would be able to establish better alliances with clients than non-user counsellors, and this was confirmed for client ratings of the alliance, which indeed indicated greater satisfaction with the alliance if the counsellor was an ex-user. It did not become clear in this study whether and at which point clients became aware of their counsellor's ex-user status and thus whether it played a role.

A variable not previously investigated in the drugs field was the level of the counsellor's professional experience, and inconsistent findings have been reported in the psychotherapy literature. The positive effect of counsellor qualification on client alliance ratings found in the present study is consistent with Mallinckrodt & Nelson (1991). In stark contrast to this and to Hersoug et al.'s (2001) findings, more experienced counsellors themselves reported less successful therapeutic alliances with their clients than their less experienced colleagues. It

may be that more experienced counsellors, having treated a greater number clients, may have developed a capacity for more critical or realistic appraisal of the relationship. This might mean that they provide more varied alliance ratings compared to novice counsellors who may consistently rate their relationships with clients as good, much as clients do in their uniformly high alliance ratings. An alternative explanation could be that if high experience was related to a greater risk of burnout, this might lead to difficulties in establishing a supportive relationship with "yet another" drug user. Thus some open questions remain about the role of drug counsellors' experience and training in the development of the therapeutic alliance.

Limitations

There are some limitations to the generalisability of the study that need to be addressed. The study sample in the present study was a sample of clients with severe problems treated in residential treatment services, and findings are best generalised to similar client groups and settings. Also, some clients dropped out before they had completed an intake assessment, thus the present results can only be applied to those who become at least minimally engaged.

Conclusion and outlook

A number of client and counsellor predictors were found to positively predict the alliance, and these findings may give important leads as to what interventions might result in an improvement in the therapeutic alliance. It was encouraging that it was not the static demographic variables (with the exception of gender) that predicted the alliance, but the potentially modifiable psychological and psychosocial resources. It is thus possible that by working on improving the client's psychological wellbeing, motivation and capacity to develop social relationships, the therapeutic alliance and ultimately treatment outcomes can be improved.

The current study highlighted inconsistencies with regard to the role of therapist experience as a predictor of the therapeutic alliance, and future studies are required which unravel the (potentially negative) effects of working in the drugs field for a long time from the effects of therapist expertise and skill. Further research is needed to replicate the present findings for non-residential settings. A major area of future work concerns also the development and evaluation of interventions geared towards improving therapeutic alliances in drug treatment settings.

References

Barber, J P, Luborsky, L, Crits-Christoph, P, Thase, M E, Weiss, R, Frank, A, Onken, L and Gallop, R (1999). Therapeutic alliance as a predictor of outcome in the treatment of cocaine dependence. Psychotherapy Research **9**(1): 54-73

Barber, J P, Luborsky, L, Gallop, R, Crits-Christoph, P, Frank, A, Weiss, R, Thase, M E, Connolly, M B, Gladis, M, Foltz, C and Siqueland, L (2001). Therapeutic alliance as a

predictor of outcome and retention in the National Institute on Drug Abuse Collaborative Cocaine Treatment Study. Journal of Consulting and Clinical Psychology **69**(1): 119-124

Bartholomew, K and Horowitz, L M (1991). Attachment styles among young adults: a test of a four-category model. Journal of Personality and Social Psychology **61**(2): 226-244

Belding, M A, Iguchi, M Y, Morral, A R and McLellan, A T (1997). Assessing the helping alliance and its impact in the treatment of opiate dependence. Drug and Alcohol Dependence **48**: 51-59

Broome, K M, Simpson, D D and Joe, G W (1999). Patient and program attributes related to treatment process indicators in DATOS. Drug and Alcohol Dependence **57**(2): 127-135

Connors, G J, DiClemente, C C, Dermen, K H, Kadden, R, Carroll, K M and Frone, M R (2000). Predicting the therapeutic alliance in alcoholism treatment. Journal of Studies on Alcohol **61**(1): 139-149

De Weert-Van Oene, G H, De Jong, C A, Jorg, F and Schrijvers, G J (1999). The Helping Alliance Questionnaire: psychometric properties in patients with substance dependence. Substance Use and Misuse **34**(11): 1549-1569

De Weert-Van Oene, G H, Schippers, G M, De Jong, C A and Schrijvers, G J (2001). Retention in substance dependence treatment: the relevance of in-treatment factors. Journal of Substance Abuse Treatment **20**(4): 253-264

Department of Health (2001). Statistics from the Regional Drug Misuse Databases on drug misusers in treatment in England, 2000/01. London.

Department of Health (2003). Provisional statistics from the national drug treatment monitoring system in England, 2001/02 and 2002/03. London.

Dunkle, J H and Friedlander, M L (1996). Contribution of therapist experience and personal characteristics to the working alliance. Journal of Counseling Psychology **43**(4): 456-460

Eames, V and Roth, A (2000). Patient attachment orientation and the early working alliance - a study of patient and therapist reports of alliance quality and ruptures. Psychotherapy Research **10**(4): 421-434

Fenton, L R, Cecero, J J, Nich, C, Frankforter, T L and Carroll, K M (2001). Perspective is everything: the predictive validity of six working alliance instruments. Journal of Psychotherapy Practice and Research **10**(4): 262-268

Fiorentine, R, Nakashima, J and Anglin, M D (1999). Client engagement in drug treatment. Journal of Substance Abuse Treatment **17**(3): 199-206

Gaston, L (1990). The concept of the alliance and its role in psychotherapy: Theoretical and empirical considerations. Psychotherapy **27**: 143-153

Gerstley, L J (1988). Antisocial personality and the therapeutic alliance. Dissertation Abstracts International **48**(12-B, Pt 1): 3678-3679

Gomes-Schwartz, B (1978). Effective ingredients in psychotherapy: prediction of outcome from process variables. Journal of Consulting and Clinical Psychology **46**(5): 1023-1035

Gossop, M, Marsden, J and Stewart, D (1998). NTORS at one year. London, Department of Health.

Gossop, M, Marsden, J, Stewart, D and Rolfe, A (1999). Treatment retention and 1 year outcomes for residential programmes in England. Drug and Alcohol Dependence **57**(2): 89-98

Griffin, D W and Bartholomew, K (1994). The metaphysics of measurement: The case of adult attachment. In: Attachment processes in adulthood. Advances in personal relationships. K. Bartholomew and D. Perlman. Bristol, PA, Jessica Kingsley Publishers**:** 17-52.

Hersoug, A G, Hoglend, P, Monsen, J T and Havik, O E (2001). Quality of working alliance in psychotherapy: therapist variables and patient/therapist similarity as predictors. Journal of Psychotherapy Practice and Research **10**(4): 205-216

Horvath, A O (1991). Working Alliance Inventory. Unpublished manuscript.

Horvath, A O and Symonds, B D (1991). Relation between working alliance and outcome in psychotherapy: a meta-analysis. Journal of Counseling Psychology **38**(2): 139-149

Joe, G W, Broome, K M, Rowan-Szal, G and Simpson, D D (2002). Measuring patient attributes and engagement in treatment. Journal of Substance Abuse Treatment **22**: 183-196

Joe, G W, Simpson, D D and Broome, K M (1998). Effects of readiness for drug abuse treatment on client retention and assessment of process. Addiction **93**(8): 1177-1190

Joe, G W, Simpson, D D and Broome, K M (1999). Retention and patient engagement models for different treatment modalities in DATOS. Drug and Alcohol Dependence **57**(2): 113-125

Kivlighan, D M, Patton, M J and Foote, D (1998). Moderating effects of client attachment on the counselor experience-working alliance relationship. Journal of Counseling Psychology **45**(3): 274-278

Knight, D K, Holcom, M and Simpson, D D (1994). TCU psychosocial functioning and motivation scales: manual on psychometric properties. Fort Worth, Texas Christian University, Institute of Behavioral Reseach.

Kokotovic, A M and Tracey, T J (1990). Working alliance in the early phase of counseling. Journal of Counseling Psychology **37**(1): 16-21

Liese, B S and Beck, A T (1995). Back to basics: fundamental cognitive therapy skills for keeping drug-dependent individuals in treatment. In: Beyond the therapeutic alliance: keeping the drug-dependent individual in treatment. L. S. Onken, J. Blaine and J. J. Boren. Rockville, NIDA. **165:** 207-230.

Litman, G K, Stapleton, J and Oppenheim, A N (1983). An instrument for measuring coping behaviours in hospitalised alcoholics: Implications for relapse prevention treatment. British Journal of Addiction **78**(269-276): 269-276

LoSciuto, L, Aiken, L S, Ausetts, M A and Brown, B S (1984). Paraprofessional versus professional drug abuse counselors: attitudes and expectations of the counselors and their clients. International Journal of the Addictions **19**(3): 233-252

Luborsky, L, Barber, J P, Siqueland, L, Johnson, S, Najavits, L M, Frank, A and Daley, D (1996). The revised Helping Alliance Questionnaire (HAq-II). Journal of Psychotherapy Practice and Research **5**(3): 260-271

Luborsky, L, Barber, J P, Siqueland, L, McLellan, A T and Woody, G (1995). Establishing a therapeutic alliance with substance abusers. In: Beyond the therapeutic alliance: Keeping the drug-dependent individual in treatment. L. S. Onken, J. Blaine and J. J. Boren. Rockville, MD, National Institute on Drug Abuse. **165**.

Mallinckrodt, B (2000). Attachment, social competencies, social support, and interpersonal process in psychotherapy. Psychotherapy Research **10**(3): 239-266

Mallinckrodt, B, Coble, H M and Gantt, D L (1995). Working alliance, attachment memories, and social competencies of women in brief therapy. Journal of Counseling Psychology **42**(1)

Mallinckrodt, B, Gantt, D L and Coble, H M (1995). Attachment patterns in the psychotherapy relationship: development of the Client Attachment to Therapist Scale. Journal of Counseling Psychology **42**(3): 307-317

Mallinckrodt, B and Nelson, M L (1991). Counselor training level and the formation of the psychotherapeutic working alliance. Journal of Counseling Psychology **38**: 133-138

Marsden, J, Gossop, M, Stewart, D, Rolfe, A and Farrell, M (2000). Psychiatric symptoms among clients seeking treatment for drug dependence. Intake data from the National Treatment Outcome Research Study. British Journal of Psychiatry **176**: 285-289

Martin, D J, Garske, J P and Davis, M K (2000). Relation of the therapeutic alliance with outcome and other variables: a meta-analytic review. Journal of Consulting and Clinical Psychology **68**(3): 438-450

Marziali, E, Marmar, C R and Krupnick, J (1981). Therapeutic alliance scales: development and relationship to psychotherapy outcome. American Journal of Psychiatry **138**(3): 361-364

McLellan, A T, Luborsky, L, Woody, G and O'Brien, C P (1980). An improved diagnostic evaluation instrument for substance abuse patients. The Addiction Severity Index. Journal of Nervous and Mental Disease **168**(1): 26-33

Meier, P S, Barrowclough, C and Donmall, M C (d.o.i. 10.111/j.1360-0443.2004.00935.x). The role of the therapeutic alliance in the treatment of substance misuse: A critical review of the literature. Addiction **published online**

Meier, P S, Donmall, M C and Heller, R F (2004). Counselling provision in specialist drug treatment services. Journal of Substance Use **9**(1): 44-51

Mickey, R M and Greenland, S (1989). The impact of confounder selection criteria on effect estimation. American Journal of Epidemiology **129**(1): 125-137

Moras, K and Strupp, H H (1982). Pretherapy interpersonal relations, patients' alliance, and outcome in brief therapy. Archives of General Psychiatry **39**(4): 405-409

Petry, N M and Bickel, W K (1999). Therapeutic alliance and psychiatric severity as predictors of completion of treatment for opioid dependence. Psychiatric Services **50**(2): 219-227

Scharfe, E and Bartholomew, K (1998). Do you remember?: Recollections of adult attachment patterns. Personal Relationships **5**(2): 219-234

Simpson, D D (1998). TCU data collection forms for methadone outpatient treatment. Fort Worth, Texas Christian University, Institute of Behavioral Research.

Simpson, D D, Joe, G W, Rowan-Szal, G A and Greener, J M (1997). Drug abuse treatment process components that improve retention. Journal of Substance Abuse Treatment **14**(6): 565-572

Stanton, M D (1997). The role of family and significant others in the engagement and retention of drug-dependent individuals. NIDA Research Monograph **165**: 157-180

Tracey, T J and Kokotovic, A M (1989). Factor structure of the Working Alliance Inventory. Psychological Assessment: a Journal of Consulting and Clinical Psychology **1**: 207-210

Tryon, G S and Kane, A S (1993). Relationship of working alliance to mutual and unilateral termination. Journal of Counseling Psychology **40**(1): 33-36

Table 1. Sample characteristics and distribution of study variables

CLIENT CHARACTERISTICS (N=187)	
Psychological resources	
Coping Strategies Index (Mean, SD)	43.8 (10.54)
Self-efficacy (Mean, SD)	3.40 (0.59)
Self-esteem (Mean, SD)	2.56 (0.76)
Social relationships	
Social support (Mean, SD)	3.83 (0.69)
Attachment security (Mean, SD)	4.05 (1.42)
Hostility (Mean, SD)	2.89 (0.80)
Attitudes & Motivation	
Treatment readiness (Mean, SD)	4.23 (0.57)
Desire for help (Mean, SD)	4.63 (0.41)
External pressure (Mean, SD)	3.06 (1.35)
Treatment confidence (Md, Range)	270 (50-300)
Treatment Expectations Index (Mean, SD)	24.69 (5.91)
Psychological well-being	
Psychol. problems index (Md, Range)	1 (0-8)
Depression (Mean, SD)	3.20 (0.78)
Anxiety (Mean, SD)	3.41 (0.75)
Demographics	
Gender: female (n, %)	57 (30.5)
Age, in years (Mean, SD)	30.06 (6.26)
Education, any GCSE/O-levels (n, %)	107 (57.2)
Drug use (past 30 days) and treatment history	
Daily* heroin use (n, %)	145 (77.5)
Daily* crack use (n, %)	82 (43.9)
Daily* problematic use of alcohol (n, %)	47 (25.1)
No of days used…(per week)	7 (0-7)
heroin (Md, Range)	7 (0-7)
crack (Md, Range)	3 (0-7)
alcohol and drugs (Md, Range)*	0 (0-7)
Ever treated before: yes (n, %)	176 (94.1)
Prior residential rehabilitation: yes (n, %)	59 (31.6)
COUNSELLOR CHARACTERISTICS (n=24)	
Qualified counsellor (n, %)	16 (66.7)
Time in current role: months (Mean, SD)	26.79 (24.62)
Time in drug counselling: months (Mean, SD)	46.00 (29.19)
Ex-addict (n, %)	13 (54.2)
Job satisfaction (Mean, SD)	4.75 (0.53)
Gender: female (n, %)	13 (54.2)
Age: in years (Mean, SD)	41.13 (9.82)

Notes: Md=Median. Client variables total n=187, counsellor variables total n=24. * daily use was defined as use on 6 or 7 days per week, problematic alcohol use was defined as >8 units per day (men) and >6 units per day (women) for at least 3 days a week

Table 2. Regression coefficients from the unadjusted and adjusted regression models. Client and counsellor predictors of the early alliance as rated by the counsellor.

	Regression coefficients (β) and associated P_values (P)			
	Unadjusted		Adjusted model (Stepwise entry)	
	β	P	β	P
CLIENT CHARACTERISTICS				
Psychological resources				
Coping strategies available to client	0.36	0.007	0.37	0.005
Self-efficacy	5.18	0.029		
Self-esteem	4.93	0.007		
Social relationships				
Social support	5.85	0.004		
Attachment security index	2.18	0.026	1.84	0.047
Hostility	-3.78	0.035		
Attitudes/motivation				
Treatment readiness	5.64	0.033		
Desire for help	8.92	0.009	6.80	0.036
External pressure	-3.12	0.002	-3.19	0.001
Treatment confidence	0.08	0.004		
Treatment expectations index	-0.54	0.033		
Psychological wellbeing				
Psychological problems index	-2.58	0.003		
Depression	-5.37	0.003		
Anxiety	-3.64	0.053		
Demographic variables				
Gender	-7.30	0.032	-6.16	0.041
Age	-0.15	0.514		
Education	0.72	0.803		
Drug use and treatment history				
No of days used heroin	-0.09	0.855		
No of days used crack	-0.33	0.475		
No of days used alcohol and drugs	0.08	0.868		
Ever treated before	-2.16	0.709	-9.61	0.083
Residential rehabilitation	1.61	0.609		
COUNSELLOR CHARACTERISTICS				
Counselling qualification	-2.13	0.668		
Time in current role	-0.22	0.011	-0.21	0.005
Time in drug counselling	-0.10	0.220		
Ex-addict	-6.39	0.154		
Same gender	-1.81	0.592		
Job satisfaction	5.13	0.285		
Gender (0=male, 1=female)	0.29	0.950		
Age	-0.05	0.836		

Notes: The regression coefficients are derived from hierarchical linear models with repeat measurements on individuals nested within therapists. The backward stepwise method was used; the exit criterion was that the variable with the largest P_value was excluded until no variable had a P_value > 0.10.

Table 3. Regression coefficients from the unadjusted and adjusted regression models. Client and counsellor predictors of the early alliance as rated by the client.

		Regression coefficients (β) and associated P_value (P)			
		Unadjusted		Adjusted model (Stepwise entry)	
	N	β	P	β	P
CLIENT CHARACTERISTICS					
Psychological resources					
Coping strategies available to client		0.19	0.211		
Self-efficacy		6.43	0.020		
Self-esteem		4.08	0.054		
Social relationships					
Social support		9.48	<0.001	9.36	<0.001
Attachment security index		3.23	0.005	2.19	0.038
Hostility		-4.63	0.025		
Attitudes/motivation					
Treatment readiness		11.19	<0.001	6.37	0.033
Desire for help		8.87	0.026		
External pressure		-3.10	0.010	-2.78	0.017
Treatment confidence		0.10	<0.001		
Treatment expectations index		-0.59	0.038		
Psychological wellbeing					
Psychological problems index		-0.22	0.826		
Depression		-4.02	0.053		
Anxiety		-4.90	0.023		
Demographic variables					
Gender		-1.94	0.613		
Age		-0.09	0.734		
Education		0.96	0.773		
Drug use and treatment history					
No of days used heroin		-1.13	0.049		
No of days used crack		-0.63	0.223		
No of days used alcohol and drugs		0.02	0.975		
Ever treated before		-4.87	0.453		
Residential rehabilitation		0.046	0.990		
COUNSELLOR CHARACTERISTICS					
Counselling qualification		4.60	0.347	8.50	0.033
Time in current role		0.01	0.932		
Time in drug counselling		0.08	0.341		
Ex-addict		7.10	0.075	9.86	0.007
Same gender		3.73	0.318		
Job satisfaction		-1.47	0.767		
Gender (0=male, 1=female)		-7.88	0.082	-7.22	0.063
Age		0.09	0.699		

Notes: The regression coefficients are derived from hierarchical linear models with repeat measurements on individuals nested within therapists. The backward stepwise method was used; the exit criterion was that the variable with the largest P_value was excluded until no variable had a P_value > 0.10.