Pre-Treatment Expectations in Clients: Impact on Retention and Effectiveness in Outpatient Substance Abuse Treatment

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Background: Common factors are important for the therapy outcome and also mediate the specific factors of therapy. As one of the common factors, client's expectations towards treatment have been understudied. **Aims:** The aim was to examine the pre-treatment expectations of outpatient substance abuse treatment clients ($N = 327$, 111 females, 216 males) and its impact on retention, effectiveness and satisfaction at 6-month follow-up. **Method:** Dependent variables included the clients' attitudes towards the twelve-step principles and participation, medical treatment and therapists' role. **Results:** An emphasis on the importance of medical treatment at baseline predicted dropping out. Similarly, it predicted a lower percent days abstinent (PDA_6) at 6 months follow-up in comparison to those who did not consider medical treatment important for recovery. Percent days abstinent increased with a more positive attitude to mutual support. At follow-up, those who had assessed the therapist's role in recovery to be most important at the baseline were most satisfied with the treatment. **Conclusions:** The client's pre-treatment expectations have an impact on treatment retention and effectiveness. Further effort should be made to study how clients' image of treatment could be improved and also how the commitment of the clients with multiple problems could be improved.

Keywords: Substance abuse treatment, expectations, retention, effectiveness, treatment satisfaction, outcome.

Introduction

Treatment is often of significant help, yet after treatment many return to problematic substance use (Litman, 1980; Allsop, Saunders, Phillips and Carr 1997). McLellan (2002) considers the problem to be the over-rated expectations placed on the treatment. The treatment is expected to create permanent abstinence despite the fact that the treatment itself covers only a limited period of time. The long-term effectiveness of treatment appears to require more than professional substance abuse treatment (Orford et al., 2006).

It has long been known in psychotherapy research that common, or contextual, factors are considerably more important for the outcome than the treatment methods (Beutler et al., 2004; Martin, Garske and Davis, 2000; Messer and Wampold, 2002). However, their effect is simultaneous, and to a great extent the common factors mediate the specific factors of therapy (Wampold, Minami, Tierney, Baskin and Bhati, 2005).

In substance abuse research the findings have been similar to those in psychotherapy research (Connors, Carroll, DiClemente, Longabaugh and Donovan, 1997; Najavits, Crits-Christoph and Dierberger, 2000; Schneider, Kroemer-Olbrisch, Wedegärtner, Cimander and Wetterling, 2004). Despite this, the impact of common factors has been far less frequently the focus of research than treatment methods (Carroll, 2001). Research on the combined effects of common factors and client characteristics is still less frequent (Karno and Longabaugh, 2007).

The matching of clients and therapies has produced almost no results (Babor and Del Boca, 2003; Imel, Wampold, Miller and Fleming, 2008; UKATT Research Team, 2005a, 2005b; Anton et al., 2006). In terms of developing treatment effectiveness, new research strategies have been called for (Orford, 2006). It has been considered that these could be reached by focusing on contextual factors (Bergmark, 2008a, b; Messer and Wampold, 2002). The role of treatment methods should not be underestimated, but neither should it be exaggerated (Beutler, 2002; Luborsky et al., 2002).

The client's characteristics also constitute an important explanation for treatment effectiveness (Hubble, Duncan and Miller, 1999; Wampold, 2001). Overall, taking account of the client's perspective is important when researching the treatment of substance abuse (Orford et al., 2006). The client's expectations and attributions concerning treatment are important for treatment retention and effectiveness (Messer and Wampold, 2002). Expectations refer to expectancies at the start of treatment, while attributions refer to expectancies following treatment; together, they can be described by the term expectancies (Weinberger and Eig, 1999). The importance of the client's expectancies for implementing change has been studied in psychotherapy research for decades, but it continues to be a relevant field of research. In comparison to other common factors, this field is still quite understudied (Arnkoff, Glass and Shapiro, 2002; Greenberg, Constantino and Bruce, 2006; Weinberger and Eig, 1999), especially as regards substance abuse treatment (Schneider et al., 2004).

Treatment seeking is a situation that involves assessment. The client may chart his or her possibilities of committing to change (Janis and Mann, 1977). At the same time, this situation is affected by different kind of expectancies. The clients individually assess their personal efficacy expectations in relation to change and their prognostic beliefs concerning the treatment available (Bandura, 1977). As a counterbalance to these, there are also the individual's positive and negative alcohol expectancies towards the substance used and the culture connected to it (Baldwin, Oei and Young, 1993). These assessments working in different, and often opposite, directions affect whether or not the client attempts to give up the substance use disorder and what kind of assistance he or she needs in doing this. The expectations also lay the foundation for the therapeutic alliance, which in turn has been found to be a very significant factor explaining treatment effectiveness (Martin et al., 2000). Especially at the early stages of treatment, different expectancies and the therapeutic alliance seem to affect treatment effectiveness (Weinberger and Eig, 1999). The therapist also conducts an assessment and offers the treatment options considered the most appropriate in each situation. In this way, the beliefs of the treatment professionals affect the practices of client–treatment matching and the treatment reality that the client encounters (Kelly, Yeterian and Myers, 2008). Mainly, the expectancies have been useful in predicting treatment effectiveness, even though opposite findings have also been presented (Arnkoff et al., 2002; Greenberg et al., 2006).

Research on client expectancies has mainly focused on alcohol expectancies, and even here the direction has long been on research on positive expectancies (Jones and McMahon, 1994a, b). Client expectations towards different treatment modalities have been considerably less frequently studied. Bergmark (2008a) has called for a change in treatment research, bringing the client's personal experience into focus.

To our knowledge, the expectations on the participation of twelve-step groups have not been much studied despite the fact that in the United States, for example, this has for decades been the most widely used method in substance abuse disorders and it holds a significant role in the Western culture of recovery (Moos, 2008). Similarly, expectations towards medical treatment and their influence on treatment effectiveness have been little studied. The significance of medication in substance abuse treatment has been studied in the COMBINE study (Anton et al., 2006). In later studies, clients who had received placebo-only or placebo in combination with behavioural therapy succeeded better than clients who only received behavioural therapy. The findings were partly explained by the client's expectations towards medical treatment. However, the expectations regarding medical treatment, as well as regarding therapy and a combination of the two were similar in different research groups at the baseline (Weiss, O'Malley, Hosking, LoCastro and Swift, 2008). Attributing change to medication has been found to differ in different treatment methods. In a study by Orford, Hodgson, Copello, Wilton and Slegg (2009), 22–37% of the participants, depending on the treatment method, attributed positive change to medication. Furthermore, the strength of this attribution varied depending on the length of follow-up period (Orford et al., 2009). There are also indications that positive expectations regarding medical treatment may lead to dropping out of treatment if the client is offered other than medical treatment (Weiss et al., 2008). The placebo effect is evident in other forms of treatment as well. In psychotherapy research, factors external to the treatment can partly explain the overall treatment effect (Wampold et al., 2005; Wampold, Imel and Minami, 2007).

The confidence in the therapist is based on the client's cultural expectations regarding the therapy situation and the therapist (Frank, 1959). Within psychotherapy research, the client's pre-treatment expectations towards the therapist have been studied (see, for example, Frank, 1983; Shapiro, 1981; Weinberger and Eig, 1999), but in substance abuse treatment such research has been relatively scarce. The client has expectations on the therapist's ability to help in implementing change. On getting the relief sought, the client can free resources for implementing change (Frank, 1959). The compatibility between the client's expectation and the treatment reality also helps to support treatment, and it has been found to affect treatment retention (Weinberger, 1995).

Pre-treatment expectations have also been found to have more significance when the substance abuse disorder has been considered more difficult (Frank, 1959). This has been explained by the individual's inclination to seek relief in a difficult situation or as a sign that, when describing the difficulties, the individual is prepared to seek therapeutic help. Overall, it would seem that the client's positive expectations towards treatment in themselves have an effect on treatment effectiveness.

The purpose of the present study was to determine the extent to which a selection of the client's pre-treatment expectations predicts treatment effectiveness. The dependent variables were treatment retention, percent days abstinent at 6 months follow-up (PDA_6), and client's satisfaction with the therapist: the latter two were measured at follow-up 6-months after treatment initiation. The starting-point for the analysis was based on previous studies on the

Baseline		Therapy arrivals		Follow-up 6 months
$N = 327$	→	$n = 286$ (87.5 %)	→	$n = 168$ (51.4 %)
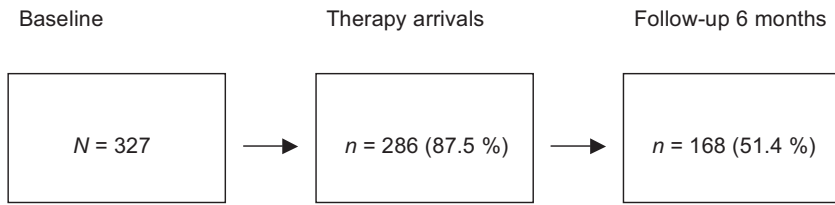
Figure 1. Number of participants at various stages of the study

dependent variables selected, and attempted to explain these with variables associated with the client's pre-treatment expectations. These variables included the client's pre-treatment attitude towards 1) the twelve-step principles and participation; 2) medical treatment; and 3) the therapist's role in recovery. The dependent variables selected have been in a central role in outcome research; what is new here is their inclusion in a single research frame.

Method

Design and implementation

The project was implemented as a multi-site study including several outpatient substance abuse treatment units ($N = 7$) in southern and western Finland. The study was presented to the clinic directors in a meeting in the Spring of 2007, when the project was introduced and the clinics' willingness to participate was ascertained. The clinics were selected on geographic and demographic grounds. All the units approached opted for participation. Their personnel were instructed to standardize the procedures between the various units during the study.

The clients ($N = 327$) entered treatment and completed the baseline questionnaires in January–June 2008. The follow-up was scheduled 6 months after treatment initiation, and the data collection was thus completed at the end of December 2008. The 6-month follow-up can be justified in the light of findings showing that a return to substance abuse is the most prevalent within these limits (Kirshenbaum, Olsen and Bickel, 2009). During the procedure, the follow-up appointment was the only meeting with a precise chronological definition. The times of the therapy sessions during the treatment period were arranged according to the client's needs and the practices of treatment units; thus intervention with actual treatment work was minimized. Figure 1 presents the progress of the study and the number of clients during each stage.

The clients' participation began at their first visit to the treatment unit. They were informed about the study and ethical principles, as well as given a brochure describing the study. Thereafter, the clients who gave their consent to participate completed a baseline questionnaire. They then received an appointment with a therapist ($N = 33$) according to the randomization list.

The study included a maximum of five sessions per client. During the first session, the therapist recorded the client's contact information and the time of the follow-up appointment. At the end of the fifth session at the latest, the therapist also recorded a code for the client's treatment retention. The code given could consist of one of the following values: 1) treatment

was ended in mutual agreement; 2) an uninterrupted treatment period is continuing; 3) absences, but the treatment period is continuing; 4) client dropped out after the first session; and 5) client dropped out later. As the study proceeded, these classes were combined for the purposes of different types of analyses. The client's treatment period could continue even after this, but sessions subsequent to this were not included in the study.

All clients who had completed the baseline questionnaire were invited by letter to a follow-up appointment at the clinic 6 months after the treatment had started. The clients who arrived for this meeting completed a follow-up questionnaire.

The following general principles were used in designing and implementing the study:

a) Naturalistic approach: the study was implemented as part of normal activity at the clinic. Apart from the randomization and the completion of questionnaires, the study procedure did not interfere with the treatment process.

b) Non-selected clients and therapists: each client who started a new period of treatment due to substance abuse disorders was included in the study after their own consent. All therapists at these clinics participated.

c) Randomization: the clients were referred to a therapist on the basis of a randomization list prepared in advance, but otherwise the treatment delivery was not interfered with.

d) Prospective follow-up study: the clients were followed up for 6 months after the treatment initiation.

e) Selection of research instruments: the questionnaires and measuring instruments at baseline, during the treatment process and at follow-up had been tested and proven useful in previous studies or were appropriately derived from those. The aim was also to use instruments that would create as little burden as possible for the actual treatment.

Participants

Those participating in the study were clients beginning a new treatment period. The clients had contacted their local treatment units on the basis of where they lived. Both urban and rural areas were included. Thus, the data are an unselected sample of the clientele that entered the clinics during the period in question, and may thus be considered to be representative on a regional level in Finland.

Tables 1 and 2 present demographic data on the clients, as well as data on their substance use. Their level of education may be characterized as low and, correspondingly, their rate of unemployment as fairly high. Overall, the demographic data for the study participants corresponded to a great extent with the clients of outpatient substance abuse treatment described in previous Finnish studies (Saarnio, 2002).

Alcohol was the primary substance used, accompanied with a tendency towards the use of only one substance. As supplements to alcohol, the most important substances used were tranquilizers, cannabis and amphetamine. This group was followed by the more recent arrival, buprenorphine.

The nature of the clients' substance abuse disorder is described by the fact that only one-fifth of them limited their substance use just to weekends. However, among Finnish inpatients the proportion of such clients is even smaller (Saarnio and Knuuttila, 2007). The nature of the problematic use is also described by the fact that almost half of the clients also had previous contacts with the same treatment unit. However, when comparing inpatients of

Table 1. Background information on participants ($N = 327$)

	n	$\%$
Age (years)		
−30	57	17.4
31–40	71	21.7
41–50	102	31.2
51–	97	29.7
Gender		
Male	216	66.1
Female	111	33.9
Marital status		
Single	102	31.2
Co-habiting	50	15.3
Married	66	20.2
Divorced	103	31.5
Widowed	6	1.8
Education		
Less than Comprehensive School	87	26.6
Comprehensive School	163	49.8
High School	77	23.5
Employment status		
Employed	139	42.5
Not employed	188	57.5
Housing		
Owner-occupier	100	30.6
Tenant	192	58.7
Homeless	35	10.7

Finnish substance abuse treatment with the clientele of outpatient clinics, the latter consists of people with less consumption and less severe problems (Saarnio and Knuuttila, 2007, 2008). On the other hand, it could be seen that the clients were prepared to control their substance use: about one-fifth (19%) of the clientele had abstained completely for the month preceding the start of treatment. Earlier research has also pointed out that clients tend to cut down on their substance use even before treatment is started (Bergmark, 2008b; Stout et al., 2003).

Attrition was analyzed by two types of comparisons. In the first place, baseline variables were compared between clients who started therapy and clients who entered treatment but did not come to therapy. Second, the same variables were used when comparing clients who participated in the follow-up and those who did not. In order to exclude their effect, whether statistically significant or nearly so, differences were also examined by controlling background variables selected on theoretical grounds. These included age, sex, previous contact with the treatment unit and client's objective for further substance use (abstinence/controlled use), for example.

The clients who entered therapy ($n = 286$) and those who entered treatment without further entering therapy ($n = 41$) differed from each other in terms of their marital status, $\chi^2 (1, 327) = 3.745$, $p = .053$. Living with a spouse predicted entry to treatment, but after

Table 2. Information on participants' ($N = 327$) substance abuse at baseline

	n	%
Substance used*		
Alcohol	315	97.5
Tranquilizers	60	18.6
Cannabis	44	13.6
Amphetamine	37	11.5
Buprenorphine	20	6.2
Opiates	8	2.5
Cocaine	8	2.5
LSD	5	1.5
Substitute alcohol	4	1.2
Solvents	2	0.6
Other	5	1.5
Type of substance use*		
Single substance use	236	73.3
Poly-substance use	86	26.7
Habit of using substance*		
Daily	125	39.3
Periodically	127	39.9
At weekends	66	20.8
Duration of prolonged abstinence period (days)*		
0–7	57	17.4
8–30	119	36.4
31–	151	46.2
Abstinent days during past 30 days		
0–7	68	20.8
8–14	54	16.5
15–22	84	25.7
23–	121	37.0
Contacts with problem users*		
Daily or almost daily	47	14.4
Weekly	83	25.4
Monthly	53	16.2
Less frequently	47	14.4
No contacts	97	29.7
Attitudes towards AA/NA		
Very positive	61	18.7
Positive	124	37.9
Neutral	115	35.2
Negative	18	5.5
Very negative	9	2.8
Prior admission at this clinic		
Yes	148	45.5
No	177	54.5
Voluntary admission		
Yes	241	73.9
No	85	26.1

Table 2. (Continued)

	n	*%*
Client's objective		
Abstinence	131	40.7
Controlled use	191	59.3

Note: *For the year prior to treatment

controlling for age the connection disappeared, although age as such was not a significant factor.

Between clients who participated in the follow-up ($n = 168$) and those who did not ($n = 159$) there were significant differences in the following variables: age, $t(325) = 3.464$, $p = .001$; education, $\chi^2(2, 327) = 7,678$, $p = .022$; housing, $\chi^2(2, 327) = 15.353$, $p < .001$ and being a poly-substance user, $\chi^2(1, 322) = 7.043$, $p = .008$. The tests of significance (above) were carried out before a specifying elaboration. After this, the stability of inter-variable variance and the variation in the different categories of the variable was controlled.

The clients who participated in the follow-up were about 4 years older than those who did not. The basic education was different for the groups; those participating in the follow-up were either better or less educated than average. They were also more often house owners or occupiers rather than living in a rented apartment, and they were more seldom homeless than the drop-outs. Poly-substance use increased the likelihood of not attending the follow-up. However, controlling for age explained the differences found to a great extent. The difference in education was explained by the effect of age; younger clients also lived in more deficient accommodation and were more often poly-substance users than the older clients.

Overall it appeared that the stability of life context built with increasing age and a less problematic substance consumption supported treatment retention after the treatment had begun. The client's subjective reasons for not attending the follow-up appointment were not empirically established.

At the beginning of the study, the therapists also filled in a baseline questionnaire, covering their background information and therapeutic orientation. On average, the clients ($M = 43.09$, $SD = 11.37$) were 6 years younger than the therapists ($M = 49.12$, $SD = 7.50$). Table 3 contains demographic information on the therapists and their therapeutic orientation.

Only three of the therapists were men. The majority of the therapists lived with a spouse. Almost every second therapist had a university-level professional education; two-thirds were social workers, while the others were nurses. However, they all now had the same job, conducting therapy with clients. Most of the therapists had worked in substance abuse treatment for quite a long time. Methodological eclecticism was predominant. Among the individual methods used by the therapists, various forms of brief therapy were notable, such as cognitive, motivational and solution-focused therapies. The median of the number of clients per therapist was nine (min = 1, max = 20).

Materials

Data were collected at baseline on entering treatment, during treatment and at follow-up. Before therapy, the clients completed a structured baseline questionnaire. Among others,

Table 3. Background information on therapists (*N* = 33)

	n	*%*
Age (years)		
31–40	2	6.1
41–50	17	51.5
51–	14	42.4
Gender		
Male	3	9.1
Female	30	90.9
Marital status		
Single	5	15.2
Co-habiting	5	15.2
Married	19	57.6
Divorced	4	12.1
Basic education		
Comprehensive School	8	24.2
High School	25	75.8
Professional education		
College or Polytechnic	17	51.5
University	16	48.5
Job title		
Nurse	12	36.4
Social worker	21	63.6
Experience in substance abuse treatment		
Under 5 years	8	24.2
5–15 years	15	45.5
Over 15 years	10	30.3
Therapeutic orientation		
Cognitive therapies	4	12.1
Motivational interviewing	1	3.0
Solution-focused	4	12.1
Psychodynamic	2	6.1
Eclectic	20	60.6
None of the above	2	6.1
Lengthy training in therapy		
Yes	15	45.5
No	18	54.5

questions dealt with demographic factors, substance use and attitude to treatment. Clients' pre-treatment expectations were measured the same way as in the COMBINE study (Weiss et al., 2008). Participants were asked at study entry, "How important do you feel the medications will be in helping you change your substance use behaviour? [translation from Finnish]. The same kinds of questions were posed regarding twelve-step and therapist's role. All of these were measured on a scale 1–5.

At the 6-month follow-up, the participants were asked, among other things, about their substance use, contacts with problem users, participation in mutual support groups, and satisfaction with the help provided by the therapist during treatment.

Data analysis

The analyses were based on a variety of different regression models; both multinomial and linear analyses were used, depending on whether the dependent variable was categorical or continuous. Different comparisons were made using conventional methods, χ^2 test and *t*-test. Statistical procedures were used to screen for violations of the major assumptions of linearity, normality and homoscedasticity. The data were analyzed with the SPSS software, version 13.0.

Results

The first question examined was how the participant's expectations towards the treatment predicted treatment retention. This was predicted using a multinomial regression analysis for which the stepwise and eliminating method was selected. The advantage of the eliminating method is that it also produces *p* values for the independent variables excluded from the model and thus helps to estimate its value. The reference category selected was the category "therapy interrupted" of the dependent variable describing treatment retention. The categories "therapy ended in agreement" and "therapy continues" were compared with this. The participants were distributed in the classes of the dependent variable as follows: "therapy interrupted" 40.2%, "therapy ended in agreement" 22.0% and "therapy continues" 37.8%. The independent variables were attitude towards the twelve-step principles and participation, considering medication to be important and the expectations of therapist's impact on recovery. The independent variables were quantitative, and an increase in the characteristic indicated an increase in its importance for recovery.

When treatment retention was predicted with stepwise multinomial regression analysis, only the importance of medication was statistically significant, $\chi^2 (2, 327) = 7.287, p = .026$. Those whose therapy was discontinued differed statistically significantly from the other two groups. When comparing those who had ended the therapy in agreement with those that had dropped out, the odds of belonging in the former group also decreased with the increase in the importance of medication, $\beta = -.261, p = .018$, Exp $(B) = 0.770$. When comparing those who had continued the treatment with drop-outs, the odds of belonging to those whose treatment had continued decreased with the increase of the importance of medication ($\beta = -.200, p = .034$, Exp $(B) = 0.819$). The predictive value (R^2) of the model was .029 (i.e. 2.9% of total variance).

However, controlling these connections with certain background variables selected on theoretical bases, for example prior substance use and other variables associated with the complexity of substance abuse problem, made it apparent that expectations depend also on other factors: substance consumption before entering treatment was a stronger predictor of future substance use than expectations. The predictive value of prior substance use has been found to explain future substance consumption in several previous studies (see, e.g. Adamson, Sellman and Frampton, 2009). Also, experiencing medication as important was associated with the type of substance abuse: poly-substance users considered medical treatment to be more important than single substance users, $\chi^2 (2, 322) = 19.816, p < .001$.

The relationship between the subject's pre-treatment expectations and their coping after treatment was next examined. The analysis used stepwise linear regression. The subject's coping was indicated by percent days abstinent at the 6-month follow-up (PDA$_6$). When data were checked for departures from normality, the PDA$_6$ as a quantitative dependent measure

was skewed to the left. The deletion of outliers would not have helped, but still it was decided to keep this measure in its original, untransformed, form, as otherwise the data would have been difficult to interpret meaningfully. The method used is also relatively robust in terms of violations of these assumptions.

According to the analysis assumptions, the correlations between independent variables were first checked. Correlations between the variables were fairly small, $r = .034–.206$. With an increased importance of medication, the therapist's importance also increased, $r = .206$, $p < .001$. The other statistically significant correlation was found between the attitude towards the twelve-step and the importance of the therapist, $r = .182$, $p < .001$. The associations remained after partial correlations. These may reflect the strategy of externalizing one's recovery process. At the same time, it is also likely to reflect the complexity of the substance abuse disorder and the increasing need for treatment as the problem gets more complex.

When predicting treatment effectiveness with percent days abstinent at follow-up (PDA_6) using stepwise linear regression, two variables were statistically significant: attitude towards the twelve-step ($\beta = 5.544$, $p = .025$) and importance of medication ($\beta = -3.228$, $p = .037$). The model's predictive value (R^2) was .055 (i.e. 5.5% of total variance). The PDA_6 increased at follow-up when the attitude to mutual support was more positive at baseline. When the attitude towards the twelve-step principles and participation was more positive by one point (on a scale of 1–5), it led to a 5.5% rise in the dependent variable (PDA_6). In contrast, the more positive the subject's attitude to medical treatment, the poorer was his or her coping after the treatment, when measured with PDA_6. With regard to expectations on the importance of medication, a rise of one point (on a 1–5 scale) led to a 3.2% decline in PDA_6.

The confirmation of expectations on subject's treatment satisfaction was analyzed using stepwise linear regression analysis and the same combination of independent variables as in the previous analyses. Satisfaction with the support received from the therapist was predicted with statistical significance by how far the subject, at baseline, assessed the possibility of recovery to be due to the therapist, $\beta = .249$, $p = .001$. The more important the subject considered the therapist to be for recovery at the outset, the more satisfied s/he was with the support received at the end of treatment. When the expectations on the role of the therapist in recovery were one point higher (on a 1–5 scale) at baseline, satisfaction with the treatment increased by 5.0%. The predictive value of the whole model (R^2) was .062 (i.e. 6.2% of total variance).

Discussion

The study examined the effect of the client's expectations on treatment effectiveness, measured by treatment retention and percent days abstinent at follow-up, and confirmation of pre-treatment expectations, measured by satisfaction with the treatment received. The study supports previous findings; the subject's pre-treatment expectations did have an impact on treatment retention and effectiveness. A positive attitude to mutual support was associated with the effectiveness of treatment, measured as percent days abstinent at follow-up. The importance of medication had an effect on treatment retention and percent days abstinent at follow-up; an increased importance placed on medical treatment at the outset predicted the dropping out of treatment and lower percent days abstinent at the 6-month follow-up. Why then does relying on medication seem to work in such a way that putting more emphasis on medication causes clients to drop-out? This may be explained by the client's expectations of treatment and differences in the complexity of the client's substance use problem.

Outpatient treatment is more psycho-social than medicine-based. When the treatment received is not in line with the client's expectations, the possibility of dropping out of treatment might become more common. In randomized controlled trails on the expectations towards the medical treatment, the placebo has proved as strong as medical treatment (Anton et al., 2006). Also the role of medication seems to grow stronger as the problem becomes worse. In this study, the stability of life context and how problematic the substance use was before entering treatment also affected the attrition rate. In this respect, the predictive role of the complexity of the substance abuse problem in terms of prior use supports this same phenomenon; the more complex the problem, the greater the discrepancy between the client's expectations and the treatment received.

The participants' expectations regarding the therapist's importance for their recovery had an effect on how they assessed and felt supported by their therapist at follow-up; the satisfaction with the therapist was greatest when the expectations had been high before treatment. Treatment appears to have an impact through its attraction; when the client believes in the treatment, the results are better (Cooney, Babor, DiClemente and Del Boca, 2003). On the other hand, positive treatment outcomes have been found to be better retained by clients who attribute a larger share of success to themselves after treatment (Weinberger, 1995). In our opinion, these reflect the important role of client's expectations in addition to the actual treatment received.

The principles considered to be strengths for this study are dealt with in the chapter on methods. The study includes certain limitations, however, that need to be borne in mind when evaluating the findings. The most important is probably the fact that the follow-up only lasted 6 months and a maximum of five sessions per client. The duration of the follow-up period could be justified by the dynamics of addiction, in that relapses most typically occur during that period (Kirshenbaum et al., 2009). Nevertheless, additional information on the clients' subsequent coping would have been useful, although it was not possible to collect it within the project schedule.

In this study we focused explicitly on the independent variables regarding clients' expectations on treatment; no covariates were used. By excluding variables that have previously been found to be strong explaining factors, we wanted to make the true effect of expectations on treatment outcome more visible. However, the intervening variables were controlled outside the regression models used. In our specifying examination we attempted to take into account the fact that variables associated with prior substance use unquestionably have a role in treatment retention and other outcome variables, even as regards these data.

The study sample was regionally representative of individuals who seek outpatient treatment in substance abuse treatment units. The sample deviated from the inpatient populations of studies on institutional care in Finland (Saarnio and Knuuttila, 2008). The direction of the deviation was in line with expectations, since outpatient substance abuse treatment involves a larger proportion of those whose addiction is less severe. This places limits on generalizing the findings to the entire number of people with substance abuse disorders who seek treatment.

Measurement of the dependent variables used in the study (pre-treatment expectations regarding medication, therapist and mutual support) was based on the client's own assessment. An assessment on a scale of 1 to 5 may, however, be too crude, so that it cannot optimally reflect the multiplicity of expectations. Unfortunately, no other measures were available during the planning of the study. Nevertheless, a measurement based on a Likert scale has

been a fairly popular way of measuring expectations (Arnkoff et al., 2002). In any case, the measurement opted for provided data on how the variables selected to describe pre-treatment expectations play a certain role in treatment retention, effectiveness and satisfaction. In future, it will be useful to examine these with more sensitive instruments.

The follow-up rate of the study remained at 51.4%. In part, this is explained by the naturalistic and non-selective research approach. We did not wish to establish the same kind of close contact with clients as in clinical trials (e.g. Project MATCH). This might also have an effect on selection; some people may have a greater likelihood of dropping out of treatment. However, we tried to identify these both in the attrition analysis and in the control. It seems that those who do worst tend to have certain common features. What we have to bear in mind is the possibility that there are some variables not within our scope.

The study showed that expectations do have significance in substance abuse treatment. At the same time, the findings show that those who succeed best are the ones with the mildest problems. On the basis of these findings it is possible to identify the population whose treatment should receive the most attention. An effort should be made to study how the commitment to the treatment of clients with multiple problems could be improved.

Attention should also be paid to how the clients' image of treatment could be improved. Positive pre-treatment expectations appear to have the power of predicting recovery. Influencing client expectations should therefore be made part of the treatment provision, even during therapy.

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