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Patient Versus Therapist Alliance: Whose Perception Matters?

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Abstract

Development of working alliance was examined for 25 opioid-abusing pain patients and their therapists. Patients participated in an 8-session intervention based on adherence strategies and employing a supportive, psychoeducational approach; methadone was prescribed for pain. Treatment goals included opioid analgesic adherence and decreasing pain, functional interference, and substance abuse. Patients and therapists completed the Helping Alliance Questionnaire-II following each treatment session. At baseline, patients' and therapists' scores indicated good alliance. Patient alliance grew significantly over time, regardless of addiction severity and independent of treatment outcomes. In contrast, therapist alliance grew only for patients without substance abuse co-morbidity and/or who had good outcomes. Patients' and therapists' alliance scores were consistent during sessions focused on emotional bonds but diverged during sessions that demanded behavior change, suggesting therapists may have reacted negatively to patients' lack of progress. Whether therapists' reactions to poor performers impacted subsequent patient outcomes is unknown, but should be investigated.

Keywords

Working alliance; Prescription opioid abuse; Opioid analgesic abuse; Chronic non-cancer pain; Medication adherence

1. Introduction

Pain is defined as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage" (IASP; Merskey & Bogduk, 1994). When pain persists for 6 months, it is considered to be chronic (Wall & Melzack, 1999). Although chronic pain often is treated with opioids (Reid et al., 2002), this practice is controversial due to concerns about tolerance, dependence, and the failure of some patients to evidence functional improvements (Katz, 2002; Pappagallo & Heinberg, 1997). The prevalence of opioid analgesic abuse among chronic pain patients is between 24%–34%, depending on population and setting (Ives et al., 2006; Reid et al., 2002). Abuse is characterized by "aberrant medication-taking behaviors" (AMTBs) that include not taking pain medication as prescribed, reporting lost/stolen prescriptions, and

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using supplemental opioids obtained from unauthorized or illegal sources (Portenoy, 1990; 1996). When AMTBs emerge during treatment, they strain the therapeutic relationship. Patients protest that providers are confrontational, withhold opioids and/or treat them like addicts while providers express concern about being manipulated (Passik & Kirsh, 2005; Portenoy, 1996). Negative interchanges make it difficult for a collaborative working relationship to be developed and sustained.

Working alliance refers to the collaborative relationship that develops between patient and therapist. Comprised of goals, tasks, and emotional bonds (Bordin, 1979), it accounts for as much as 15% of the variance in treatment outcomes (Horvath, 2006). Alliance is measured from both patient and therapist perspectives, with patients rating alliance more highly than therapists (Belding, Iguchi, Morral, & McLellan, 1997; Petry & Bickel, 1999). Among substance abusers, working alliance impacts treatment retention, completion, and outcomes (Barber et al., 1999, 2001; Belding et al., 1997; Carroll, Nich, & Rounsaville, 1997; Liese & Beck, 1997). Stronger therapist alliance predicts treatment completion in opioid abusers receiving agonist treatment (Petry & Bickel, 1999), and patient alliance predicts treatment retention in offenders receiving substance abuse treatment (Brochu et al., 2006). Among alcohol abusers, patient and therapist alliance was positively related to days abstinent (Connors, Carroll, DiClemente, Longabough, & Donovan, 1997). Higher patient and therapist alliance also is associated with better treatment outcomes for both cocaine users (Barber et al., 1999) and methadone maintenance patients (Belding et al., 1997). In sum, higher working alliance predicts increased retention, completion, and outcomes in substance abuse treatment.

Patient and therapist characteristics influence alliance development in substance abuse treatment. While greater substance abuse severity (Belding et al., 1997) and lower motivation to change (Connors et al., 2000) have a negative impact patient on alliance, patient recognition of drug-related problems positively predicts patient alliance (Broome, Knight, Knight, Hiller, & Simpson, 1997). Therapists with more education and credentials develop stronger working alliance with their patients (Connors et al., 2000; Meier, Donmall, Barrowclough, McElduff, & Heller, 2005) and patients report stronger alliance with therapists in recovery (Meier et al., 2005). As these factors influence alliance development, they should be considered when evaluating the efficacy of various drug treatments.

No information exists regarding alliance development in pain patients who abuse prescribed opioids. Alterations in office/prescribing practices have been proposed (Sees & Clark, 1993; Weaver & Schnoll, 2002; Wesson, Ling, & Smith, 1993), although these are geared toward containing behavior more than repairing the therapeutic relationship. It is not known whether a healthy working alliance can be established/sustained with this population. With this in mind, the current study investigated alliance development for patients who enrolled in a treatment trial targeting chronic pain and opioid analgesic abuse. We hypothesized that: (1) patient and therapist alliance would increase over time; (2) patient alliance would be higher than therapist alliance; (3) growth in alliance would be lower for patients with greater substance abuse severity; and (4) growth in alliance would be positively related to treatment outcome.

2. Method

2.1. Inclusion and exclusion criteria

Of 74 referrals received from pain providers, 46 signed a HIPAA form to release medical information, passed a telephone pre-screen, signed informed consent, and began the baseline evaluation; however, 6 failed to complete the evaluation and 4 were excluded from participation for psychiatric and/or medical reasons (unstable psychiatric or medical conditions, malignancy, headache/facial pain, significant cognitive problems, or surgery pending during the 6-month study period). The remaining 36 patients met all inclusion criteria [qualifying chronic pain

diagnosis, “average” pain in the severe range ($VAS \geq 7$) on the Visual Analogue Scale despite use of opioid analgesics for 6 months, opioid abuse or dependence diagnosis based on the Structured Clinical Interview for DSM-IV-Clinician version, and ≥ 2 AMTBs based on the Problems with Pain Meds Checklist] and initiated treatment.

2.2. Behavioral intervention

Participants engaged in 8 adherence-counseling sessions delivered over 12 weeks (wks 1–5, 7, 9, & 12). Sessions were spread out during the later part of treatment to afford patients more opportunities to practice medication management strategies. The goals of the intervention were to improve opioid adherence, eliminate unauthorized opioid/other drug use, decrease pain, and improve functioning. Adherence strategies included: (1) education about chronic pain, opioids and opioid abuse; (2) self-administration of opioids to control pain; (3) self-monitoring; (4) pill counts; (5) opioid contracts; and (6) feedback on urine toxicology results. The intervention framed opioid abuse as a medical problem and discussion revolved around medication management as opposed to drug abuse. The intervention also addressed problems communicating with pain providers about misuse of opioid analgesics.

Sessions 1 and 2 focused on establishment of emotional bonds. Content included reason for referral, history of pain/pain treatment and psychoeducation about opioid analgesics. During Sessions 3 and 4, patient difficulties with pain control, problems managing opioid analgesics and illicit drug use (if appropriate) were discussed. During Session 5, the focus shifted from emotional bonds to treatment goals and tasks through frank discussion of goals and barriers to change. This focus continued during Sessions 6 and 7, with the therapist providing ongoing feedback on treatment progress. During Session 8, the therapist and study physician met with the patient to review the course of treatment and inform the patient of the treatment teams’ decision to maintain the patient on versus taper the patient off methadone, based on a mathematical algorithm to objectify outcome.

2.3. Pharmacotherapy

Referring providers signed a “Provider Contract” promising to stop providing opioids (including methadone) to patients who enrolled in the trial, although they were allowed to continue other pain treatments such as Non-Steroidal Inflammatory Drugs (NSAIDs; e.g., Ibuprofen). Providers also agreed to resume treatment of patients at trial completion, regardless of the treatment outcome. If patients were successful, providers agreed to continue to prescribe methadone throughout the 3-month follow-up period unless problems developed. Consultation from study physicians was available to referring physicians throughout the follow-up period.

Ongoing pharmacotherapy was needed to provide patients with opportunities to practice newly acquired medication management skills. Medication visits occurred immediately after counseling visits and included: (1) discussion of adherence to a signed opioid contract; (2) assessment of medication adherence since the last visit; (3) evaluation of both therapeutic and adverse drug effects using a checklist; (4) discussion of urine toxicology; (5) pill counts; and (6) writing of prescriptions for methadone. Methadone was selected because it is an efficacious analgesic, relatively long acting, easy to monitor and inexpensive. Study participants on methadone at baseline (32%) continued on this medication, with their dose being adjusted (up or down) based on VAS scores, behavior, and adherence (urine drug screen, pill counts, etc.). The remaining 68% of participants were converted from other opioids to an equianalgesic dose of methadone before dose titration began. Unlike methadone for addiction where patients are dosed once daily, patients were dosed every 6 hours and also were provided with three 5 mgs doses for “breakthrough” pain. Methadone was prescribed in tablet form and dispensed to patients by the hospital’s Investigational Pharmacy. Changes on ratings of pain, functioning, and side effects were used to titrate the dose with patients being dosed to therapeutic effect

(i.e., the point where pain was stabilized in the absence of signs of intoxication, abuse, or intolerable side effects).

2.4. Outcome criteria: Decision to maintain on versus taper off opioid therapy

Prior to Session 8, an algorithm was used to determine outcome at discharge (maintain on versus taper off methadone); the algorithm was based on: (1) changes in VAS pain and functioning; (2) opioid medication adherence; and (3) decreased use of unauthorized substances, including other opioid analgesics, alcohol, and illicit drugs. Patients who failed to obtain pain relief, whose functioning did not improve, who were unable to demonstrate reliable medication adherence, and/or who continued to use unauthorized opioid analgesics and/or other drugs of abuse were tapered off methadone. All patients were returned to their referring physicians' care after the trial, either drug-free or on a stable dose of methadone.

2.5. Treatment fidelity

The intervention was manual-guided. Seven therapist/physician teams received training cases prior to being assigned randomized cases. Treatment fidelity was assessed by independent raters who reviewed session tapes. Clinicians completed adherence checklists following each session and also participated in clinical supervision. The Motivational Adherence Therapy Therapist Adherence and Competence Scale (MAT-TACS; Ingersoll et al., 2003), was used to evaluate therapists' adherence and competence. The MAT-TACS is a modified version of the Yale Adherence and Competence Scales (YACS; Carroll et al., 2000) that retained general and proscribed items, and added items specific to the current study's interventions. The therapist version of MAT-TACS is a 42-item measure in 6 domains: (1) assessment; (2) general clinical skills; (3) adherence strategies; (4) cognitive-behavioral strategies; (5) motivational interviewing; and (6) proscribed behaviors. Scores range from 1–7 for both adherence to the treatment manual and competence in the delivery of the intervention. A reliability analysis revealed that Cronbach's alpha for the adherence subscale was .71, and for the competence subscale was .74 (Ingersoll et al., 2003). Although fidelity information was collected for both physicians and behavioral therapists, working alliance data targeted the behavioral intervention only.

2.6. Enrollment and procedures

Due to relocation of the Principal Investigator, the trial was conducted at two sites: Virginia Commonwealth University Medical Center in Richmond, Virginia, and St. Luke's-Roosevelt Hospital Center in New York City. Study procedures were conducted on research units in accord with standards of the Institutional Review Boards at both institutions. IRB approval also was obtained from 3 referral sites (the McGuire Veterans Administration Medical Center in Virginia and the New York-Presbyterian and Beth Israel Medical Centers in New York). Providers identified opioid abusers who appeared to meet inclusion/exclusion criteria. They obtained HIPAA authorization to allow sharing of information with study staff, completed a Physician Referral Form, and a Problems with Pain Meds Checklist to specify AMTBs. Baseline evaluations were scheduled with patients who met initial inclusion/exclusion criteria and passed a structured telephone pre-screen to confirm presence of opioid abuse or dependence. At baseline, patients underwent psychiatric and physical examination, including EKG and blood work. Patients next completed a psychosocial evaluation using structured clinical interviews and computer-based measures. Patients provided a urine sample to test for alcohol, illicit and prescribed drugs including methadone, morphine-based and synthetic opioids such as oxycodone and hydrocodone. Patients were compensated \$35 for completing the baseline assessment. The visit schedule for the remainder of the study included back-to-back counseling and pharmacotherapy sessions during Weeks 1–5, 7, 9 & 12 with additional stabilization visits (vital signs, urine test, and pill count) during the first 2 weeks of treatment

as a safety precaution. Patients were compensated \$10 for completing a minor assessment following each treatment visit which included measures of working alliance, pain severity, functional interference, medication adherence, and unauthorized drug use (urine toxicology). Following each counseling session, therapists also completed a measure of working alliance.

2.7. Measures

2.7.1. The Helping Alliance Questionnaire-II (HAQ-II)—The 19-item HAQ-II (Luborsky et al., 1996) was used to assess working alliance. Each item is rated on a 6-point Likert scale (1 = strongly disagree, 6 = strongly agree). Negatively worded items are reverse scored. A score of 86 is considered a “good” alliance, based on tentative findings by Luborsky and colleagues (L. Luborsky, personal communication, October 18, 2005). The range of Cronbach’s alpha coefficient for patients’ alliance ratings was .86 (Session 1), to .85 (Session 8). For therapists, the range was .38 (Session 1), to .82 (Session 8).

2.7.2. The Visual Analogue Scale (VAS)—The VAS was adapted from the Partners with Pain Opioid Therapy Documentation Kit (Narcessian, 2001), and was used to assess pain severity and functional interference due to chronic pain. For this study, participants were asked to rate both the severity of pain (worst, least, average) and extent of functional interference (e.g., sleep, mood, activity level) on a 10-point VAS scale with 1 being no pain/interference and 10 being the worst imaginable pain/interference.

2.7.3. Structured Clinical Interview for DSM-IV-Clinician Version (SCID-CV)—The SCID-CV (First, Spitzer, Gibbon, & Williams, 1997) was used to assess current (past 30 days) and lifetime Axis I psychiatric and substance-related diagnoses. Patients were required to meet criteria for current opioid abuse or opioid dependence to be enrolled in the study.

2.7.4. Problems with Pain Meds Checklist (PPM)—The PPM (Acosta, Haller, & Weaver, under revision) is a 48-item checklist designed to characterize AMTBs and other drug abuse problems in patients with pain. A minimum of 2 provider-identified problems was required for study inclusion. In addition, for this study, a subset of 7 items reflecting tension in the doctor-patient relationship were used (Provider Relations domain)¹, with higher scores indicating more problems in the relationship.

2.7.5. Physician Referral Form—This form, developed for the study, was used to collect information about the referring pain provider, the patient’s pain and other medical diagnoses, current medications, and any non-opioid pain interventions.

2.8. Baseline participant characteristics

These data are for 25 (of 36) randomized participants who completed all 8 intervention sessions. Information obtained from the remaining 11 patients was excluded, as their HAQ-II ratings were not available for all treatment sessions. Comparison of completers and non-completers at Session 1 failed to reveal any significant differences on demographic characteristics, working alliance scores, VAS pain severity and functional interference scores, AMTBs, or non-opioid substance abuse. Patients failed to complete treatment for a variety of reasons: removed from trial by investigator (5), died (2), and voluntarily withdrew (4). Four of 5

¹2. Manipulate doctors to get pain medication

22. Call for refills at night or on weekends rather than during regular office hours

28. Have made up (or exaggerated) symptoms to justify use of pain medicine

36. Have had arguments or conflicts with providers regarding your use of pain medicine

39. Feel you have to “beg” for pain medication

40. Feel your doctor is opposed to your use of pain medicine

41. Feels you have been treated like an “addict” by medical providers

participants were removed due to unstable medical conditions and one for non-attendance. Three participants withdrew from the study because of methadone-related concerns. One participant completed a baseline assessment, but never met with a study therapist.

Table 1 displays baseline demographic characteristics and Table 2 shows baseline pain and functional interference characteristics for treatment completers. Patients were middle-aged, male, Caucasian, and disabled. The mean duration of pain was 8.9 years ($SD = 8.2$). Disease was the most common cause of pain (72%), and the most frequent pain sites were chest/upper back (40%), and lower back (44%). Functional interference was most severe in the areas of work ($M = 8.4$, $SD = 2.2$) and enjoyment of life ($M = 8.1$, $SD = 2.3$).

All participants met SCID-CV criteria for current opioid abuse (32%) or dependence (68%). Other substance use disorders included: alcohol (28% lifetime dependence, 8% lifetime abuse, 4% current abuse), cannabis (4% lifetime dependence, 16% lifetime abuse), cocaine (16% lifetime dependence, 8% lifetime abuse, 8% current abuse), sedatives/hypnotics/anxiolytics (4% lifetime dependence, 4% current abuse), amphetamines (4% lifetime abuse), and hallucinogens (4% lifetime abuse). In addition, patients had high rates of anxiety (24% current, 48% lifetime) and depressive (40%, current, 76% lifetime) disorders.

Referring physicians endorsed an average of 11.0 ($SD = 9.3$) AMTBs, including increasing opioid dose without permission (50%); going to the emergency room to obtain opioids (41%); using opioids not authorized by the treating physician (36%); manipulating doctors to obtain opioids (32%); using opioids to treat problems other than pain (32%); and having two or more prescriptions from different doctors for the same opioid medication (32%). Referring physicians also reported that patients: “begged” for opioid medication (32%); rapidly progressed from weaker to stronger opioids (27%); used more opioid medication than warranted (27%); argued with their provider about opioid use (27%); and made up/exaggerated symptoms to justify use of opioid analgesics (23%). Forty-one percent of providers felt their patients were “overly concerned” about access to opioid medication, and 41% believed their patient’s opioid use was “out of control.”

2.9. Therapist characteristics

Study physicians included 2 psychiatrists certified in Addiction Psychiatry by the American Board of Psychiatry and Neurology, an American Society of Addiction Medicine-certified internist, and 3 fellows in anesthesiology (pain management) or psychiatry. Therapists were licensed psychologists (5), psychology post-doctoral fellows (3), psychiatry residents (1), and clinical psychology interns (2). They were Caucasian, (82.9%), Black/African-American (2.9%), and Hispanic (14.3%) with a mean age of 34.54 ($SD = 6.35$) years. Most (77.1%) were female with at least one year of formal substance abuse training (51.4%), and with 1–5 years experience working with patients with both substance abuse and chronic medical problems (72%).

2.10. Statistical analysis

Descriptive statistics were used to characterize the sample. Within-subjects analysis of variance (ANOVA) tests were used to examine the development of alliance over time for both patients and therapists. We then examined the impact of patient characteristics, including psychiatric co-morbidity and substance abuse co-morbidity, and treatment outcome on the development of alliance over time, yielding 3 mixed between-within subjects ANOVAs. When significant interactions emerged, we examined simple effects using paired-samples t-tests (to compare change from Session 1) and independent samples t-tests (to compare differences between therapists’ and patients’ scores at different time points). To explore these findings in more detail, we ran correlations to assess the relationship between working alliance ratings and

outcomes during treatment, including pain levels, functional interference, treatment adherence, and urine toxicology. Further, methadone dose and prior doctor-patient relationship (using the PPM Provider Relations domain) were examined as additional potential influences on alliance development.

3. Results

3.1. Development of working alliance over time

Patients' and therapists' alliance ratings were high across sessions. Within-subjects ANOVAs revealed significant increases in both patient [$F(7, 112) = 3.01, p < .01$] and therapist alliance over time [$F(7, 126) = 7.50, p < .001$; see Figure 1). In addition, patient scores ($M = 96.04, SD = 9.37$) were significantly higher than therapist scores [$(M = 83.96, SD = 8.39), t(21) = -5.08, p < .01$] at Session 1 and stayed higher throughout treatment. Correlations between patients' and therapists' alliance scores were moderate to large and grew over time, reaching significance during Session 7 ($r = .51$) and Session 8 ($r = .67; p's < .05$). While patients' and therapists' alliance scores were correlated and grew over time, patients had higher working alliance scores than therapists across sessions.

3.2. Impact of patient characteristics on working alliance

3.2.1. Psychiatric co-morbidity—We next examined the impact of anxiety or depression on patient and therapist alliance over time. No statistically significant relationships were found between patient alliance and lifetime anxiety disorder. However, patients with a current anxiety disorder report lower overall alliance ($M = 95.66, SD = 5.48$) compared to those without anxiety [$M = 103.04, SD = 7.40; F(1,17) = 4.58, p < .05$], though no impact on change in alliance over time was observed. Similarly, while neither lifetime nor current depression was related to *change* in patient alliance, patients with a lifetime depressive disorder reported significantly lower overall alliance ($M = 98.64, SD = 6.78$) than those without depression [$M = 106.50, SD = 6.18; F(1,17) = 4.70, p < .05$]. No relationship between therapist alliance scores and patient psychiatric co-morbidity was found. In sum, though patients with current anxiety and lifetime depression reported lower levels of alliance overall, co-morbid psychiatric disorders had no impact on change in either patient or therapist alliance over time.

3.2.2. Substance abuse co-morbidity—While the percentage of patients with current versus lifetime psychiatric disorders was sizeable enough for statistical analysis, base rates for current alcohol and non-opioid drug use disorders were too low to conduct separate analyses. Therefore, patients with versus without lifetime alcohol and non-opioid analgesic drug disorders were compared. Having a lifetime alcohol or non-opioid analgesic drug use disorder did not impact change in patients' alliance ratings over time. However, patients with alcohol use disorders had lower overall alliance ratings ($M = 97.31, SD = 6.75$) than those without alcohol use disorders [$M = 104.51, SD = 8.04; F(1,16) = 5.28, p < .05$]. Interestingly, growth in therapist alliance ratings over time differed significantly for patients with versus without alcohol use disorders [$F(7,126) = 2.78, p < .05$] and for patients with versus without non-opioid drug use disorders [$F(7,119) = 2.36, p < .05$]. More specifically, therapists' alliance ratings for patients without alcohol use disorders increased significantly from Session 1, to Sessions 4, 5, 6, 7, and 8 ($p's < .05$). In contrast, therapists' alliance ratings for patients with alcohol use disorders only increased from Session 1 to Session 5 ($p < .05$). A similar pattern was seen for patients with non-opioid analgesic drug use disorders; therapists' alliance ratings for patients without other drug use disorders increased significantly from Session 1, to Sessions 4, 5, 6, 7, and 8 ($p's < .05$). However, therapists' alliance ratings for patients with non-opioid drug use disorders increased only from Session 1 to Sessions 5 and 7 ($p's < .05$). In sum, therapist alliance for patients without co-morbid alcohol and/or non-opioid drug use disorders significantly and consistently increased during the latter half of treatment; in contrast,

consistent growth was not seen in therapist alliance for patients with alcohol or non-opioid analgesic drug use disorders.

3.3. Relationship of working alliance to treatment success

A mixed between-within subjects ANOVA revealed that growth in patient alliance was unrelated to treatment success (maintained versus tapered). For therapists, however, working alliance significantly increased for successful patients only [$F(7,126) = 6.47, p < .01$; see Figure 2]. Post-hoc analyses indicated that, for successful patients, therapist alliance significantly increased from Session 1 to Sessions 4, 5, 6, 7, and 8 (p 's $< .05$). However, for unsuccessful patients, therapist alliance did not change significantly over time. To ensure that alliance scores were not related to variables outside of therapy, we examined the relationship between methadone dose, and patient and therapist alliance at each session. Correlation coefficients revealed no significant relationships between patients' or therapists' alliance scores and methadone dose at any time point.

3.4. Relationship of working alliance to “during treatment” outcomes

In order to more thoroughly explore the relationship of alliance to treatment outcome, we examined “during treatment” outcomes including repeated assessments of pain, functional interference, opioid adherence and urine toxicology. Correlations failed to reveal statistically significant relationships between either patient or therapist alliance scores and VAS pain ratings until the end of treatment, when higher patient alliance was significantly related to lower VAS scores for least ($r = -.51$) and average pain ($r = -.53, p$'s $< .05$) at Session 8. A similar relationship was seen for VAS least and average pain and therapist alliance at Session 7 ($r = -.52$ least, $-.48$ average) and at Session 8 ($r = -.44$ least, $-.51$ average, p 's $< .05$). Higher patient alliance was related to higher VAS functional interference ratings for general activity level ($r = .43$) and walking at Session 1 ($r = .41, p$'s $< .05$); however, by end of treatment, higher levels of patient alliance were related to lower VAS functional interference ratings for activity, work, life enjoyment, mood, and relationships with others ($r = -.43$ to $-.58, p$'s $< .05$). Therapists evidenced similar trends; higher therapists' alliance scores at Session 7 were related to lower VAS functional interference ratings for activity, work, and life enjoyment at Sessions 6, 7, and 8 ($r = -.41$ to $-.60; p$'s $< .05$). In sum, lower pain and functional interference ratings were related to higher patient and therapist alliance, but only at the end of treatment.

We also examined the relationship of working alliance to opioid adherence for scheduled and breakthrough medication (measured via pill count) and to urine toxicology. Poorer medication adherence was related to lower therapist (but not patient) alliance. Significant correlations between therapist alliance and patient adherence (scheduled dose) were found at Session 6 ($r = .44$) and Session 7 ($r = .51, p$'s $< .05$) and between therapist alliance and patient adherence (breakthrough doses) at Session 5 ($r = .43$), and Session 7 ($r = .42, p$'s $< .05$). Thus, therapists' alliance scores were lower when patient adherence was poor, but only during later Sessions (5–7). Finally, we examined the relationship between alliance and unauthorized drug use. Drug screens assessed for opioids other than methadone, amphetamines, cocaine and cannabis. Similar to findings for adherence, patient alliance was not related to unauthorized drug use at any time during treatment. Unauthorized drug use was positively correlated with therapist alliance early in treatment (Session 2 $r = .51, p < .05$), but negatively correlated with alliance later in treatment; Session 8 therapist alliance was impacted by unauthorized drug use at Sessions 5 ($r = -.50$), 6 ($r = -.54$), and 7 ($r = -.44, p$'s $< .05$). To conclude, patient alliance was unrelated to opioid adherence and unauthorized drug use; in contrast, lower therapist alliance was related to poorer adherence and higher levels of unauthorized drug use in later (but not earlier) sessions.

3.5. Working alliance and doctor-patient relationship in prior pain treatment

Significant negative correlations were found between referring provider ratings on PPM (Provider Relation domain) and patients' alliance ratings at Sessions 4, 6, and 8 ($r = -.78$ to $-.50$, p 's $< .05$). Significant negative correlations also were found between PPM items and therapist alliance at Sessions 4, 7, and 8 ($r = -.63$ to $-.48$, p 's $< .05$). The relationships between working alliance and physician PPM ratings emerged at Session 4 for both therapists and patients and persisted throughout treatment. We next investigated the relationship between treatment outcome (maintained or tapered) and PPM ratings using a between-subjects ANOVA. Unsuccessful participants were rated significantly higher on the PPM Provider Relations domain ($M = 4.2$, $SD = 2.58$) than were successful participants [$M = 1.0$, $SD = 1.47$; $F(1,15) = 10.67$, $p < .01$]. To summarize, participants whose referring providers perceived more tension in the doctor-patient relationship had poorer outcomes in the current treatment trial.

4. Discussion

The current study examined working alliance between opioid abusing pain patients and their therapists. We hypothesized that: (1) patient and therapist alliance would increase over time; (2) patient alliance would be higher than therapist alliance; (3) growth in alliance would be lower for patients with greater substance abuse severity; and (4) growth in alliance would be positively related to treatment outcome. As expected, patient and therapist alliance grew over time, with patient alliance being higher than therapist alliance from the outset. However, while patient alliance grew independently of addiction severity and treatment outcome, therapist alliance grew consistently only for patients without substance abuse co-morbidity and/or who had good outcomes.

Many patients who had experienced strained relationships with their pain providers were able to develop a healthy alliance with their therapists. Patients responded positively to therapists who focused on pain and functioning, treated opioid analgesic abuse as a medical problem, and refrained from labeling patients as "addicts". The current approach differs from traditional drug treatment where the identified problem is addiction and where acceptance of oneself as an addict is seen as prerequisite to recovery. By "medicalizing" treatment and working towards mutually determined goals (i.e., medication adherence, decreased pain, increased functioning), therapists were seen as collaborative, empathic, and respectful, as opposed to confrontational and critical, thus facilitating a positive alliance (Horvath, 2001; Newman, 1997). In spite of high ratings overall, patient alliance was unrelated to behavior change (i.e., increased medication adherence, decreased unauthorized drug use), both during and at the end of treatment. This finding is inconsistent with research showing that higher patient alliance predicts positive treatment progress and outcomes (Barber et al., 1999, 2001; Brochu et al., 2006). We surmise that patient alliance ratings may have reflected emotional bonds more than goals and tasks, and that behavior change may be dependent on goals and tasks as opposed to bonds. If patient alliance scores primarily reflect emotional bonds, this may explain why patient and therapist alliance grew in a parallel fashion during early sessions (when the emphasis was on relationship-building), yet became more discrepant during later, task-oriented sessions. A second explanation for why patient alliance failed to predict outcomes is related to treatment expectancies. Many patients had conflictual relationships with their referring pain providers. They felt they were under-treated, yet were at risk of being tapered off of opioids for non-compliance. Participation in the current program afforded them a second chance, therefore patient feelings of gratitude or optimism may have artificially inflated alliance ratings.

In contrast to patient alliance, therapist alliance was related to both patient characteristics and outcomes. Therapist alliance failed to increase for patients with lifetime alcohol or other non-opioid substance use disorders and/or who were unsuccessful during treatment (i.e., non-

adherent, using unauthorized drugs) and at treatment end (i.e., tapered off methadone). It is striking that 100% of treatment failures had multiple substance use disorders, compared to only 22% of treatment successes. This finding is consistent with research showing that greater substance use severity is associated with poorer treatment outcomes (McLellan et al., 1994). In the current study, therapists' alliance ratings showed some growth for patients up to Session 5 - the point at which review of progress began. At this point, ratings decreased, falling significantly by Session 8. Therapists may have been more optimistic or forgiving during early sessions, but became disappointed as patients failed to make concrete behavioral changes during more task-oriented sessions. The assumption that therapists become disappointed or frustrated by patients' lack of progress is consistent with research showing that therapists are less empathic towards patients who are perceived as unmotivated to change (Liese & Beck, 1997). The fact that patients with poor outcomes also had more problematic relationships with their referring pain providers (based on PPM) indicates that their ways of interacting with providers were stable across treatment settings and providers (Horvath & Luborsky, 1993).

To summarize, growth in patient and therapist alliance was parallel during early treatment, when the focus of treatment was on relationship building and demands for behavior change were minimal. However, during middle treatment, when pressure for behavior change began to mount, therapist (but not patient) alliance lagged for patients with substance abuse co-morbidity and/or who failed to evidence behavior change and ultimately had poor outcomes. Our findings are consistent with those from studies showing that therapist alliance predicts outcomes in substance abuse treatment (Belding et al., 1997) and 12-months post-treatment (Connors et al., 1997); however, they are at odds with data showing that patient alliance predicts treatment outcome. Alliance is a complex construct; in order to comprehend the nuances of therapeutic relationships, it must be carefully assessed over time from both parties' perspectives, while taking other variables into consideration.

4.1. Study limitations

Because the sample size was small, the study may have been insufficiently powered to detect additional main effects for patient alliance or to describe more subtle relationships between alliance and other variables such as pain, functional interference, and medication adherence. Sample size also precluded group comparisons for completers versus non-completers, although visual inspection of the data revealed that both groups established a healthy alliance during early stage treatment. A second limitation pertains to instrumentation. While the HAQ-II did a good job of measuring emotional bond formation during early treatment, it may have been unable to capture therapists' task-oriented approach to alliance development during middle and later stage treatment. This limitation appears to have been recognized by Dr. Luborsky and colleagues (see Andrusyna, Tang, DeRubeis, & Luborsky, 2001) who have revised their assessment of working alliance measurement to include two factors (Agreement and Relationship). A third concern is the lack of follow-up for study completers, making it impossible to determine whether alliance predicted success beyond the end of treatment. Finally, as the study was conducted in a research clinic where treatment was delivered under "optimal" conditions, findings may not generalize to clinical settings, including pain clinics and drug treatment programs. It is possible that substance abuse counselors with limited experience treating opioid analgesic-abusing pain patients (as opposed to illicit drugs), large caseloads, and inconsistent supervision, may have difficulty implementing the treatment and monitoring course of care.

4.2. Implications for practice and research

The finding that therapists' alliance ratings served as a "barometer" for outcome is important. By attending to alliance as a process, difficult patients may be identified sooner, so that treatment can be re-focused and bad outcomes possibly averted. This study highlights the

importance of understanding that alliance is comprised multiple components - i.e., mutual tasks and goals as well as an emotional bond. While most therapists strive to develop an emotional bond with their patients, it is unclear to what extent they focus on identification of *mutual* tasks and goals, as opposed to the prescribed goals and tasks of the treatment program such as abstinence. In addition, recognizing that patients and therapists respond to each other in subtle, reciprocal ways that influence treatment process and outcome puts added responsibility on therapists and their supervisors. In addition to attending to behavior, therapists' feelings about patients and how treatment is proceeding should be monitored. Assessing for problems with alliance should begin early and continue throughout treatment with therapists asking themselves 3 questions: (1) "Are the patient and I connecting?" (emotional bond); (2) "Are the patient and I in agreement about the goals of treatment?" (goals); and (3) "Do the patient and I agree on how to approach the problem?" (tasks). While formal measurement of working alliance may not be practical or feasible in many treatment settings, therapist self-assessment may help to identify when the treatment is not progressing as expected and a different approach is needed.

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Figure 1.

Patient and therapist HAQ-II total scores

* $p < .001$ for differences in patient and therapist alliance scores at Visit 1.

Figure 2.
Therapist HAQ-II total scores and treatment success (maintained) versus failure (tapered) at trial's end
* $p < .001$ change from baseline for maintained patients only

Table 1**Baseline Participant Characteristics**

Characteristic	Percent		Percent
Age in years [M (SD)]	41.40 (9.81)	Prior and current pain treatment	
Male	56	Other non-opioid medications	72
Marital Status		Psychotherapy/counseling	36
Single/Divorced	60	Transcutaneous Electrical	
Married	36	Nerve Stimulation	28
Committed partner	4	Physical therapy	24
Racial/Ethnic Group		Pool therapy	20
Caucasian	84	Support group	12
African American	12	Medication "pump"	8
Biracial/Multiracial	4	Spinal cord stimulator	4
High School Education	64	Medications	
Employment Status		Non-steroidal anti	
Disabled	40	inflammatory drugs (NSAIDs)	100
Unemployed	32	Anti-depressants	62
Alcohol Use Disorder		Anti-convulsants	44
Current	4	Common causes of pain	
Lifetime	36	Disease	72
Non-Opioid Drug Use Disorder		Accidental injuries	32
Current	12	Medical/surgical injuries	24
Lifetime	56	Unknown	12

Table 2

Mean Visual Analogue Scale (VAS) Ratings of Baseline Pain and Functional Interference

Pain and Functional Interference	(n = 25)
Pain severity [M (SD)]	
Worst pain	8.9 (1.1)
Least pain	4.5 (2.4)
Average pain	7.0 (.39)
Functional interference [M (SD)]	
General activity	7.6 (2.7)
Mood	6.9 (2.5)
Walking ability	6.8 (2.9)
Concentration	6.1 (2.5)
Work	8.4 (2.2)
Sleep	7.6 (1.8)
Enjoyment of life	8.1 (2.3)
Appetite	5.8 (3.2)

Note. VAS Rating Scale: 1–3 (Mild); 4–6 (Moderate); 7–10 (Severe)