Relationships Between Counseling Rapport and Drug Abuse Treatment Outcomes

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Objective: **This study examined the association between counseling rapport and drug abuse treatment outcomes.** ***Methods:*** **Two cohorts of outpatients who were being treated with methadone in four cities were studied. Cohort 1 comprised 354 patients in community-based nonprofit programs, and cohort 2 comprised 223 patients from a private for-profit program. Logistic regression analyses were used to assess the importance of counseling rapport as a predictor of drug use and criminality relative to treatment retention in the index treatment, satisfaction with treatment, and whether additional treatment was received after the index treatment.** ***Results:*** **In both cohorts, ratings made by counselors, during treatment, of therapeutic involvement and relationships with patients provided a useful measure of counseling rapport. A lower level of rapport during treatment predicted worse post–index treatment outcomes, including more cocaine use and criminality, both by itself and after adjustment for treatment retention, satisfaction with treatment, and post–index treatment status. Counseling strategies were associated with the development of counseling rapport.** ***Conclusions:*** **Counseling rapport is a vital part of the therapeutic process and helps explain why and when treatment is effective. It contributes explicitly to the prediction of outcomes, apart from treatment retention, and accounts in part for the usual association between treatment retention and outcomes. (*Psychiatric Services* 52:1223–1229, 2001)**

Treatment retention has served as an overall indicator of the amount of treatment that patients receive and has proved to be a strong and consistent predictor of posttreatment outcomes (1–6). Nevertheless, retention is limited as a treatment process indicator. The treatment process has many features that are integral to understanding how treatment "works," including characteristics of counseling and the perceived quality of treatment. Knowledge of these aspects of treatment can lead to their strategic improvement, which can translate into better treatment outcomes. Recent studies have focused on some of these components of the treatment process, particularly patient engagement (7–13).

The conceptual model used by Simpson and colleagues (11,14–16) has been useful in identifying indicators for predicting performance during treatment (14) as well as retention (15) and posttreatment outcomes (11,15–16). The model includes an assessment that represents seven conceptual domains of variables: the patient's motivation for seeking treatment; external factors that affect the treatment process, such as the patient's background and counseling enhancements; attributes of the counseling session; therapeutic involvement, such as the relationship between the counselor and the patient; outcomes during treatment, such as drug use; treatment retention; and posttreatment outcomes, such as social relations, drug use, and criminality. At the center of the model are the objective and subjective components of the treatment process, which are viewed as being related to one another (17).

To examine sequential components of the treatment process, studies of the model usually have emphasized patient engagement—therapeutic involvement and attendance at counseling sessions—during the first few months of treatment. These measures of early patient engagement were found to have indirect relationships with posttreatment behaviors such as drug use and criminality through their positive links with retention, posttreatment social relationships with peers and family members, and continuation of therapeutic involvement after treatment.

Nevertheless, the first two or three months of treatment often represent only a small window on the total treatment episode. Measures of pa-

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tient engagement that cover the total treatment episode need to be examined as predictors of patient outcome. Of the two aspects of patient engagement, therapeutic involvement more readily captures the essence of engagement, because attendance at counseling sessions may not be completely voluntary. On the other hand, the "cognitive involvement" of the patient in the treatment process may be viewed as a reflection of the therapeutic relationship (18).

The therapeutic relationship, or involvement, has been represented in our studies as a function of the rapport between the counselor and the patient (19), the motivation of the patient, and the patient's confidence in the process. In this study, we focused on rapport between the patient and the counselor rather than the patient's motivation and confidence in the process, which may affect or be affected by the relationship. Rapport is often considered to be at the core of the therapeutic relationship, because it is important to the development of a therapeutic bond as treatment progresses. Similar to the concepts for therapeutic bonding in psychotherapy discussed by Orlinsky and Howard (10), rapport between the patient and the counselor reflects the extent to which the two are on the same wavelength and caring for one another's well-being.

Factors that have been shown to be related to outcomes include treatment retention, satisfaction with treatment, and additional treatment. Thus it is necessary to use these variables as multivariate statistical controls for establishing the efficacy of counseling rapport as a predictor of outcomes. Our general hypothesis was that greater counseling rapport would be related to better outcomes after the index treatment for drug abuse. More specifically, low counseling rapport would be expected to predict more drug use in terms of positive urine tests and self-reports and more illegal activity and arrests. We investigate the hypothesis further in relation to treatment retention in the index treatment, satisfaction with treatment, and post–index treatment status.

Although the focus of our study was the predictive relationship of rapport to long-term outcomes, we also examined factors related to the successful development of rapport, including therapeutic focus and counseling strategies that have been shown to be related to session attendance and motivation for seeking treatment for drug addiction (12).

Methods

Sample

Two cohorts of patients who had been admitted for outpatient methadone treatment were used to examine the relationship of patient-counselor rapport during treatment for drug addiction to outcomes after the index treatment. Although the two groups of patients were both part of the same long-term treatment-enhancement project with a standardized data collection system (20), they were intentionally different in several respects to enable us to test the generalizability of our findings.

Rapport is often considered to be at the core of the therapeutic relationship, because it is important to the development of a therapeutic bond as treatment progresses.

The first cohort consisted of 354 patients who had been admitted to three nonprofit, community-based outpatient methadone treatment programs in three cities between 1990 and 1993 (21). Follow-up interviews were conducted one year after treatment ended. The second cohort consisted of 223 patients who had been admitted to a private, for-profit outpatient methadone treatment clinic in Texas between September 1995 and August 1997. These patients received free services for a year in return for participating in the study. Eighteen months after the start of treatment, each of the patients in this second cohort was eligible for the follow-up interview. For both samples, after proposed treatment strategies and data collection procedures had been fully explained, written consent was obtained from all participants with use of a protocol approved by the university's institutional review board.

Measures

Counseling rapport. The measure of counseling rapport that we used is based on ratings from counselors of their patients; patients' ratings were more highly skewed, mostly toward the upper end of the scale, and were less discriminating than counselor ratings (19,22). The data provided an opportunity to examine the robustness of this construct, because there were differences in the cohorts as well as some variation in the scale itself between the two cohorts.

The instrument that was used to record these process ratings underwent several stages of experimental testing and refinement from cohort 1 to cohort 2. The wording of some of the items was modified, and two different response formats were used. In cohort 1, the ratings were based on a 5-point Likert scale for frequency of occurrence—never, rarely, sometimes, often, almost, or always—at months 1, 2, 3, 6, 9, and 12 of the index treatment. Six items were used to define counseling rapport: "easy to talk to," "warm and caring," "honest and sincere," "understanding," "not suspicious," and "not in denial about problems." The alpha reliabilities of this scale were .80, .79, .81, .78, .82, and .82 for months 1, 2, 3, 6, 9, and 12, respectively.

In cohort 2, the ratings were based on a 7-point Likert scale that indicated the level of agreement—ranging from "disagree strongly" to "agree strongly"—at months 3, 6, 9, and 12 of the index treatment. The scale consisted of five items—"easy to talk to," "warm and caring," "honest and sin-

cere," "not hostile nor aggressive," and "not in denial about problems"—and had coefficient alpha reliabilities of .79, .81, .83, and .81 for months 3, 6, 9, and 12, respectively.

For the purposes of this study, each patient's scores were averaged over the full length of stay in the index treatment episode and dichotomized. For cohort 1, the average score could range from 0 to 4 and was dichotomized at 2.5 because of distributional skew, with scores of 2.5 or above indicating a frequency rating of "more than sometimes." About half of the patients (183, or 52 percent) had scores of 2.5 or above. Patients whose average score was 2.5 or above were coded as 1, and those whose score was below 2.5 were coded as 0.

For cohort 2, the average score could range from 1 to 7 and was dichotomized at 5, with scores of 5 or higher representing "agreement" and thus higher levels of perceived rapport between the counselor and the patient. In the distribution of this variable, 93 of the patients had average scores of 5 or above. Patients whose scores were 5 or above were coded as 1, and those with scores below 5 were coded as 0. Because the counselors did not rate the patients in cohort 2 until month 3, no ratings were available for 39 patients who had dropped out of treatment before ratings had been made. For analytic purposes, these patients were included with those who had scores below 5. With these additions to the low-rapport category, patients with scores above 5 constituted about 42 percent of the sample (93 patients). This procedure was deemed acceptable because of the similarity of the results between the samples with and without these patients.

Posttreatment outcomes. At the follow-up interview, a urine specimen was obtained and tested for opiate—excluding methadone—and cocaine metabolites. The urine specimens were analyzed with use of the enzyme multiplication immunoassay technique. Other post–index treatment outcomes included self-reported use of heroin and of cocaine, illegal activity, and arrests during the six months before the interview. Illegal activity was defined as any self-reported illegal activity during the six months before the interview or a stay in jail during that time. Individuals who were in prison at the time of follow-up were not interviewed and were excluded from the analysis, which may have reduced the level of illegal activity reported.

Covariates. In the logistic regression analyses, the importance of counseling rapport as a predictor of outcomes was tested relative to treatment retention, satisfaction with treatment, and post–index treatment status. Satisfaction with treatment was based on the results of a factor analysis of patients' ratings of treatment services at months 3, 6, 9, and 12 of treatment and was defined by five items—overall satisfaction, location, staff efficiency, meeting time of the session, and whether the session was organized and well run. The alpha reliabilities for satisfaction with treatment were .67, .77, .75, and .73 for months 3, 6, 9, and 12, respectively. Treatment retention was defined as a duration of treatment of at least a year. In cohort 1, a total of 134 patients (38 percent) met the criterion for treatment retention, compared with 167 patients (47 percent) in cohort 2. Patients who met this criterion were coded 1, and those who did not were coded 0.

Counseling rapport was significantly associated with five of the six treatment outcomes. Patients whose ratings indicated low counseling rapport had significantly worse outcomes.

Analyses

The analyses addressed six post–index treatment outcomes: urine tests that were positive for opiate metabolites or for cocaine metabolites, self-reported use of heroin and cocaine, any illegal activity, and any arrest. Initially, a multivariate analysis of variance was performed to test overall differences between the effects of different levels of counseling rapport on these six outcomes. To identify the components contributing to the significant results of the multivariate test, we then conducted separate analyses of variance for each of the six outcomes.

This procedure was followed by logistic regression analyses in which treatment retention, satisfaction with treatment, and post–index treatment status were used as covariates to further examine the significance of counseling rapport relative to the covariates as a predictor of post–index treatment outcomes.

Because treatment retention traditionally has been a consistent predictor of post–index treatment outcomes, it represents an important alternative hypothesis for explaining relationships between counseling rapport and these outcomes. Similarly, satisfaction with treatment is an alternative that might predict outcomes. Also, because patients often transfer to or enter another treatment episode after the index treatment that is being studied, the effects of counseling rapport on the post–index treatment outcomes should be adjusted for treatment status during the follow-up interview. In essence, the relative importance of counseling rapport is addressed by adjusting it for treatment retention in the index treatment, satisfaction with treatment, and treatment status at the follow-up interview. Next, counseling strategies are examined as variables that predict counseling rapport.

Finally, these analyses were replicated in the cohort 2. The availability of similar data across these somewhat diverse cohorts provided an opportunity to test the robustness of the findings. The importance of counseling rapport to outcomes was viewed as a central treatment

Table 1

Demographic and drug-use characteristics of 354 patients in community-based nonprofit drug treatment programs (cohort 1) and 223 patients in a private for-profit program (cohort 2)

Variable	Cohort 1		Cohort 2		Both cohorts				
	N or mean	%	N or mean	%	N or mean	%	χ^2	df	p
Sex, male	243	69	140	63	383	66	2.10	1	ns
Race							22.92	3	<.001
White	129	36	49	22	178	31			
African American	56	16	33	15	89	15			
Hispanic	151	43	137	61	288	50			
Other	18	5	4	2	22	4			
Age[1] (mean±SD)	37±7.6		40±10		38±8.6				
Age group (years)							44.00	4	<.001
Under 30	60	17	39	17	99	17			
30 to 35	100	28	33	15	133	23			
36 to 40	104	29	41	18	145	25			
41 to 45	56	16	53	24	109	19			
Over 45	34	10	57	26	91	16			
Educational level of 12th grade or higher	149	42	96	43	245	42	.05	1	ns
Marital status							20.43	2	<.001
Never married	50	14	49	22	99	17			
Married or living as married	171	48	66	30	237	41			
Separated, divorced, or widowed	133	38	108	48	241	42			
Full-time or part-time employment	163	46	71	33	234	41	9.11	1	<.003
Major source of financial support							9.58	3	<.03
Job	103	29	39	18	142	25			
Family or friends	106	30	68	32	174	31			
Illegal source	86	24	58	27	144	25			
Other	59	17	49	23	108	19			
Involvement with the criminal justice system	141	40	124	56	265	46	13.49	1	<.001
Drug use at intake									
Alcohol daily	109	31	37	17	146	25	14.11	1	<.001
Marijuana at least weekly	84	24	25	11	109	19	14.22	1	<.001
Cocaine alone at least weekly	89	25	30	13	119	21	11.52	1	<.001
Speedball at least weekly	107	30	37	17	144	25	13.71	1	<.001

[1] t=4.53, p<.001

process variable that would be expected to affect outcomes similarly in the two cohorts.

Results

The cohorts differed in retention rates and background. One-hundred and forty-two patients (40 percent) in cohort 1 terminated treatment by the sixth month; only 134 patients (38 percent) stayed a year. In contrast, in the second cohort, 133 patients (60 percent) remained in treatment for a year. As can be seen in Table 1, cohort 1 was younger, more likely to be white and less likely to be Hispanic, more likely to be married or living as married, more likely to have a full-time or part-time job, and less likely to have had involvement with the criminal justice system at admission. Cohort 1 had higher rates of daily alcohol use, marijuana use, and use of cocaine alone or in combination with heroin.

Cohort 1

As can be seen in Table 2, in cohort 1 there were significant differences between the high- and low-rapport groups in the six outcomes. Counseling rapport was significantly associated with five of the six post–index treatment outcomes: opiate- and cocaine-positive urine tests, self-reported cocaine use, illegal activity, and arrests. In each instance, patients whose ratings indicated low counseling rapport had significantly worse outcomes. Those with low counseling rapport were at least twice as likely as those with high rapport to have had a cocaine-positive urine test, to have reported cocaine use, to have been involved in illegal activity, or to have been arrested.

The results of the logistic regression analyses, which are presented in Table 3, indicate that counseling rapport was a more significant predictor of cocaine use and criminality outcomes after the index treatment than treatment retention, satisfaction with treatment, or post–index treatment status. When treatment retention was adjusted for counseling rapport and post–index treatment, it was not significantly related to the outcomes. Without this adjustment, treatment retention was significantly related to lower rates of drug use, illegal activity, and arrest. Greater satisfaction was significantly related to a lower rate of self-reported heroin use, and additional treatment was significantly related to a lower rate of illegal activity and arrest.

Four of the five therapeutic strategies were predictive of counseling rapport: emphasis by the counselor on communication skills (p<.001, odds ratio=8.4), goal setting (p<.008, OR=16.1), improvement of the patient's

objectivity (p<.005, OR= 8.6), and problem solving (p<.001, OR=4.1).

Cohort 2

Significant differences in outcomes were also found in cohort 2 between the high- and low-rapport groups (Table 2). The two groups were significantly different in self-reported use of heroin and cocaine and in illegal activity and arrests.

Counseling rapport was a significant predictor of a cocaine-positive urine test (p<.05), self-reported use of heroin (p<.004), self-reported use of cocaine (p<.027), and arrests (p<.008) and was marginally related to illegal activity. The difference between the low- and high-rapport groups in cocaine-positive urine tests was marginally significant.

The logistic regression analyses again showed that counseling rapport was a more consistent predictor of outcomes than treatment retention, satisfaction with treatment, and post–index treatment status. Counseling rapport was a significant predictor of a cocaine-positive urine test, self-reported use of heroin, self-reported use of cocaine, illegal activity, and arrest. When adjusted for counseling rapport and post–index treatment status, treatment retention was not a significant predictor.

As in cohort 1, when counseling rapport was adjusted for treatment retention, satisfaction with treatment, and post–index treatment status, it was a significant predictor of a cocaine-positive urine test, self-reported cocaine use, illegal activity, and arrests. In addition, counseling rapport was a significant predictor of self-reported heroin use in cohort 2.

As we have noted, patients who

Table 2

Estimated drug treatment outcomes among 354 patients in community-based nonprofit drug treatment programs (cohort 1) and 223 patients in a private for-profit program (cohort 2), by level of counseling rapport

Variable	Low rapport N	Low rapport %	High rapport N	High rapport %	Odds ratio	t	p
Cohort 1[1] (N=171 low and 183 high rapport)							
Opiate-positive urine test[2]	73	51	66	39	1.61	2.07	.04
Cocaine-positive urine test[2]	74	51	42	25	3.22	5.02	<.001
Self-reported weekly use of heroin	72	42	64	35	1.33	1.34	ns
Self-reported weekly use of cocaine	45	26	24	13	2.38	3.20	.002
Any illegal activity	80	47	35	19	3.70	5.80	<.001
Any arrests	77	45	46	25	2.44	4.01	<.001
Cohort 2[3] (N=130 low and 92 high rapport)							
Opiate-positive urine test	79	62	52	58	1.20	.65	ns
Cocaine-positive urine test	50	39	24	27	1.79	1.95	.052
Self-reported weekly use of heroin	81	62	31	35	3.03	4.05	<.001
Self-reported weekly use of cocaine	23	18	5	6	3.57	2.63	.01
Any illegal activity	43	33	17	18	2.22	2.43	.016
Any arrests	40	31	13	14	2.70	2.91	.004

[1] Multivariate F=7.88, df=6, 305, p<.001
[2] N=144 low and 169 high rapport
[3] Multivariate F=4.27, df=6, 205, p<.001

Table 3

Associations of drug treatment outcomes at follow-up with rapport, retention, satisfaction, and follow-up treatment in a sample of 354 patients in community-based nonprofit drug treatment programs (cohort 1) and 223 patients in a private for-profit program (cohort 2)

Outcome	Intercept	Rapport b weight	Rapport χ^2	Retention b weight	Retention χ^2	Satisfaction b weight	Satisfaction χ^2	Follow-up treatment b weight	Follow-up treatment χ^2
Cohort 1									
Opiate-positive urine test	1.03	–.41	3.02	–.17	.39	–.25	2.09	–.40	2.53
Cocaine-positive urine test	.16	–1.10	19.74***	–.30	1.16	.02	.02	–.22	.65
Self-reported weekly use of heroin	1.37	–.19	.70	–.35	1.73	–.46	7.21**	–.47	3.50
Self-reported weekly use of cocaine	.10	–.81	7.87**	–.09	.07	–.36	3.00	–.15	.24
Any illegal activity	1.09	–1.23	23.45***	–.45	2.38	–.26	1.95	–.84	9.10**
Any arrests	.91	–.77	10.08**	–.55	3.64	–.20	1.17	–1.03	14.30***
Cohort 2									
Opiate-positive urine test	.89	–.15	.21	–.35	.77	1.14	7.86**	–1.16	11.07***
Cocaine-positive urine test	–.55	–.76	4.92*	.20	.24	.85	5.10*	–.44	1.48
Self-reported weekly use of heroin	.94	–.99	8.74**	–.13	.12	–.09	.06	–1.23	11.96***
Self-reported weekly use of cocaine	–1.40	–1.27	5.30*	–.49	.80	.46	.68	.21	.16
Any illegal activity	–.54	–.65	3.14	–.06	.02	–.33	.57	–.42	1.16
Any arrests	–.45	–1.08	7.59**	–.16	.14	.27	.39	–.77	3.25

*p<.05
**p<.01
***p<.001

dropped out early were included in cohort 2, and analyses that excluded these individuals yielded similar results. The result of the multivariate test was significant ($p<.003$), and the subsequent analyses of variance showed associations with a cocaine-positive urine test ($p<.058$), self-reported heroin use ($p<.002$), self-reported cocaine use ($p<.013$), illegal activity ($p<.054$), and arrests ($p<.004$). The logistic regression analyses confirmed the significance of counseling rapport when treatment retention and post–index treatment status were controlled for.

Three of the five counseling strategies were found to be predictive of counseling rapport in a series of logistic regression analyses: the use of communication skills ($p<.02$, OR=1.8), goal setting ($p<.001$, OR=2.6), and empathy building ($p<.001$, OR=4.1).

Discussion and conclusions

In this study, counseling rapport as measured during drug abuse treatment was found to predict post–index treatment outcomes. Essentially, the hypothesis that greater counseling rapport is related to better drug-use and criminality outcomes at follow-up—even after adjustment for the duration of treatment, satisfaction with treatment, and subsequent return for more treatment—was confirmed. These findings support the use of interventions to increase the patient's readiness for treatment and to enhance the counselor's skills (21,23) as a means of improving counseling rapport.

Our findings suggest that the role of the counselor is important in the treatment of drug abuse, which is reminiscent of earlier psychotherapy research on the importance of the type of therapist. Particularly relevant are some commonalities between the items on the scale for reporting counseling rapport—for example, "easy to talk to," "warm and caring," "honest and sincere," and "understanding"—and the "humanistic and person oriented" type of therapist in psychotherapy (24,25). In addition, our results support findings from psychotherapy research about the relevance to therapy outcomes of prognostic expectations before or early in treatment (26). Despite these commonalities in results, our study addressed a different patient population and involved drug counselors, whose formal training is very different from—and more limited than—that of psychotherapists.

Of particular interest is the effects of counseling rapport on posttreatment cocaine use and illegal activity when follow-up treatment status, satisfaction with treatment, and retention in the index treatment were introduced into the analyses. These results showed that counseling rapport had a unique predictive value beyond that offered by the other measures.

The results of our study also suggest that treatment focus and strategies are important for understanding counseling relationships.

The analyses were repeated with another cohort in which similar data had been collected, and these analyses reaffirmed the significance of counseling rapport on post–index treatment outcomes.

Particularly notable is the robustness of the findings. Despite methodologic and patient-background differences between the two cohorts, the results were essentially the same and supported counseling rapport as an important component of the treatment process for drug abuse. Additional analyses also showed a relationship between counseling rapport and the therapeutic strategies that were emphasized by the counselors. The strategies of communication skills and goal setting had a significant effect in both cohorts. These findings, emphasizing the importance of the patient-counselor relationship, expand our knowledge of the "black box" of treatment.

The differences between the two cohorts not only support the robustness of counseling rapport as a predictor of outcomes but also highlight difficulties in using treatment retention as a predictor. The average tenure in cohort 2 was more than eight months; more than two-thirds of the patients stayed at least six months, and more than half stayed 360 days or more. This long-tenure sample proved valuable for studying the treatment process but was less useful for studying retention as a predictor of posttreatment outcomes. In contrast with samples in many treatment-effectiveness studies, the cohort included only a small number of patients who dropped out early—in less than 90 days. In contrast, cohort 1 included a higher percentage of patients who dropped out early. These patients generally have the poorest outcomes. It is the large percentage of patients who dropped out early that strengthened the association between retention and drug use and criminality after the index treatment. This finding points to the importance of collecting process data, such as data on counseling rapport, in treatment evaluations. Such data have conceptual and practical value in situations in which treatment retention may be consistently high or consistently low—for example, when treatment retention is standardized by coercion, as is the case in a prison setting.

The results of our study also suggest that treatment focus and strategies are important for understanding counseling relationships. A higher level of counseling rapport was related to better counseling skills, and possible by-products of counseling rapport during treatment may be greater satisfaction with treatment and better family, spousal, and peer relationships. Our results provide further evidence for the variables that need to be included in models of treatment process and outcomes. ♦

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