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Client-Provider Relationship and Treatment Outcome: A Systematic Review of Substance Abuse, Child Welfare, and Mental Health Services Research

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This systematic review reports on the association of the client-provider relationship with service outcomes across 3 service sectors: substance abuse, child welfare, and mental health. The review includes 60 research reports meeting inclusion criteria: 25 in substance abuse, 7 in child welfare, and 28 in mental health. For each social service sector, we analyze the association of the client-provider relationship to intermediate and ultimate outcomes. In addition, we examine potential moderating mechanisms of rater type (i.e., client, provider, and observer) and treatment setting (i.e., inpatient, outpatient, other). Social services research increasingly seeks to identify the active elements that affect outcomes common to all interventions. Results suggest the client-provider relationship is a consistent predictor of client retention in treatment and a somewhat less-consistent predictor of ultimate outcome across the 3 service sectors. These results contrast with recent findings from the psychotherapeutic literature in which the client-provider relationship demonstrated a weaker association with treatment retention (measured as drop out) than with other outcome measures. Findings indicate a clear need to refine the conceptualization and measurement of key service mechanisms and outcomes, particularly in the area of child welfare given that services research is less developed in that sector. The discussion includes recommendations for future research, including the use of selection criteria to enable researchers to conduct formal meta-analyses and expand the methodological framework with additional moderator variables relevant to social service delivery.

Key words: client-provider relationship, professional provider relationship, alliance, outcome, substance abuse, child welfare, mental health, common factors

Social work researchers focused on the development of evidence-based interventions are increasingly interested in documenting all the specific treatment elements related to positive outcomes. In particular, attention falls on the elements related to intervention technology itself as well as nonintervention elements related to implementing interventions. The client-provider relationship is a process element central to the implementation in many, if not all, social service interventions (Bickman, 2005; Castonguay & Beutler, 2006; Kazdin & Nock, 2003; Norcross, 2002; Perlman, 1979; Proctor & Rosen, 1978, 1981, 1982). Indeed, some psychotherapy researchers have asserted the dominance of the client-provider relationship as a process factor affecting outcome (Jensen, Weersing, Hoagwood, & Goldman, 2005; Lambert & Barley, 2002; Norcross, 2002). Therefore, intervention researchers have increasingly called for more research on how process factors—including the client-provider relationship—operate in the implementation of practice interventions. Proponents of such research seek a way to generalize evidence-based practices more effectively into usual-care settings (Brekke, Ell, & Palinkas, 2007; Kazdin & Nock, 2003).

The importance of the client-provider relationship in the delivery of social services has inspired important theoretical work in social work. For example, Perlman’s (1979) seminal book, Relationship: The Heart of Helping People, as well as a set of papers by Rosen (1972), Proctor and Rosen (1978), Rosen and Proctor (1981), and Proctor (1982), provide early conceptual analyses of the role of client-provider relationship in service delivery. These social work scholars identified the client-provider relationship as a necessary, but not sufficient, condition for treatment success. In addition, the client-provider relationship has been a central concept in the distillation of common factors of evidence-based practice; that is, the client-provider relationship has been key in the codification and identification of specific techniques and procedures that were common to, or could be found across a range of empirically validated interventions (Cameron & Keenan, 2010; Chorpita, Dalieden, & Weisz, 2005). Overall, the current practice environment with its emphasis on coordinated and patient-centered care—an emphasis reinforced by the recent passage of the Affordable Care Act—has heightened the urgency to better understand the role of the client-provider rela-
relationship in the delivery of social services.

Despite the importance of the client-provider relationship in social service delivery, most research on this relationship has been conducted under the rubric of the therapeutic alliance, helping alliance, working alliance, or therapeutic relationship; in other words, the interpersonal relationship between therapists and adult clients who are in psychotherapy but not chronically and severely mentally ill (Horvath & Luborsky, 1993; Horvath & Symonds, 1991). The alliance concept has been so intensely researched in the psychotherapy literature that a 2009 search of electronic databases using these key words yielded more than 7000 items (Horvath, Del Re, Fluckiger, & Symonds, 2011). Further, research on the relation between the alliance and psychotherapy outcomes is so well-developed that several meta-analyses have been conducted that required the identification of a quantitative estimate of the relation between alliance and outcome (typically correlation coefficients are used to estimate effect sizes; Martin, Garske, & Davis, 2000; Horvath & Symonds, 1991; Karver, Handelsman, Fields, & Bickman, 2006). In their recent meta-analysis, Horvath et al. (2011) identified more than 200 research reports that contained a quantitative estimate of the relation between the alliance and psychotherapy outcomes, which served as the basis for their meta-analysis. Based on the work of these researchers and numerous others, the client-provider relationship is widely accepted as having a robust, if moderate, impact on treatment outcomes. In particular, the psychotherapy literature has examined studies across a broad range of psychotherapeutic interventions used with a variety of clients and client problems; however, for the most part, this literature has been limited to mental health settings in which measures of psychiatric symptomology (e.g., anxiety, depression, and psychological adjustment) form the primary outcomes of interest.

A growing number of systematic reviews have evaluated the associations of the client-provider relationship with social service outcomes within the sectors of mental health (Hewitt & Coffey, 2005; Howgego, Yellowlees, Owen, Meldrum & Dark, 2003; McCabe & Priebe, 2004; Priebe, Richardson, Cooney, Adedeji, & McCabe, 2011), child welfare (Green, 2006; Karver et al., 2006), and substance abuse (Meier, Barrowclough, & Donmall, 2005). These reviews have defined social service outcomes in terms of indicators of social, economic, and psychological functioning. Outcome indicators used in social services research include reduction in substance use, employment status, housing stability, hospital admissions, home visitation, and family reunification. The current review seeks to examine the association of the client-provider relationship to social service outcomes in usual-care practice settings for social workers. Because social workers are most frequently employed in the sectors of substance abuse, mental health and child welfare (National Association of Social Workers, 2006), we selected studies from these three service systems. Further, given that social workers have made particularly important contributions to development of effective social services for the severely and persistently mentally ill (Angell & Test, 2002; Stein & Test, 1980), we limited the focus of our review to this subpopulation. Overall, this systematic review had two purposes: (a) to examine the relation of the client-provider relationship to outcome as the relationship operates across the substance abuse, child welfare, and mental health service systems; and (b) to identify factors that might moderate the influence of the client-provider relationship on specific outcomes in these systems.

Conceptual Framework and Measurement

Understanding the conceptual underpinnings and definitions of the therapeutic alliance as the relationship operates in psychotherapeutic settings provides valuable background for our review. The conceptual underpinnings of research on the therapeutic alliance recognize that the beneficial effects of psychotherapy and counseling result as much from factors common to all therapies as from specific, individual therapeutic approaches (Horvath & Luborsky, 1993; Horvath & Symonds, 1991). Bordin’s (1994) pan-theoretical conceptualization of the working alliance—the influential basis for much of early measurement development in this area—focused on change-inducing relationships regardless of theoretical underpinning (Horvath & Greenberg, 1989). According to this perspective, the working alliance has three constituent components: client and provider agreement on therapeutic goals; client and provider consensus on tasks that make up therapy; and the bond or relationship between client and therapist. Together, these components define the quality and strength of therapeutic relationships. Bordin viewed the working alliance not as an intervention itself, but rather as a vehicle to facilitate particular interventions. Further, Bordin asserted the alliance promoted and interacted with specific counseling techniques, thereby enabling and facilitating such techniques. Bordin was not concerned with how the alliance works or the mechanisms through which a relationship affects an outcome. Indeed, none of the early advocates of the pan-theoretical alliance construct offered a precise definition of the construct; the result, as noted by Horvath et al. (2011), has been that research syntheses conducted over the years have defined alliance in terms of the diverse measures used to operationalize the construct.

Overall, psychotherapeutic research on the therapeutic alliance has been concerned with two major questions:
1. Does a causal connection exist between the alliance and therapeutic outcomes?

2. Does the working alliance operate differently in response to specific moderating factors that are relevant in psychotherapeutic settings?

Across research studies, the most frequently examined moderating factors include (a) rater perspective (whether assessment conducted by therapist, patient, or external raters), (b) therapist variables, (c) patient factors, (d) different measures of alliance, (e) time of assessment (when in the course of therapy), and (f) type of psychotherapy or theoretical orientation (Horvath & Greenberg, 1989; Norcross & Lambert, 2011).

Research on the connection between the client-provider relationship and outcome in social services research can be usefully compared to psychotherapy research. First, the basic questions of interest (i.e., whether a causal relationship exists with relevant outcomes; and whether this connection is influenced by specific moderating factors) are the same in the two literatures. However, the two literatures have conceptualized and defined moderating and outcome factors quite differently. In the social service literature, rater perspective and treatment setting emerge as important factors. Although psychotherapy research has evaluated the differential influence of client versus therapist perspective (Hatcher & Berends, 2006; Hatcher, Berends, Hansel & Gutfreund, 1995), sensitivity to the client’s perspective is especially well-developed in social services research (Malluccio, 1979; Marsh, 2002). Similarly, to a greater extent than psychotherapy researchers, social services researchers have been concerned with moderating factors that might affect the treatment process, such as the restrictiveness of the treatment setting, inpatient versus outpatient settings, and mandated or voluntary treatment (Ivanoff, Blythe, & Tripodi, 1994; Rooney, 2009). As a result, although psychotherapy research has explored a number of moderating factors, the factors of rater perspective and treatment setting have emerged as potential moderators in social services research. In addition, the outcome variables of interest have varied across the two literatures. Although the broad goals of all social services systems have focused on social, economic, and psychological outcomes, the specific definition and measurement of those outcomes has occurred within specific service systems with little consideration for related developments in other service systems. As such, outcome variables are defined and measured differently in each of the three service systems included in this review. Because our intention in conducting this review was to present a broad perspective on the function of the client-provider relationship across three social service systems, we used an explicit conceptual framework that defined important concepts consistently across the three service systems. Specifically, the conceptual framework defines the client-provider relationship and the moderating and outcome variables as well as their interrelationships.

Our conceptual framework focuses on the direct association of the client-provider relationship with specific intermediate and ultimate outcomes relevant to the substance abuse, child welfare, and mental health service systems. In addition, the framework considers the factors that influence or moderate such associations. Moderator variables are variables that affect the strength and/or direction of the relation between an independent variable and a criterion variable (Baron & Kenny, 1986). Our primary interest in this review was in determining whether the relation between the client-provider relationship and outcomes changed under different categories of two moderator variables: rater perspective and treatment setting. (See Figure 1.) Using this framework, the review identifies and analyzes the direct associations as well as the factors that interact with the client-provider relationship. This moderational framework has been applied successfully in studies of therapeutic alliance as well as in research on substance-abuse services to investigate the conditions under which treatment works (Finney, 1995; Finney, Hahn, & Moos, 1995).

A limitation of this conceptual framework, and indeed, a problem in all nonintervention process studies, is the difficulty of establishing causal connections between relationship behaviors and intermediate and ultimate outcomes. In the final analysis, we cannot determine whether the relationship causes improvement in treatment outcomes or only reflects improvement. The three conditions required to make a causal claim are difficult to meet: nonspuriousness, covariation between process and outcome measures, and temporal precedence of process variable (Feeley, De Rubeis, & Gelfand, 1999). Despite this fundamental design limitation in process studies, a significant body of research has used statistical methods such as structural equation modeling to support the inference that the therapeutic relationship probably contributes causally to outcome (Barber, Connelly, Crits-Cristoph, Gladis, & Siqueland, 2000). Given these limitations to our conceptual model, and more generally to process research, in this systematic review, we use the language of association and correlation to describe statistically significant relations between client-provider relationship and social service outcomes.
Measures of Client-Provider Relationship

The operationalization of the client-provider relationship in social service systems research relies heavily on the measures of therapeutic alliance developed in psychotherapy research. Similar to research on therapeutic alliance, social services research lacks a widely agreed-upon definition of the client-provider relationship, and the concept is ultimately defined by the measures used to operationalize the concept. In the Horvath et al. (2011) meta-analysis, 30 different alliance measures were used, including four so-called “core” measures: California Psychotherapy Alliance Scale (CALPAS), Helping Alliance Questionnaires (HAQ), Vanderbilt Psychotherapy Process Scale (VPPS), and Working Alliance Inventory (WAI). These measures have been used for more than 20 years and have been found to have an acceptable level of internal consistency (Martin et al., 2000) and a moderate amount of shared variance at less than 50% (Horvath et al., 2011). Horvath and colleagues also identified a group of newer alliance measures that had relatively few administrations or that had been developed for specific investigations, and placed these measures in a category labeled “other.” Our systematic review of client-provider relationship in three social service sectors relies heavily on alliance measures, both core and other, used in psychotherapy literature.

Measures of Intermediate and Ultimate Outcomes

Within specific service systems, measures of outcome variables derive from distinct historical and cultural perspectives, and therefore, may be defined in a variety of ways (McLellan, Chalk, & Bartlett, 2007). Our primary concern in this review was the direct associations of the client-provider relationship to intermediate or ultimate outcomes. Intermediate outcomes are treatment outcomes related to the clients’ continuing participation in treatment or continuing receipt of services. Intermediate outcomes vary across service systems, involving measures of retention and number of sessions attended (in substance abuse), retention and frequency of contact (in child welfare), and service use and treatment adherence (in mental health). Ultimate outcomes are outcomes that reflect the most frequently identified final or distal treatment goals within each service system. For example, an ultimate outcome of the substance abuse service system is reduction in drug abuse; ultimate outcomes in the child welfare system include child safety, permanency, and well-being; and ultimate outcomes in the mental health system include prevention of readmission, improvement in clinical symptoms, and increased social functioning. Although appropriate and sensitive measures of outcome are certainly under debate in services research, definitions used here are designed to reflect those most frequently used in extant studies.

Measures of Moderating Variables: Rater Type and Treatment Setting

An idea that first emerged from the earliest conceptual and empirical work on the helping relationship in social services is that the effect of the client-provider relationship on outcome depends on the person making the assessment, that is, whether the assessor is the client or provider. Moreover, this suggestion holds that the effect of the client-provider relationship on outcome also depends on the nature of the treatment setting; specifically, whether an inpatient, outpatient, or other type of setting. Thus, for each study in the review, we have identified the rater (i.e., client or provider) and the nature of the treatment setting (i.e., inpatient, outpatient, or other). We provide these distinctions to examine possible ways in which rater type and treatment setting might moderate the association between client-provider relationship and treatment outcome.

Method

Systematic reviews of the literature take a variety of forms and use specific methods depending on the authors’ purpose, perspective, organization, and intended audience for the review (Bem, 1995; Cooper, 2003; Hinshaw, 2009; Sternberg, 1991). The purpose of this review was to examine the client-provider relationship.
relationship and to assess what we have learned from empirical work on the associations of client-provider relations with service outcomes in three service domains: substance abuse, child welfare, and mental health. In the process, we sought to define core constructs and variables, to describe associations and potential causal relations among variables, to identify moderating mechanisms, and ultimately, to highlight gaps that point to promising directions for future research and practice. The review is intended for an audience of social work practitioners and researchers, although the findings are relevant to helping professionals working in the three service sectors. Last, the review is organized so the key relationship of interest—between client-provider relationship and outcome—can be evaluated both within and across specific service domains.

Methods used in this systematic review were consistent with methods used in previous systematic reviews of client-provider relationship and service outcomes (Hewitt & Coffey, 2005; Howgego et al., 2003; McCabe & Priebe, 2004; Priebe et al., 2011; Green, 2006; Karver et al., 2006; Meier et al., 2005). Multiple search strategies were used to identify the English-language articles included in the review. Specifically, the following electronic databases were searched for articles published between January 1990 and April 2011: Medline, PubMed, PsycInfo, Social Services Abstracts, Sociological Abstracts, Google Scholar, C2-SPECTR, ERIC, Dissertation Abstracts, and the Child Welfare Information Gateway. The terms used in the searches are listed in Table 1. The publication dates were chosen to capture the period when most studies in the area were conducted. This search strategy also was used to identify research reports issued by the National Institute on Drug Abuse, the Substance Abuse and Mental Health Services Administration, the Center for Substance Abuse Treatment, the National Institute of Mental Health, and the Administration for Children and Families. The review includes only studies with experimental and quasi-experimental designs (Shadish, Cook, & Campbell, 2002) as well as quantitative measures of the client-provider relationship, and the moderator and outcome measures. We excluded descriptive case studies and studies investigating the client-provider relationship in group treatment. In addition, the review excluded studies that involved only medical professionals (nurses, primary care physicians), studies that involved patients with a primary medical condition, and studies that sampled only children or adolescents. As a final step, we conducted a backward search using identified sources and searching the Reference sections of those sources for additional studies meeting the review inclusion criteria. In all, our search yielded 60 studies meeting the review inclusion criteria: 25 in substance abuse, seven in child welfare, and 28 in mental health.

Table 1

<table>
<thead>
<tr>
<th>Client-Provider Relationship</th>
<th>Mental Health</th>
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<tr>
<td>Client-provider relationship</td>
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<td>Social work relationship</td>
<td>Mental illness</td>
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<td>Helping relationship</td>
<td>Serious mental illness</td>
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<td>Therapeutic relationship</td>
<td>Severe mental illness</td>
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<td>Working relationship</td>
<td>Psychiatric disability</td>
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<td>Therapeutic alliance</td>
<td>Psychiatric disorder</td>
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<td>Working alliance</td>
<td>Community mental health</td>
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<td>Helping alliance</td>
<td>Psychiatric rehabilitation</td>
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<td><strong>Child Welfare</strong></td>
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<td>Child welfare services</td>
<td>Schizophrenia</td>
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<td>Child welfare interventions</td>
<td>Substance abuse treatment</td>
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<tr>
<td>Child and family services</td>
<td>Drug abuse treatment</td>
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<tr>
<td>Parent-child interventions</td>
<td>Alcohol abuse treatment</td>
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<td>Parent-worker relationship</td>
<td>Addiction treatment</td>
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<td>Treatment outcomes</td>
<td>Substance abuse counseling</td>
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<td>Child outcomes</td>
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<td>Parent outcomes</td>
<td>Alcohol abuse counseling</td>
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<td>Family outcomes</td>
<td>Addiction counseling</td>
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For each of the three social service sectors, this article reviews studies investigating the connections of the client-provider relationship with intermediate and ultimate outcomes. Potential moderating factors—specifically, rater type and treatment setting—are also examined to determine the extent to which the impact of the client-provider relationship on outcomes might vary by rater perspective and by treatment setting.

To organize results consistently across the three service sectors, we developed a coding scheme to categorize studies based on the conceptual framework guiding the review. Specifically, studies were coded by research design and sample, measures of client-provider relationship, measures of moderator variables (rater type, treatment setting), measures of outcome (intermediate and ultimate), and principal findings. To establish reliability, three raters worked independently, with each assigned to code all studies for one of the three service sectors; a fourth rater randomly selected studies across the three service sectors to check for agreement. Agreement was high among coders and disagreements were resolved through reappraisal and discussion by coders. Final results of coding are organized into Tables 2 through 4.

**Results**

**Substance Abuse Services: Overview**

Our searches identified 25 studies that examined the effect of the client-provider relationship on outcomes in substance abuse treatment. All of these studies used samples that included only individuals receiving treatment for substance abuse or dependence. However, the sampled research varied with respect to the treatment settings, interventions used, and the types of substances used by individuals who received treatment. Although several studies included samples of individuals receiving treatment for a single substance (e.g., cocaine), the majority of studies included samples of individuals receiving treatment for abuse of multiple substances. Treatment interventions used across the studies included cognitive therapy, pharmacological interventions, and traditional 12-step abstinence-based counseling. Treatment occurred in outpatient, inpatient, and methadone-maintenance programs.

Studies included in the review assessed the effect of the client-provider relationship on three major outcomes: (a) retention, which was measured either as the length of time in treatment or with a dichotomous measure of treatment completion; (b) engagement, which was a measure of clients’ level of involvement in the treatment process; and (c) posttreatment substance abuse, which was measured as posttreatment abstinence or as the net reduction in substance abuse from pre- to post-treatment. The first two outcomes, retention and engagement, are conceptualized as intermediate outcomes, whereas posttreatment substance abuse is viewed as an ultimate outcome of treatment. Among all outcomes, the impact of the client-provider relationship on posttreatment substance abuse has received the most research attention. Less research has been conducted on retention and engagement. We found that the vast majority of studies from the substance abuse service system used a longitudinal design, and many relied on validated measures of the client-provider relationship (WAI and HAQ).

**Intermediate Outcomes**

**Retention.** The amount of time spent in substance abuse treatment is an important intermediate outcome in this service sector. Evidence has shown that client length of stay in treatment was linked to positive ultimate outcomes, including decreased posttreatment substance abuse (Zhang, Friedmann, & Gerstein, 2003). As Table 2 shows, 12 of the reviewed studies examined the role the client-provider relationship played in retention. Among these studies, all but four (Belding, Iguchi, Morral, & McLellan, 1997; Brocato & Wagner, 2008; Petry & Bickel, 1999; Tunis, Delucchi, Schwartz, Banyes, & Sees, 1995) found at least some association between the client-provider relationship and retention. Of the six studies that measured retention as a continuous variable (i.e., number of sessions, days, or weeks in treatment), all but one (Brocato & Wagner, 2008) found the client-provider relationship was positively associated with retention. However, in the study by Carroll et al. (1997), this association was statistically significant only for the control group. In the study by Shin, Marsh, Cao, and Andrews (2011), the association was statistically significant only for clients in nonresidential settings. Of the six studies that examined retention as a dichotomous measure of treatment drop out, only three found an association between the client-provider relationship and retention (Cournoyer, Brochu, Landry, & Bergeron, 2007; De Weert-Van Oene, De Jong, Jörg, & Schrijvers, 1999; De Weert-Van Oene, Schippers, De Jong, & Schrijvers, 2001).

**Rater type.** Across the studies included in the review, rater perspective did not alter the association between client-provider relationship and retention in substance abuse treatment. The client-provider relationship was most frequently measured from the client’s perspective; in 11 of the 12 studies that examined retention, the client-provider relationship was measured using a client rating, either alone or in combination with the provider’s perspective. Only one study used an observer measure of the client-provider relationship (Carroll et al., 1997). Among the studies that used a client rating, eight found the client-provider relationship was associated with retention (Barber et al., 1999; Barber et al., 2001; Barber et al., 2008; Bethea, Acosta, & Haller, 2008; Cournoyer et al., 2007; De-Weert-Van Oene et al., 1999; De Weert-
Van Oene et al., 2001; Shin et al., 2011). Of the six studies that included provider ratings of the client-provider relationship, three found a statistically significant association between the relationship and retention in substance abuse treatment (Barber et al., 1999; Barber et al., 2001; Meier, Donmall, McElduff, Barrowclough & Heller, 2006). In Carroll et al. (1997), the one study that used an observer rating of the client-provider relationship, no association was found for relationship and retention. These findings suggest that client and provider ratings of the quality of client-provider relationship are similarly successful in predicting retention in substance abuse treatment.

**Treatment setting.** The reviewed studies showed variability in the function of the client-provider relationship across treatment settings, but generally revealed that the relationship’s association with outcome was robust across settings. Of the studies that examined retention as an outcome variable, seven occurred in outpatient treatment, one in methadone maintenance, one in detoxification, and one in both outpatient treatment and detoxification. Of the eight studies that occurred in outpatient treatment settings, six found ratings of the client-provider relationship were positively associated with retention in treatment (Barber et al., 1999; Barber et al., 2001; Carroll et al., 1997; Cournoyer et al., 2007; DeWeert-Van Oene et al., 1999; DeWeert-Van Oene et al., 2001). The two studies involving detoxification settings found a positive association between client-provider relationship and retention (DeWeert-Van Oene et al., 1999; DeWeert-Van Oene et al., 2001). The study that occurred in methadone maintenance found no statistically significant association (Belding et al., 1997).

**Engagement.** Similar to retention, engagement has been identified as an important process measure in substance abuse treatment. Prior research has suggested that client engagement was positively related to beneficial changes in substance abuse and other behaviors (Simpson, Joe, Rowan-Szal, & Greener, 1995). However, the substance abuse treatment literature devotes less attention to behavioral outcomes than to retention. As Table 2 indicates, only four studies examined the impact of the client-provider relationship on engagement in substance abuse treatment. Further, engagement was defined differently across studies, making the studies difficult to compare and contrast. For example, one study operationalized engagement using a measure of clients’ level of “commitment” to treatment (Broome, Simpson, & Joe, 1999); another operationalized engagement by multiplying the number of completed treatment sessions by the total weeks in treatment (Fiorentine, Nakashima, & Anglin, 1999); two studies measured engagement as the proportion of sessions attended by the client (Connors, Carroll, DiClemente, Longabaugh, & Donovan, 1997; Dundon et al., 2008). Two of the reviewed studies found a statistically significant association between client-provider relationship and engagement for all clients in the study sample; two others found only weak associations that were moderated by treatment (Dundon et al., 2008) and gender (Fiorentine et al., 1999). Taken together, these studies do not offer substantial evidence in support of an association between the client-provider relationship and engagement.

**Rater type.** It does not appear that rater type alters the association between client-provider relationship and engagement, although this review cannot draw definitive conclusions based on the small number of studies that used engagement as an outcome. Of the four studies that examined the association of client-provider relationship to engagement in substance abuse treatment, two measured both client and provider ratings of the relationship whereas the other two measured only client ratings. Of the two studies that used client and provider ratings of the relationship, one found a statistically significant association among client and provider perspectives and engagement (Connors et al., 1997), and the other found that only provider ratings were predictive of engagement (Dundon et al., 2008). Among the two studies that used only client ratings of the relationship, one found a statistically significant association between client ratings and engagement (Broome et al., 1999); the other found a statistically significant association only in an analysis that included a term for an interaction with gender (Fiorentine et al., 1999).

**Treatment setting.** The scarcity of available studies measuring the impact of client-provider relationship on engagement greatly limits our ability to consider the possibility that treatment setting functions as a moderating variable. Three of four studies that measured engagement occurred in outpatient treatment settings; the fourth drew from a sample that included clients from outpatient, inpatient, and methadone maintenance treatment settings (Broome et al., 1999). Of the three studies that occurred in outpatient treatment, one found a main effect of client-provider relationship on engagement (Connors et al., 1997). The other two studies found a statistically significant association between client-provider relationship and engagement only in analyses that stratified by gender (Fiorentine et al., 1999) and treatment (Dundon et al., 2008). These findings suggest that client-provider relationship might play an important role in increasing engagement, but more research is required to substantiate this claim and to identify potential moderating factors.

**Ultimate Outcomes**

**Substance Abuse.** Of the 25 reviewed studies that involved substance abuse treatment settings, 18
examined the impact of client-provider relationship on posttreatment substance abuse. As Table 2 indicates, all but three (Barber et al., 2001; Barber, Gallop, Crits-Christoph, Barrett et al., 2008; DeWeert-Van Oene et al., 1999) found at least some association between ratings of the quality of the client-provider relationship and posttreatment substance abuse. The studies that reported a statistically significant association found that the quality of the client-provider relationship was positively associated with reductions in posttreatment substance abuse. Studies that assessed the impact of client-provider relationship on substance abuse during and immediately after treatment found relatively straightforward associations with substance abuse behavior (Belding et al., 1997; Bethea et al., 2008; Carroll et al., 1997; Crits-Cristoph et al., 2011; Dunson et al., 2008; Fenton, Cecero, Nich, Frankforter, & Carroll, 2001; Gibbons et al., 2010; Tunis et al., 1995). However, studies that assessed the impact of the client-provider relationship on substance abuse at more than one posttreatment time point suggested the impact of the client-provider relationship might decrease as time from treatment discharge increases (Barber et al., 1999; Tetzlaff et al., 2005). However, five studies found that the client-provider relationship had a sustained effect on substance abuse at one year after discharge (Connors et al., 1997; Hser, Grella, Hsieh, Anglin, & Brown, 1999; Ilgen, McKellar, Moos & Finney, 2006; Joe, Simpson, Dansereau, & Rowan-Szal, 2001; Shin et al., 2011).

**Rater type.** Our review suggests that the association of client-provider relationship to posttreatment substance abuse does not vary to a statistically significant degree across rater type. Of the 18 studies that examined posttreatment substance abuse, five studies measured the client perspective, two measured the provider perspective, and nine measured both. In addition, one study included only observer ratings whereas another included client, provider, and observer ratings. Of the 15 studies that included client ratings, seven found a statistically significant association between client ratings and reductions in posttreatment substance abuse. The exceptions were studies by Barber et al. (2001), DeWeert-Van Oene et al. (1999), and Fenton et al. (2001). Among the 12 studies that measured provider ratings of the client-provider relationship, only four did not find a statistically significant association of provider ratings with posttreatment substance abuse (Barber et al., 2001; Crits-Cristoph et al., 2011; Fenton et al., 2001; Tetzlaff et al., 2005). Two studies found mixed results for clients and providers. Bethea et al. (2008) found provider ratings related to reductions in unauthorized substance abuse; however, client ratings were unrelated to such reductions. Further, Gibbons et al. (2010) found that both client and provider ratings predicted outcomes in a two-session treatment protocol, but not in a nine-session protocol. Of the two studies that examined observer ratings of the client-provider relationship, both found a statistically significant association with posttreatment substance abuse. In the study by Carroll et al. (1997), the association was statistically significant only for the control assignment.

**Treatment setting.** Study findings did not indicate that treatment setting had a consistent impact on the association between the client-provider relationship and posttreatment substance abuse. Among the 18 reviewed studies that examined posttreatment substance abuse, nine included samples collected only in outpatient treatment settings. One study was conducted in both outpatient and residential treatment settings, one was conducted in methadone maintenance only, and one was conducted in all three settings. Of the 14 studies that examined the association between client-provider relationship and posttreatment substance abuse in outpatient settings, 10 found that the association was statistically significant and four found that the association was not statistically significant (Barber et al., 2001; Barber et al., 2008; DeWeert-Van Oene et al., 1999; Hser et al., 1999). The three studies conducted solely or partly in methadone-maintenance settings provided mixed results; two studies found that the quality of the client-provider relationship was associated with a reduction in posttreatment substance abuse (Belding et al., 1997; Joe et al., 2001), and the other found that the relationship quality was associated with an increase in posttreatment substance abuse (Hser et al., 1999). The three studies that examined the impact of the client-provider relationship quality on posttreatment substance abuse in residential settings found no statistically significant association (DeWeert-Van Oene et al., 1999; Hser et al., 1999; Shin et al., 2011).

**Summary and Methodological Considerations**

The review findings suggest, within the context of substance-abuse treatment, the client-provider relationship is associated with intermediate process (retention, engagement) and ultimate outcomes (posttreatment substance abuse). These findings do not differ substantially across client, provider, and external-observer perspectives. However, the strongest evidence was found for posttreatment substance abuse. Less support is available for the association between client-provider relationship and engagement. In part, this difference exists because engagement has been studied less extensively than the other outcomes considered in this review, and engagement is defined with less consistency across studies. Because most of the reviewed studies drew samples from outpatient treatment, the variation across treatment settings was insufficient to draw strong conclusions regarding its potential moderating role. The available evidence
suggests the client-provider relationship is consistently linked with outcomes in outpatient settings, but the evidence is mixed regarding residential and methadone-maintenance settings. This review also raises questions regarding the potential moderating role of medication-based interventions (e.g., methadone, Naltrexone, Buprenorphine) in substance abuse treatment. Among studies that examined the client-provider relationship in settings in which medication-based interventions were used (Belding et al., 1997; Broome et al., 1999; Dundon et al., 2008; Joe et al., 2001; Petry & Bickel, 1999), the evidence for the client-provider relationship’s association with key outcomes was considerably weaker.

Further research in this area could address weaknesses in the measurement of client-provider relationship in substance abuse treatment. Although many studies used validated measures of substance abuse treatment, those with the broadest scope—encompassing multiple treatment settings, drawing large samples, and observing clients for substantial periods of time after treatment discharge—were less likely to use validated measures. As such, studies that used strong measures to operationalize the client-provider relationship say little about the relationship’s long-term impact on substance abuse outcomes or its differential impact across treatment settings. Further, even those studies that used validated measures of the client-provider relationship relied on scales that were developed in the psychotherapy literature rather than for substance abuse treatment settings. Consequently, these measures were not designed to address clinical concerns unique to addiction, including the high proportion of clients who are mandated to attend substance-abuse treatment.

Child Welfare Services: Overview

Few research studies in child welfare services have examined how the parent-worker alliance affects treatment outcomes (Alexander & Dore, 1999; Dore & Alexander, 1996). As a result, only seven studies conducted between 2002 and 2011 met our inclusion criteria. These studies evaluated traditional and preventive child welfare services (see Table 3). Child welfare services can be characterized as (a) traditional services, which are typically involuntary, are for parents who have been reported for child abuse or neglect, and whose children are living in temporary custody of a child welfare agency; or (b) preventive services, which are typically voluntary, include early childhood home visiting and in-home family therapy services and are designed for families who are found to be at risk for child abuse and neglect.

Six of the seven studies used the client’s perspective (in this case, parents); only one used parents and workers together as raters. All the studies reviewed in this section occurred in a community treatment setting; therefore, we discuss setting in terms of traditional versus preventive services. Overall, studies included the use of pre- and posttest measures of the outcome variables as well as empirically validated and reliable measures of the client-provider relationship. Few included longitudinal posttreatment measures.

The reviewed studies assessed the impact of client-provider relationship on both intermediate and ultimate outcomes. Participation, assessed as the frequency and duration of both program involvement and service completion, was the only intermediate outcome measured. Consistent with the child welfare literature, three ultimate outcomes were measured: (a) safety, measured as parenting practices and physical violence; (b) permanency, measured as parental visitation and reunification; and (c) well-being, measured as physical, mental, social, educational, and relational symptoms and functioning.

Intermediate Outcomes

Participation. Participation is a key outcome in child welfare research because drop out rates are high among parents in child welfare programs. Two studies in our sample (see Table 2) explored participation; one found the strength of the parent-worker (i.e., client-provider) relationship predicted service completion (Girvin, DePanfilis, & Daining, 2007) and the other found the relationship predicted staff perception of family involvement (Korfmacher, Green, Spellmann, & Thornburg, 2007).

Rater type. Both studies examining participation as an intermediate outcome used the client’s perspective of the relationship. As a result, no differences could be examined by rater type.

Treatment setting. Both studies investigating the association between the client-provider relationship and participation examined different models of prevention. One examined an early childhood home-visiting program and the other a home-based child-neglect prevention program. Both studies focused on the therapeutic relationship as a central element of the intervention. In each case, the clients entered the program voluntarily; the services were supportive and strength-based. Each study identified a positive client-provider relationship as a central component of the intervention. This focus no doubt contributed to the connection between client-provider relationship and participation in these studies. Although conclusions cannot be drawn from two studies, these two studies provide evidence that the helping relationship is associated with parent’s level of participation in prevention programs.
<table>
<thead>
<tr>
<th>Authors</th>
<th>Rater</th>
<th>Alliance</th>
<th>Design</th>
<th>Sample</th>
<th>Treatment Setting</th>
<th>Outcome Type</th>
<th>Measure</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barber et al. (1999)</td>
<td>Client, Provider</td>
<td>HAq-II; CALPAS</td>
<td>Long.</td>
<td>252 cocaine dependent outpatients</td>
<td>Outpatient-3 interventions: cognitive, dynamic, or drug counseling</td>
<td>Retention</td>
<td>No. sessions in treatment</td>
<td>CALPAS-P &amp; -T predicted retention at session 2 but not 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Drug abuse</td>
<td>ASI</td>
<td>H AQ-II-P only predicted alliance at 1 mo. but not 6</td>
</tr>
<tr>
<td>Barber et al. (2001)</td>
<td>Client, Provider</td>
<td>HAq-II; CALPAS</td>
<td>Long.</td>
<td>308 cocaine dependent outpatients</td>
<td>Outpatient- 3 interventions: cognitive, dynamic, or drug counseling</td>
<td>Retention</td>
<td>No. days in treatment</td>
<td>CALPAS-P &amp; -T predicted retention but varied depending on time of measure and treatment type</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>Drug abuse</td>
<td>ASI</td>
<td>No association for any measure</td>
</tr>
<tr>
<td>Barber et al. (2008)</td>
<td>Client</td>
<td>CALPAS HAq-II (patients only).</td>
<td>Long.</td>
<td>108 cocaine-dependent patients</td>
<td>Outpatient-intervention for cocaine dependence</td>
<td>Retention</td>
<td>No association for any measure</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Drug abuse</td>
<td>ASI</td>
<td>No association H AQ-II or CALPAS drug abuse subscale</td>
</tr>
<tr>
<td>Belding et al. (1997)</td>
<td>Client, Provider</td>
<td>HAq-II</td>
<td>Long.</td>
<td>57 patients methadone maintenance</td>
<td>Methadone maintenance</td>
<td>Retention</td>
<td>Dropout (Y/N)</td>
<td>No association for H AQ–P or –T 3-mo. measure associated with reduced drug abuse at 6 mos.</td>
</tr>
<tr>
<td>Bethea et al. (2008)</td>
<td>Client, Provider</td>
<td>HAq-II</td>
<td>Long.</td>
<td>25 opioid-abusing pain patients</td>
<td>Outpatient-8 sessions adherence, intervention with methadone prescribed for pain</td>
<td>Retention</td>
<td>No. association for any measure</td>
<td>H AQ unrelated to treatment success; provider rating related to success</td>
</tr>
<tr>
<td>Brocato &amp; Wagner (2008)</td>
<td>Client, Provider</td>
<td>WAI- C-T Week 1</td>
<td>Long.</td>
<td>141 felony offenders</td>
<td>Alternative to prison</td>
<td>Retention</td>
<td>No. days in treatment</td>
<td>WAI not associated with days in treatment</td>
</tr>
<tr>
<td>Broome et al. (1999)</td>
<td>Client</td>
<td>5-item “rapport” scale (invalidated)</td>
<td>Long.</td>
<td>2,548 drug abuse treatment patients</td>
<td>Outpatient; Inpatient residential; and methadone maintenance</td>
<td>Engagement</td>
<td>7-item measure of confidence &amp; commitment (invalidated)</td>
<td>3-mo. alliance measure associated with increased engagement</td>
</tr>
<tr>
<td>Carroll et al. (1997)</td>
<td>Observer</td>
<td>VTAS-Session 2</td>
<td>Long.</td>
<td>103 cocaine users with dual diagnosis</td>
<td>Outpatient; Cognitive therapy &amp; control</td>
<td>Retention</td>
<td>No. association for any measure</td>
<td>Alliance predicts retention for control only</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>Drug abuse</td>
<td>ASI</td>
<td>Alliance predicts days abstinent for control but not cognitive therapy</td>
</tr>
<tr>
<td>Authors</td>
<td>Rater</td>
<td>Alliance</td>
<td>Design</td>
<td>Sample</td>
<td>Treatment Setting</td>
<td>Outcome</td>
<td>Measure</td>
<td>Effects</td>
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<tr>
<td>Connors et al. (1997)</td>
<td>Client, Provider</td>
<td>WAI-C-T</td>
<td>Long.</td>
<td>1,196 outpatient &amp; aftercare patients</td>
<td>Outpatient-substance abuse treatment</td>
<td>Engagement</td>
<td>No. weeks attended over 12 weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Session 2</td>
<td></td>
<td></td>
<td></td>
<td>Drug abuse</td>
<td>% of days abstinent &amp; drinks/day</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>WAI-C &amp; -T both predicted attendance for outpatient but not aftercare</td>
<td></td>
</tr>
<tr>
<td>Cournoyer et al. (2007)</td>
<td>Client</td>
<td>CALPAS</td>
<td>Long.</td>
<td>248 patients in drug rehab</td>
<td>Outpatient-substance abuse treatment</td>
<td>Retention</td>
<td>Drop out (Y/N) at 6 mos.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4-8 weeks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Alliance positively related to retention</td>
<td></td>
</tr>
<tr>
<td>Crits-Cristoph et al. (2011)</td>
<td>Client</td>
<td>CALPAS</td>
<td>Long.</td>
<td>1,613 patients in cognitive-behavioral outpatient treatment</td>
<td>Outpatient-Organizational performance feedback</td>
<td>Drug abuse</td>
<td>ASI 2 items from drug abuse subscale</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4 items adapted)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CALPAS significantly associated with substance abuse at patient and program levels</td>
<td></td>
</tr>
<tr>
<td>De Weert-Van Oene et al.</td>
<td>Client</td>
<td>HAq-II</td>
<td>Long.</td>
<td>340 addicted patients</td>
<td>Outpatient drug treatment; Inpatient detox</td>
<td>Retention</td>
<td>Drop out (Y/N) at 1 mo.</td>
<td></td>
</tr>
<tr>
<td>(1999)</td>
<td></td>
<td>not described</td>
<td></td>
<td></td>
<td></td>
<td>Drug abuse</td>
<td>Addiction severity (ASI);</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No association</td>
<td></td>
</tr>
<tr>
<td>De Weert-Van Oene et al.</td>
<td>Client</td>
<td>HAq-II</td>
<td>Long.</td>
<td>93 alcohol and/or drug dependent patients</td>
<td>Inpatient detox &amp; crisis intervention</td>
<td>Retention</td>
<td>Drop out (Y/N) at 1 mo.</td>
<td></td>
</tr>
<tr>
<td>(2001)</td>
<td></td>
<td>2 weeks</td>
<td></td>
<td></td>
<td></td>
<td>Drug abuse</td>
<td>Addiction severity (ASI);</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Alliance showed strongest association with dropout; HAq-II-P positively associated with retention, particularly helpfulness &amp; cooperation subscales</td>
<td></td>
</tr>
<tr>
<td>Dundon et al. (2008)</td>
<td>Client, Provider</td>
<td>WAI-T, -C</td>
<td>Long.</td>
<td>194 outpatients receiving Naltrexone</td>
<td>Outpatient-Intervention promoting pharmacotherapy for intervention group</td>
<td>Engagement</td>
<td>% sessions attended</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Session 2</td>
<td></td>
<td></td>
<td></td>
<td>Drug abuse</td>
<td>% days abstinent</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Therapist rating associated with abstinence for intervention group; no patient association</td>
<td></td>
</tr>
<tr>
<td>Fenton et al. (2001)</td>
<td>Client, Provider,</td>
<td>WAI; PENN; VTAS;</td>
<td>Long.</td>
<td>46 clients in outpatient clinical trial</td>
<td>Outpatient-CBT or 12-step program</td>
<td>Drug abuse</td>
<td>No. consecutive days abstinent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Observer</td>
<td>CALPAS;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Only observer ratings associated with days of abstinence</td>
<td></td>
</tr>
<tr>
<td>Fiorentine et al. (1999)</td>
<td>Client</td>
<td>4-item scale</td>
<td>Long.</td>
<td>302 outpatients in CA</td>
<td>Outpatient substance abuse treatment</td>
<td>Engagement</td>
<td>No. sessions * no. weeks in treatment</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(invalidated)</td>
<td></td>
<td></td>
<td></td>
<td>Drug abuse</td>
<td>Single item, “cares a lot,” related with engagement for women; single item, “very helpful,” related with engagement for men</td>
<td></td>
</tr>
<tr>
<td>Gibbons et al. (2010)</td>
<td>Client, Provider</td>
<td>WAI-T, -C</td>
<td>Long.</td>
<td>450 marijuana-dependent patients</td>
<td>Outpatient-Brief &amp; extended multi-component treatment</td>
<td>Drug abuse</td>
<td>% day marijuana use</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Session 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>WAI-C predicted decrease in use: Session 2; WAI-T predicted decrease in use: Session 9</td>
<td></td>
</tr>
</tbody>
</table>
Table 2 (cont.)

<table>
<thead>
<tr>
<th>Authors</th>
<th>Rater</th>
<th>Alliance</th>
<th>Design</th>
<th>Sample</th>
<th>Treatment Setting</th>
<th>Outcome</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ilgen et al. (2006)</td>
<td>Client, Provider</td>
<td>WAI Session 2</td>
<td>Long.</td>
<td>753 outpatients</td>
<td>Outpatient-Project MATCH intervention</td>
<td>Drug abuse % of days abstinent &amp; drinks/day</td>
<td>WAI associated with drug use for both client &amp; provider; also interaction between motivation &amp; therapist ratings</td>
</tr>
<tr>
<td>Joe et al. (2001)</td>
<td>Provider</td>
<td>5- or 7-item scale (invalidated) multiple</td>
<td>Long.</td>
<td>577 methadone patients (2 cohorts)</td>
<td>Methadone maintenance</td>
<td>Drug abuse Abstinence (Y/N) via self-report &amp; urine screen</td>
<td>Better rapport associated with less posttreatment drug use at 1 year posttreatment</td>
</tr>
<tr>
<td>Petry &amp; Bickel (1999)</td>
<td>Client, Provider</td>
<td>HAq-II, Session 3</td>
<td>Long.</td>
<td>114 drug users</td>
<td>Outpatient-Buprenorphine treatment</td>
<td>Retention Treatment completion (Y/N)</td>
<td>Only interaction between HAq-II-P and psychiatric severity predicted treatment completion</td>
</tr>
<tr>
<td>Shin et al. (2011)</td>
<td>Client</td>
<td>10-item index of relationship quality</td>
<td>Long.</td>
<td>3,027 clients</td>
<td>Outpatient; Inpatient residential</td>
<td>Retention Days in treatment Drug abuse Days in last mo. used each of five substances</td>
<td>Relationship associated with retention only for clients in nonresidential settings Relationship indirectly associated with drug abuse (through receipt of matched services) only for clients in nonresidential settings</td>
</tr>
<tr>
<td>Tetzlaff et al. (2005)</td>
<td>Client, Provider</td>
<td>WAI Session 2, 3, 4, or 5</td>
<td>Long.</td>
<td>600 adolescent patients</td>
<td>Outpatient-Cannabis Youth Treatment</td>
<td>Drug abuse SPI &amp; days of cannabis use (from GAIN)</td>
<td>Patient rating predicted alliance at 3 and 6 mos., but not long-term use (12 &amp; 30 mos. after intake)</td>
</tr>
<tr>
<td>Tunis et al. (1995)</td>
<td>Client</td>
<td>CALPAS 3 mos.</td>
<td>Long.</td>
<td>41 patients</td>
<td>Outpatient-Psychosocial treatment</td>
<td>Retention Dropout (Y/N) at 174 days Drug abuse Abstinence (Y/N) via urine screen</td>
<td>No association Positive alliance associated with less drug use during last 30 days of treatment</td>
</tr>
</tbody>
</table>

Note. Reference for each measure available in source document. ASI = Addiction Severity Index; CALPAS = California Psychotherapy Alliance Scale (-P = Patient; -T = Therapist); CBT = Cognitive Behavioral Therapy; DATOS = Drug Abuse Treatment Outcomes Study; GAIN = Global Appraisal of Individual Needs; HAq = Helping Alliance Questionnaire, (-II=version 2; -P=Patient version; -T=Therapist version); Long. = longitudinal; Project MATCH = intervention matching services to client characteristics; OP = Outpatient; PENN = Penn Helping Alliance Rating Scale; SPI = Substance Problem Index; VTAS = Vanderbilt Therapeutic Alliance Scale; WAI = Working Alliance Inventory (-C = Client version; -T = Therapist version).
Ultimate Outcomes

Safety. The physical safety of children is a primary concern for families involved in the child welfare system. Of the seven studies included in the review, two examined the impact of the client-provider relationship on the ultimate outcome of child safety (Johnson & Ketring, 2006; Lee & Ayón, 2004) and both found that ratings of the quality of the client-provider relationship are associated with safety. Specifically, these studies found that a positive relationship was associated with improvements in scores related to safety when safety was defined in terms of improvements in discipline and emotional care as well as reduction in violence.

Permanency. This outcome indicates that the child welfare intervention results in a stable and permanent living situation for the child. Although it is a central consideration in child welfare, only one of the seven studies examined permanency outcomes (Altman, 2008). In this study, Altman used two measures of permanency: rates at which parents visited children in temporary custody and rates at which the children were ultimately reunified with their families. She found no association between client-provider relationship and either measure.

Well-being. Measures of well-being assess the healthy development of children and families in the child welfare system. Four of the seven studies in Table 3 used some measure of well-being (Johnson & Ketring, 2006; Johnson, Wright, & Ketring, 2002; Lee & Ayón, 2004; Southerland, Mustillo, Farmer, Stambaugh, & Murray, 2009). Although well-being was the most common ultimate outcome, the four studies used eight unique measures of well-being, and client-provider relationship was associated with only two of those measures. One study used the Child Behavior and Emotional Functioning scale (Southerland et al., 2009). Two studies measured symptoms of anxiety and depression using the validated and reliable Outcome Questionnaire 45.2-Symptom Distress Scale. Both studies found favorable associations with the client-provider relationship; one study assessed the anxious/depressed symptoms within the family as a whole (Johnson & Ketring, 2006), and the other assessed the symptoms within the individual member of the family (e.g., adolescents, mothers, and fathers; Johnson et al., 2002). These two studies used the same relationship measure, the Family Therapy Alliance Scale (FTAS; Pinsof & Catherall, 1986), which is a modified version of the WAI used in family therapy settings. Although Pinsof and Catherall argued that the FTAS had content validity, few researchers who have used the scale suggest that it has predictive validity (Johnson et al., 2002; Johnson & Ketring, 2006). FTAS has not been used as widely as other scales.

Rater type. Four of the five studies that explored the ultimate outcomes of safety, permanency, and well-being measured only the client’s perspective of the client-provider relationship. Each of the four studies found at least a partial association between the client-provider relationship and the measured outcome (Johnson et al., 2002; Johnson & Ketring, 2006; Lee & Ayón, 2004; Southerland et al., 2009). Only one study used both client and provider ratings, and that study did not find the relationship was positively associated with permanency outcomes for either rater type.

Treatment setting. The two studies that explored traditional child welfare services and the effect of treatment setting reported mixed findings (Altman, 2008; Lee & Ayón, 2004). Lee and Ayón (2004) found that the parent-provider (i.e., client-provider) relationship was associated with safety outcomes but not with permanency nor well-being outcomes. Altman (2008) measured safety outcomes only and found no association with the parent-provider relationship.

In contrast, the two studies involving preventive, voluntary settings (i.e., the in-home, family-therapy interventions) found more consistent associations among the client-provider relationship and measured outcomes. Johnson and Ketring (2006) found that the client-provider relationship was associated with safety outcomes, and both Johnson et al. (2002) and Johnson and Ketring (2006) found the relationship was associated with well-being outcomes. Johnson et al. (2002) found the scores on all three of the family alliance subscales (goals, tasks, bonds) were associated with a reduction in symptoms of anxiety and depression for mothers, fathers, and adolescents. In a later study by the same lead author, Johnson and Ketring (2006) determined that scores on all three of the family alliance subscales were associated with reductions in anxiety and depression. The associations were independent of the severity of symptoms before treatment. Again, it is not appropriate to draw conclusions from two studies, but they provide evidence that the parent-provider relationship is associated with both safety and well-being measures.

Summary and Methodological Considerations

In seven child welfare studies that reviewed the impact of client-provider relationship, findings indicated that relationship was a consistent predictor of intermediate outcomes, but an uneven predictor of ultimate outcomes for parents who were either reported or at-risk for child abuse and neglect. Limited but consistent evidence from two studies indicated that the client-provider relationship was consistently
associated with the process outcome of participation in prevention programs (Girvin et al., 2007, Korfmacher et al., 2007). Examining the associations of the client-provider relationship with ultimate outcomes of safety, permanency, and well-being revealed these relations were inconsistent. Overall, the client-provider relationship was found to be a predictor of safety when safety was measured through parent interviews about discipline and emotional care (Lee & Ayón, 2004) or through empirically validated measures of parenting practices and levels of family violence (Johnson & Ketring, 2006). In addition, the client-provider relationship was found to predict well-being when well-being was measured in terms of parental reports of family mental health symptoms (Johnson & Ketring, 2006; Johnson et al., 2002). Last, no relationship was found between the client-provider relationship and any of the permanency outcomes, including visitation and reunification rates (Altman, 2008).

Because only one study included a provider/worker’s perspective of the relationship and no studies included an observer’s perspective of the relationship, it is not appropriate to draw conclusions regarding whether type of rater served as a moderator. However, whether a service was traditional (i.e., typically involuntary service) or preventive (i.e., typically voluntary) was a possible moderator of the associations of the client-provider relationship with ultimate outcomes of safety, permanency, and well-being. In the two studies that examined traditional child welfare services, little connection was found between client-provider relationship and outcomes. Perhaps the case management approach did not allow providers to develop deep relationships with parents, especially those whose children had been removed by the same system in which the case managers’ worked. In contrast, the two studies that examined voluntary, in-home, family therapy services tailored and structured to fit the family’s needs found a connection between client-provider relationship and outcome. These service setting factors, coupled with the family’s risk of having a child removed from the home, might create the conditions in which the family and provider are motivated to build a meaningful relationship, and the resulting alliance might improve outcomes.

Measurement strategies in these studies varied across several dimensions, including the time point at which the client-provider relationship was measured. Two studies examined the alliance at multiple time points. Korfmacher and colleagues (2007) captured variation over time in the parents’ perception of their relationship with the home visitor. The authors’ found that the relationship was predictive of outcome only in early (6 months) and later stages (26 months) of the intervention; the relationship scores dropped during the middle stage. In contrast, Altman (2008) found that the parental alliance scores were consistently high at all three data collection points (3, 6, and 9 months) but that the parent’s consistently positive perception of the relationship was not associated with positive outcomes. The other four studies measured the relationship only at the end of treatment, making it impossible to know whether and to what extent the parent-worker relationship changed over time.

An additional way in which measurement varied in these studies was in terms of relationship and outcome indicators through interview data or empirically validated measures. For example, the only behavioral measure used was a measure of visitation and permanency, which counted parent visits and the number of homes to which children returned. The client-provider relationship was predictive of about half of the measures fielded in interviews and paper-and-pencil surveys but not predictive of the behavioral permanency measure. Further, child welfare outcomes of visitation and permanency are known to be influenced by a range of environmental and service system features. Last, the studies raised important questions about the utility of current relationship measures in child welfare. Six different relationship measures were used in the seven studies. This extent of variation makes comparison of study results cumbersome and difficult. The one study that found no association between the alliance and client outcome used a modified version of a psychotherapy instrument (WAI) to measure the parent-worker relationship in traditional child welfare services with mandated clients (Altman, 2008). Even after modification, the measure may not adequately capture the unique relationship between parents and workers in child welfare. The alliances that workers build in this context are likely to operate in very different ways from those in traditional clinic-based outpatient therapy settings.
### Table 3
Association Between Client-Provider Relationship and Outcomes in Child Welfare (7 Articles)

<table>
<thead>
<tr>
<th>Authors</th>
<th>Rater</th>
<th>Alliance</th>
<th>Design</th>
<th>Sample</th>
<th>Treatment Setting</th>
<th>Outcome</th>
<th>Type</th>
<th>Measure</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girvin (2007)</td>
<td>Parents</td>
<td>HRI-C &amp; RWI</td>
<td>Pre-post</td>
<td>136 families at-risk for neglect</td>
<td>Home-based prevention program</td>
<td>Participation</td>
<td>Complete full service (Y/N)</td>
<td>HRI-C interpersonal subscale predicted service completion. RWI did not</td>
<td></td>
</tr>
<tr>
<td>Johnson &amp; Kretting (2006)</td>
<td>Families</td>
<td>FTAS</td>
<td>Pre-post</td>
<td>255 families reported for abuse or neglect</td>
<td>Home-based family therapy as needed</td>
<td>Safety</td>
<td>Level of violence (CTS-PAS)</td>
<td>Goals subscale associated with violence. Bonds subscale moderated level of violence Bonds, tasks, &amp; goals subscales associated with distress independent of level at intake</td>
<td></td>
</tr>
<tr>
<td>Johnson et al. (2002)</td>
<td>Parents, Children</td>
<td>FTAS-A, -M, &amp; -F</td>
<td>Pre-post</td>
<td>43 families referred for risk of child removal</td>
<td>Home-based family therapy as needed</td>
<td>Well-being</td>
<td>Anxiety/depression (OQ-SD)</td>
<td>Bonds, tasks, &amp; goals subscales predict symptom distress for mothers, fathers, &amp; adolescents</td>
<td></td>
</tr>
<tr>
<td>Korfmacher et al. (2007)</td>
<td>Parents</td>
<td>HRI</td>
<td>Pre-post</td>
<td>1,100 parents with young children</td>
<td>HV as part of an early intervention program (EHS)</td>
<td>Participation</td>
<td>Frequency of HV</td>
<td>HRI associated with number of HV at 6 &amp; 26 mos.</td>
<td></td>
</tr>
<tr>
<td>Lee &amp; Ayón (2004)</td>
<td>Parents</td>
<td>RWI</td>
<td>Pre-post</td>
<td>100 former DCFS clients</td>
<td>Family preservation &amp; family maintenance child welfare services</td>
<td>Well-being</td>
<td>Child Symptoms (POI)</td>
<td>No association</td>
<td>No association</td>
</tr>
<tr>
<td>Southerland et al. (2009)</td>
<td>Parents</td>
<td>Parent satisfaction with provider relationship</td>
<td>Post only</td>
<td>177 foster care parents</td>
<td>Treatment foster care</td>
<td>Well-being</td>
<td>Child behavior &amp; emotional functioning</td>
<td>Parent with higher satisfaction had children with higher CBEF Scale</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** References for measures available in source document. WAI = Working Alliance Inventory (P = Parent version; W = Worker version); CBEF = Child Behavior and Emotional Functioning; CTS-PAS = Conflict Tactics Scale-Physical Aggression; DCFS = Department of Children and Family Services; EHS = Early Head Start; F-COPES = Family Crisis Oriented Personal Evaluation Scales; FTAS = Family Therapy Alliance Scale (A = Adolescent; M = Mother; F = Father); HRI = Helper-Client Relationship Inventory (C = Client version); HV = Home Visiting; OQ-IR = Outcome Questionnaire - Interpersonal Relations Scale; OQ-SD = Outcome Questionnaire -Symptom Distress Scale; POI = Parent Outcome Interview; RWI = Relationship with Worker Instrument (Parent Outcome Interview subscale).
Mental Health Services Overview

Our review identified 28 studies in the mental health services sector. All of the reviewed studies included a measure of the client-provider relationship or therapeutic alliance. For studies in this set, we added another review inclusion criterion: a sample of people with serious and persistent mental illness (SPMI), which includes schizophrenia-spectrum disorders, bipolar disorders, and severe and persistent major depressive disorder. To avoid sampling studies of non-SPMI populations, we considered only those studies using samples composed of people with SPMI or that a sample with a minimum of 50% representation of people with schizophrenia-spectrum or bipolar disorder. Although the majority of studies meeting the sample criterion pertained to a type of case management service, we also included studies in which people with SPMI were receiving inpatient treatment, outpatient psychotherapy or pharmacotherapy, vocational rehabilitation services, psychiatric rehabilitation services, and specialized probation and parole services.

The types of outcomes varied widely, and this variation is consistent with the comprehensive array of goals targeted by psychiatric rehabilitation services. We focused attention on several intermediate and ultimate outcomes that have established clinical importance for individuals with serious mental illness. To simplify summarization of findings, this review does not include all outcomes examined in the selected studies, and focuses on the following five outcomes:

- Participation, which is measured as either retention in a course of therapy treatment, consistency of appointment attendance, or medication adherence;
- Readmission, which includes time spent in hospitals as well as criminal justice violations;
- Psychiatric status, which is defined to include depression, anxiety, mania and psychosis;
- Employment, which is measured in terms of employment attainment, duration of employment, and employment performance; and
- Social functioning, which is measured by global ratings, social support scales, and community adjustment scales.

Service participation is considered an intermediate outcome, whereas the other four outcomes (i.e., readmission, psychiatric status, employment, and social functioning) are considered ultimate outcomes.

Although some of the studies in this set were substudies within larger intervention projects (some of which collected data via randomized designs), the analyses of the alliance-outcome relationship were correlational in nature. Most of the studies were longitudinal, and outcomes were measured multiple times during and after intervention. This data collection design permitted the investigators to determine the time ordering of the alliance and outcome. In some cases, the investigators performed the analyses using both cross-sectional data (i.e., alliance and outcome measured at the same time) and longitudinal data (alliance measured prior to later outcomes measured over time). Of the 28 studies, 13 used the WAI, and often in conjunction with other measures. The remainder of the studies used an array of established or newly developed instruments.

Intermediate Outcomes

Participation. The extent to which clients attend and remain in treatment programs and regimens plays a well-established role as an intermediate outcome in psychiatric treatment and rehabilitation services (Kreyenbuhl, Nossel, & Dixon, 2009; O’Brien, Fahmy, & Singh, 2009). The longer clients remain connected to services and adhere to treatment regimens, the better their functioning and quality of life (Adair et al., 2005), and the less likely their relapse or admission to psychiatric hospitals (Killaspy, Banerjee, King, & Lloyd, 2000). Seven studies in this review examined the role of the client-provider relationship in service participation when defined as either retention in treatment or treatment attendance, and four studies examined the role of relationship in service participation when defined as adherence to treatment regimens (which included attitudes toward medication, completion of therapy homework, and medication adherence). All seven studies of service retention and attendance found a positive association with at least one rater’s (client, observer, or provider) assessment of quality of the client-provider relationship (Coffey, 2003; Dunn, Morrison, & Bentall, 2006; Frank & Gunderson, 1990; Gaudiano & Miller, 2006; Mohamed, Rosenheck, & Cuerdon, 2010; Sells, Davidson, Jewell, Falzer, & Rowe, 2006; Startup, Wilding, & Startup, 2005). This positive association persists across different measures of the client-provider relationship and outcome. Likewise, all three studies measuring participation in terms of adherence found that at least one rater’s assessment of the quality of the client-provider relationship was associated with the adherence outcome (Solomon, Draine, & Delaney, 1995; Weiss, Smith, Hull, Piper, & Huppert, 2002; Zeber, Copeland, Good, Fine, Bauer, & Kilbourne, 2008).

Rater type. Taken together, the 10 studies examining participation suggested that the rater perspective made no difference in the association of client-provider relationship to participation according to rater
perspective (Table 4). Two studies measured the client perspective only, two studies measured the provider perspective only, five studies measured both client and provider perspectives, and one study used provider and observer ratings. Among the seven studies that used a provider rating, all seven found a positive association between the client-provider relationship and participation (Coffey, 2003; Dunn et al., 2006; Frank & Gunderson, 1990; Gaudiano & Miller, 2006; Mohamed et al., 2010; Startup et al., 2005; Weiss et al., 2002). In addition, all seven of the studies that used client ratings (Coffey, 2003; Dunn et al., 2006; Gaudiano & Miller, 2006; Mohamed et al., 2010; Sells et al., 2006; Solomon et al., 1995; Zeber et al., 2008), and the one study that used an observer rating (Startup et al., 2005), found a positive association between the client-provider relationship and participation.

**Treatment setting.** Reviewed studies found that client-provider relationship is consistently associated with service participation (including both retention in treatment and program attendance) in both outpatient treatment and case management settings. Of the studies examining client-provider relationship and service participation, five were conducted in outpatient treatment settings (including psychotherapy and pharmacological interventions), and four occurred in intensive case management programs; one study sampled a mix of inpatient and outpatient clients. In outpatient treatment settings, two studies (Frank & Gunderson, 1990; Weiss et al., 2002) used only a provider rater, one study (Startup et al., 2005) used a provider and observer, and the remaining two studies (Dunn et al., 2006; Gaudiano & Miller, 2006) measured both client and provider ratings. Both of the studies that used a client rating found an association with service participation (Dunn et al., 2006; Gaudiano & Miller, 2006). Similarly, 3 out of 4 studies that used a clinician rating found an association with participation (Dunn et al., 2006; Frank & Gunderson, 1990; Startup et al., 2005). The only study to use an observer rating (Startup et al., 2005) found that the client-provider relationship was associated with a reduction in program drop-out rates.

The four studies conducted in case management settings found that ratings of quality of the client-provider relationship were positively associated with participation overall; three reviewed studies used both client and provider raters (Coffey, 2003; Mohamed et al., 2010; Solomon et al., 1995). One study found that only the client rating was associated with participation (Solomon et al., 1995). In the two remaining studies, both sets of ratings indicated that the client-provider association was associated with participation.

**Ultimate Outcomes**

**Readmission.** As Table 4 shows, readmission is frequently used as an outcome criterion within psychiatric rehabilitation because a key goal of those services is to maintain community tenure and prevent individuals with mental illness from languishing in institutions, whether these be hospitals, jails, or prisons. Although prolonged hospitalization is now relatively rare among individuals with mental illness, the time spent in hospitals is often considered a proxy for a negative outcome, because hospitalization signifies that either the client’s symptoms have worsened to a point at which he or she cannot live safely in the community or the client is suicidal. This review yielded eight studies that examined the association of readmission with ratings of the quality of the client-provider relationship. The operationalization of readmission varied across the reviewed studies. Five studies measured the number of hospitalization episodes (Fakhoury, White, & Priebe, 2007; Frank & Gunderson, 1990; Klinkenberg, Calsyn, & Morse, 1998; Meaden, Nithsdale, Rose, Smith, & Jones, 2004; Neale & Rosenheck, 1995); three studies measured the number of days hospitalized (Frank & Gunderson, 1990; Klinkenberg et al., 1998; Solomon et al., 1995); and one study by Priebe and Gruyters (1993) used a hospitalization index, which is a composite measure of duration and severity. In addition, one study used probation violations as a measure of criminal justice readmission (Skeem, Louden, Polaschek, & Camp, 2007). Of the eight studies included in the review, only four (Fakhoury et al., 2007; Meaden et al., 2004; Priebe & Gruyters, 1993; Skeem et al., 2007) found a statistically significant association between client-provider relationship and readmission.

**Rater type.** Of the eight reviewed studies that examined readmission, five measured the provider perspective of the client-provider relationship (Fakhoury et al., 2007; Frank & Gunderson, 1990; Neale & Rosenheck, 1995; Skeem et al., 2007; Solomon et al., 1995); five studies measured the client perspective (Klinkenberg et al., 1998; Neale & Rosenheck, 1995; Priebe & Gruyters, 1993; Skeem et al., 2007; Solomon et al., 1995); and one measured the observer perspective (Meaden et al., 2004). Of the five studies that included provider ratings, only two found a statistically significant association between the client-provider relationship and readmission (Fakhoury et al., 2007; Skeem et al., 2007). Similarly, 2 of 5 studies measuring the client perspective found a statistically significant association with readmission (Priebe & Gruyters, 1993; Skeem et al., 2007). Hence, rater perspective does not appear to determine varia-
bility in the relationship between alliance and readmission.

**Treatment setting.** Of the eight studies that examined readmission, the client-provider relationship’s association with readmission varied across treatment settings. All but two, occurred in case management settings, of which one was a therapy study, and the other took place in specialty probation. The therapy study (Frank & Gunderson, 1990) was conducted in an outpatient treatment setting and found no evidence that ratings of quality of the client-provider relationship were associated with readmission. The specialty probation study (Skeem et al., 2007), an intervention that shares some features with case management, defined readmission as rule violations that would lead to probation revocation, and found the client-provider relationship had an effect on readmission. Among six studies that occurred within case management settings, half found statistically significant associations between the client-provider relationship and readmission (Fakhoury et al., 2007; Meeden et al., 2004; Priebe & Gruyters, 1993). Overall, no consistent patterns across treatment settings were found.

**Psychiatric status.** A fundamental goal of any psychiatric rehabilitation program is to improve the mental health condition of clients. Congruent with the centrality of the goal, the reviewed studies in this service sector examined psychiatric status to a greater extent than any other outcome variable. Some measure of psychiatric status was included in 13 studies; however, the operationalization of this outcome varied across studies. Five studies used the Brief Psychiatric Rating Scale (Calsyn, Morse, Klinkenberg, & Lemming, 2004; Goering & Wasylenki, 1997; Klinkenberg et al., 1998, 2002; Neale & Rosenheck, 1995; Solomon et al., 1995). Other studies used the Positive and Negative Syndrome Scale (Catty et al., 2008; Dunn et al., 2006); the Psychiatric Status Schedule (Frank & Gunderson, 1990); the Inpatient Multidimensional Psychiatric Scale (Frank & Gunderson, 1990); the Modified Hamilton Rating Scale for Depression (Strauss & Johnson, 2006); and the Bech-Rafaelsen Mania Rating Scale (Strauss & Johnson, 2006). Two studies used unvalidated measures, of which one gauged reduction in mental illness symptoms (Chinman, Rosenheck, & Lam, 2000), and the other examined the percentage of time a client was depressed or manic during a follow-up period (Gaudiano & Miller, 2006). Among the 13 studies that examined psychiatric status, nine found a statistically significant association between ratings of the client-provider relationship and psychiatric status.

**Rater type.** Among the 13 studies that measured psychiatric status as an outcome variable, 11 measured the client perspective on the client-provider relationship (Calsyn et al., 2004; Catty et al., 2008; Chinman et al., 2000; Dunn et al., 2006; Gaudiano & Miller, 2006; Goering & Wasylenki, 1997; Klinkenberg et al., 1998; Neale & Rosenheck, 1995; Solomon et al., 1995; Strauss & Johnson, 2006; Zeber, Copeland, Good, Fine, Bauer, & Kilbourne, 2008), and eight measured the provider perspective (Calsyn et al., 2004; Catty et al., 2010; Dunn et al., 2006; Frank & Gunderson, 1990; Gaudiano & Miller, 2006; Klinkenberg et al., 2002; Neale & Rosenheck, 1995; Solomon et al., 1995). No reviewed studies use ratings from an observer. Across the two perspectives, few notable differences were found. Five of the 11 studies measuring the client perspective found that the relationship was associated with psychiatric status (Calsyn et al., 2004; Gaudiano & Miller, 2006; Goering & Wasylenki, 1997; Strauss & Johnson, 2006; Zeber et al., 2008), and 5 of 8 studies measuring the provider perspective found the relationship was associated with psychiatric status (Calsyn et al., 2004; Catty et al., 2010; Frank & Gunderson, 1990; Klinkenberg et al., 2002; Neale & Rosenheck, 1995).

**Treatment setting.** Of the 13 studies that included psychiatric status as an outcome variable, seven occurred in case management programs (Calsyn et al., 2004; Chinman et al., 2000; Goering & Wasylenki, 1997; Klinkenberg et al., 1998, 2002; Klinkenberg et al., 2002; Neale & Rosenheck, 1995; Solomon et al., 1995), three took place in outpatient treatment (Dunn et al., 2006; Frank & Gunderson, 1990; Gaudiano & Miller, 2006), two were conducted in a combination of outpatient and inpatient treatment (Zeber et al., 2009; Strauss & Johnson, 2006), and one occurred in vocational services (Catty et al., 2010). In this review, the association between client-provider relationship and psychiatric status was slightly more likely to be statistically significant in outpatient treatment settings. In 2 of 3 studies conducted in outpatient treatment settings, the client-provider relationship was associated with psychiatric status; only the study by Dunn et al. (2006) found no association. Studies occurring in case management programs showed less consistent support for the association between client-provider relationship and psychiatric status. Among studies conducted in case management programs, 4 of 7 studies affirmed the association of the client-provider relationship and psychiatric status (Calsyn et al., 2004; Goering & Wasylenki, 1997; Klinkenberg et al., 2002; Neale & Rosenheck, 1995).

**Employment.** As services for individuals with serious mental illness have moved into the community, vocational rehabilitation has emerged as an important aspect of psychiatric community care (Bond et al., 2001). Employment provides an essential foun-
dation for independent living and represents an important institution through which individuals are connected to their residential communities. In this review, five articles examined the client-provider relationship’s association with employment outcomes, but the operationalization of employment varied among the studies. Two studies measured whether clients had employment prior to the study or obtained work during the study (Catty et al., 2008; Donnell, Lustig, & Strauser, 2004); two studies measured whether clients’ work performance improved during the study period (Davis & Lysaker, 2007; Pribe & Gruyters, 1993); one study measured total hours worked (Catty et al., 2008); and one study measured the total duration of employment (Kukla & Bond, 2009). Despite differences in operationalization of employment, the studies suggested that the quality of client-provider relationship was consistently associated with employment outcomes; 4 of 5 studies found a statistically significant association of client-provider relationships with employment, whereas Kukla and Bond (2009) found no association.

**Rater type.** Of the five studies that examined employment outcomes, four measured the client perspective (Catty et al., 2008; Donnell et al., 2004; Kukla & Bond, 2009; Pribe & Gruyters, 1993), of which one also included the provider perspective (Catty et al., 2008); the fifth study measured the observer perspective (Davis & Lysaker, 2007). Studies measuring the observer and provider perspectives found a statistically significant association of the client-provider relationship with employment outcomes. Among those studies measuring the client perspective, all but one (Kukla & Bond, 2009) found an association with employment. Due to the relatively small number of articles examining employment outcomes, it is difficult to draw even suggestive implications about how rater perspective may moderate the client-provider relationship’s association with employment outcomes. However, the limited existing evidence suggests that client and provider perspectives reliably predict the relationship between treatment alliance and employment.

**Treatment setting.** Among articles that measured employment outcomes, 4 of 5 studies were conducted in vocational rehabilitation settings (Catty et al., 2008; Davis & Lysaker, 2007; Donnell et al., 2004; Kukla & Bond, 2009), and the fifth study occurred in a case management program (Pribe & Gruyters, 1993). Among the studies occurring in vocational rehabilitation settings, 3 of the 4 found an association between the client-provider relationship and employment outcomes; however, the Kukla and Bond (2009) study found no association. As in the discussion of rater type, our ability to explore the potential moderating effect of treatment setting on the association between client-provider relationship and employment is limited by the small number of articles examining employment outcomes.

**Social Functioning.** Functioning is a common measure in the psychiatric rehabilitation literature. Assessments of social functioning attempt to gauge clients’ overall adjustment to and functioning in their communities. Although studies assessed a range of subtypes of functioning (e.g., work) as outcomes, we focused on the nine studies that included some measure of social functioning as an outcome variable (i.e., social functioning includes ratings of global functioning, community functioning, or social support scales). As Table 4 illustrates, the 10 studies of social functioning used a variety of assessment measures: one assessed violence risk (Beauford, McNeil, & Binder, 1997), two used the Global Assessment Scale (Catty et al., 2010; Neale & Rosenheck, 1995), one used the Multnomah Community Adjustment Scale (Hopkins & Ramsundar, 2006), one used the Lehman Quality of Life Inventory (Solomon et al., 1995), one used the Katz Adjustment Scales (Frank & Gunderson, 1990), one used the Specific Level of Functioning Scale (Goering, Wasylenki, Lindsay, Lemire, & Rhodes, 1997), one used the Goal Attainment Scale (Gehrs & Goering, 1994), and two used measures of housing stability (Calsyn et al., 2004; Chinman et al., 2000). Among these, 8 of 10 studies found a statistically significant association between at least one rating of the quality of the client-provider relationship and social functioning (Beauford et al., 1997; Calsyn et al., 2004; Catty et al., 2008; Frank & Gunderson, 1990; Gehrs & Goering, 1994; Goering et al., 1997; Hopkins & Ramsundar, 2006; Neale & Rosenheck, 1995).

**Rater type.** Two studies measured the client perspective only (Chinman et al., 2000; Goering & Wasylenki, 1997), two measured only the provider perspective (Frank & Gunderson, 1990; Hopkins & Ramsundar, 2006), and five measured both client and provider perspectives (Calsyn et al., 2004; Catty et al., 2010; Gehrs & Goering, 1994; Neale & Rosenheck, 1995; Solomon et al., 1995). Of these nine studies, one measured an observer perspective (Beauford et al., 1997). The review suggests little difference existed among the evaluations of client’s interpersonal competence or social engagement based on rater. Among the studies that measured the provider perspective, 6 of 7 studies found a statistically significant association between client-provider relationship and social functioning (Calsyn et al., 2004; Catty et al., 2010; Frank & Gunderson, 1990; Gehrs & Goering, 1994; Hopkins & Ramsundar, 2006; Neale & Rosenheck, 1995). Among the seven studies that measured the client perspective, five found an association of client-pro-
vider relationship with social functioning (Calsyn et al., 2004; Gehrs & Goering, 1994; Goering et al., 1997; Neale & Rosenheck, 1995; Solomon et al., 1995).

**Treatment setting.** Of the 10 reviewed studies that measured social functioning, seven were conducted in case management settings (Beauford et al., 1997; Calsyn et al., 2004; Chinman et al., 2000; Goering et al., 1997; Hopkins & Ramsundar, 2006; Neale & Rosenheck, 1995; Solomon et al., 1995), one took place in inpatient treatment (Beauford et al., 1997) one took place in outpatient treatment (Frank & Gunderson, 1990), and one occurred in a supported employment services setting (Catty et al., 2010). Among the studies conducted in case management programs, 5 of 6 found a statistically significant association between the client-provider relationship and social functioning (Calsyn et al., 2004; Gehrs, & Goering, 1994; Goering et al., 1997; Hopkins & Ramsundar, 2006; Neale & Rosenheck, 1995). Both the outpatient therapy study (Frank & Gunderson, 1990) and the supported employment study (Catty et al., 2008) found the client-provider relationship had effects on social functioning. Because relatively few studies examined social functioning as an outcome variable, and because little variation existed in the treatment settings of these studies, drawing conclusions about the possibility that treatment setting plays a moderating role in the association between the client-provider relationship and social functioning is not appropriate.

**Summary and Methodological Considerations**

The reviewed evidence suggests that for clients with serious mental illness, the client-provider relationship tended to be consistently correlated with outcome, with no major differences in findings based on rater perspective or treatment setting. However, the consistency of this effect differed by outcome. For example, every study that examined participation (either as service participation or treatment adherence) as an outcome variable found participation was positively and statistically significantly associated with the client-provider relationship. Similarly, employment, psychiatric status, and social functioning appeared to be consistently associated with client-provider relationship. Thus, nearly all of the reviewed studies (4 out of 5 for employment, 9 out of 13 for psychiatric status, and 8 out of 10 for social functioning) found a statistically significant association between the client-provider relationship and the outcome. Readmission was less consistently associated with the client-provider relationship; roughly half of the studies found no association. It is not immediately apparent why the consistency of this association might vary by outcome. In the case of retention, the high consistency of the findings could suggest that a positive client-provider relationship influences clients to remain in treatment. In comparison, hospital readmission is strongly influenced by contextual factors (e.g., bed scarcity; Solomon & Doll, 1979), in addition to the client-provider relationship.

Although findings support the notion that a strong client-provider relationship or alliance aids the success of psychiatric rehabilitation intervention, the studies presented here vary in the rigor with which they establish the direction of the alliance-outcome relationship. For example, alliance-outcome associations are often found in cross-sectional studies. However, in studies that followed clients over time, client-provider relationship did not always predict subsequent outcome scores, even if cross-sectional effects were observed. Other studies that correlated early measures of alliance with a status observed later (e.g., retention or drop out) did not always control for unmeasured factors, such as improvements in symptom or social skills, that could both strengthen alliances and improve outcomes.

Another methodological issue is that measures like the WAI, which was developed for use in the psychotherapy setting, might fail to pick up salient aspects of the working relationship between client and provider in services for SPMI individuals. This concern has led to the development of new instruments, such as Skeem’s Dual Role Relationship Inventory and Priebe’s Helping Alliance Scale (Fakhoury et al., 2007). Assessing these new instruments with analytic designs that precisely hone in on change in outcome would more definitively establish the importance of the alliance in services to SPMI clients and light the way for intervention approaches that bolster strong client-provider relationships.
## Table 4

**Association of Client-Provider Relationship with Various Outcomes in Psychiatric Treatment (28 Articles)**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Rater</th>
<th>Alliance</th>
<th>Design</th>
<th>Sample</th>
<th>Treatment Setting</th>
<th>Type</th>
<th>Measure</th>
<th>Effects</th>
</tr>
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<tbody>
<tr>
<td>Beauford et al. (1997)</td>
<td>Observer</td>
<td>Single item rating based on record review (not validated)</td>
<td>Longitudinal</td>
<td>328 patients hospitalized in locked inpatient unit</td>
<td>Case management</td>
<td>Social functioning</td>
<td>Violence during first week of admission (staff rated)</td>
<td>Quality of alliance during the admission interview predicted lower risk of violence during first week</td>
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<td>Social functioning</td>
<td>Housing stability; income (self-report)</td>
<td>Early WAI-C &amp; late WAI-T predicted prospective gains in stable housing. No association with income</td>
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<tr>
<td>Catty et al. (2008)</td>
<td>Client, Provider</td>
<td>Helping Alliances scale HAS, 3 versions: Alliance with clinical keyworker (HAS-k) &amp; vocational worker (HAS-v); rated by client; Alliance with patient; rated by vocational worker (HAS-p-v)</td>
<td>Longitudinal</td>
<td>312 adult clients with psychotic disorders in 6 European cities</td>
<td>Outpatient-Randomized to individual placement and support or vocational services as usual</td>
<td>Employment &amp; Social functioning</td>
<td>Vocational outcomes (worked at least 1 day; hours worked); Global disability (GAS-D)</td>
<td>HAS-v &amp; HAS-p, but not HAS-k, associated with greater likelihood of entering competitive employment. HAS-p predicted improved GAS-D &amp; overall social disability</td>
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<td>Psychiatric status</td>
<td>Psychotic &amp; Negative Symptoms:(PANSS), Global severity (GAS-S), Anxiety, Depression (HADS)</td>
<td>HAS-p predicted improvements in positive, negative, &amp; general symptoms &amp; higher likelihood of symptom remission (Van Os criteria for PANSS)</td>
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<td>Subjective</td>
<td>QOL (GSDS)</td>
<td>HAS-k predicted improved quality of life</td>
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<tr>
<td>Chinman et al. (2000)</td>
<td>Client</td>
<td>WAI-C administered to subjects who reported having case manager</td>
<td>Cross-sectional &amp; Longitudinal</td>
<td>3,481 homeless adults with SMI</td>
<td>Case management</td>
<td>Psychiatric status</td>
<td>Self-reports of depression &amp; psychotic symptoms (not validated); substance abuse (ASI)</td>
<td>No association</td>
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<td>Social functioning</td>
<td>Homelessness (days); social support (self-reports no. support contacts)</td>
<td>Alliance predicted fewer days homeless (CS finding). No association with social support</td>
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<td>Subjective</td>
<td>QOLI</td>
<td>High alliance group showed greater subjective quality of life (CS &amp; long.)</td>
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</table>
Table 4 (cont.)

<table>
<thead>
<tr>
<th>Authors</th>
<th>Rater</th>
<th>Alliance</th>
<th>Design</th>
<th>Sample Description</th>
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<tbody>
<tr>
<td>Coffey (2003)</td>
<td>Client, Provider</td>
<td>SASB, self-rated form (connection &amp; autonomy dimensions)</td>
<td>Longitudinal</td>
<td>55 Clients with schizophrenia newly admitted to an intensive case management program</td>
<td>Case management</td>
<td>Participation</td>
<td>TPI, provider rated</td>
<td>Client &amp; provider SASB predicted higher TPI</td>
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<tr>
<td>Davis &amp; Lysaker (2007)</td>
<td>Observer</td>
<td>WAI-O, short version</td>
<td>Longitudinal</td>
<td>26 clients with schizophrenia in VA outpatient treatment</td>
<td>Employment</td>
<td>Employment</td>
<td>Behavioral performance at work (WBI)</td>
<td>High-alliance group had more improved performance on two out of five work behavior dimensions</td>
</tr>
<tr>
<td>Donnell et al. (2004)</td>
<td>Client</td>
<td>Working Alliance Survey developed for vocational rehab, &amp; administered by phone</td>
<td>Cross-sectional</td>
<td>305 clients with SPMI</td>
<td>Employment</td>
<td>Employment</td>
<td>Work satisfaction &amp; optimism</td>
<td>Employed subjects rated stronger alliances than unemployed subjects Subjects with higher alliance scores had higher work satisfaction &amp; work optimism</td>
</tr>
<tr>
<td>Dunn et al. (2006)</td>
<td>Client, Provider</td>
<td>CALPAS, patient &amp; therapist versions</td>
<td>Cross-sectional, &amp; Longitudinal</td>
<td>29 clients in study of CBT for psychosis</td>
<td>Outpatient-Psychotherapy</td>
<td>Participation</td>
<td>Homework compliance</td>
<td>Client &amp; therapist CALPAS ratings predicted concurrent level of homework compliance</td>
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<tr>
<td>Fakhoury et al. (2007)</td>
<td>Provider</td>
<td>HAS-p-k</td>
<td>Longitudinal</td>
<td>580 clients with SPMI receiving assertive outreach</td>
<td>Case management</td>
<td>Readmission</td>
<td>No. of hospitalizations during 9-mo. follow-up period</td>
<td>Higher HAS-p-k lowered odds of hospitalization for newer patients but not established patients</td>
</tr>
<tr>
<td>Frank &amp; Gunderson (1990)</td>
<td>Provider</td>
<td>AES</td>
<td>Longitudinal</td>
<td>143 clients with schizophrenia recruited during inpatient admission but treated beyond discharge</td>
<td>Outpatient-all patients received therapy (exploratory-insight-oriented or reality-adaptive-supportive)</td>
<td>Psychiatric status</td>
<td>Psychiatric Status Schedule, Inpatient Multidimensional Psychiatric Scales</td>
<td>Better alliance predicted lower global psychopathology, positive symptoms, no effect on depression, anxiety, or cognitive disorganization</td>
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<tr>
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<td></td>
<td>Psychiatric status</td>
<td>Social functioning</td>
<td>Katz Adjustment Scales</td>
<td>Better alliance predicted better social functioning. No effect on major role performance</td>
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<td></td>
<td>Participation</td>
<td>Participation</td>
<td>Retention in therapy &amp; compliance abstracted from records</td>
<td>Good alliance predicted therapy continuance &amp; medication compliance</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Readmission</td>
<td>Readmission</td>
<td>No. &amp; duration of readmissions, total time hospitalized</td>
<td>No association</td>
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</tbody>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Gaudiano &amp; Miller</td>
<td>Client, Provider (psychiatrist)</td>
<td>WAI-C &amp; WAI-T adapted for pharmacotherapy measured at 2 mos. post-BL</td>
<td>Longitudinal</td>
<td>61 clients with bipolar disorder receiving medication management from a randomized trial of family psycho-education &amp; family therapy</td>
<td>Outpatient-pharmacotherapy</td>
<td>Participation</td>
<td>Retention in study treatment (mos.)</td>
<td>WAI-C predicted retention; WAI-T related to treatment retention, but relationship did not remain significant (p &lt; .05) if patient expectancies controlled</td>
</tr>
<tr>
<td>Gehrs &amp; Goering</td>
<td>Client</td>
<td>WAI-C, WAI-T T1: 2–7 mos. after program entry; T2: 3 mos. after T1</td>
<td>Cross-sectional, &amp; Longitudinal</td>
<td>22 outpatients with schizophrenia</td>
<td>Outpatient-psychiatric rehab.</td>
<td>Social functioning</td>
<td>GAS; problem list</td>
<td>CS analyses showed relationships between WAI-T &amp; outcomes (GAS &amp; problem list) &amp; between WAI-C &amp; the GAS Long. analyses showed no associations</td>
</tr>
<tr>
<td>Goering &amp; Wasylkenki</td>
<td>Client</td>
<td>WAI-C</td>
<td>Longitudinal</td>
<td>55 homeless adults with SMi</td>
<td>Case management</td>
<td>Social functioning</td>
<td>Social functioning (SLOF) BPRS</td>
<td>WAI-C predicted social functioning improvement</td>
</tr>
<tr>
<td>Hopkins &amp; Ramsundar</td>
<td>Provider</td>
<td>WAI-T, short form</td>
<td>Longitudinal</td>
<td>30 outpatients with SMI</td>
<td>Case management</td>
<td>Social functioning</td>
<td>MCAS</td>
<td>WAI-T gain score predicted improvement in MCAS score during first year of program</td>
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<tr>
<td>Klinkenberg et al.</td>
<td>Client</td>
<td>Original 15-item measure developed for study</td>
<td>Cross-sectional, &amp; Longitudinal</td>
<td>105 individuals with SMI at risk for homelessness</td>
<td>Case management</td>
<td>Readmission</td>
<td>Hospital admissions &amp; bed days Symptoms (BPRS &amp; GSI) Satisfaction with services</td>
<td>No association</td>
</tr>
<tr>
<td>Klinkenberg et al.</td>
<td>Provider</td>
<td>Three-item measure tapping client’s motivation &amp; receptivity, whether staff liked client (validated using WAI)</td>
<td>Longitudinal</td>
<td>92 adults with SMI</td>
<td>Case management</td>
<td>Psychiatric status</td>
<td>Symptoms (BPRS, BSI) Subjective Satisfaction with services; quality of life (SLDS)</td>
<td>Concurrent inverse relationship between alliance &amp; anxiety-depression symptoms &amp; hostility-suspicion symptoms; no long. association Concurrent positive relationship of alliance &amp; client satisfaction with treatment program; no long. association. No association with quality of life</td>
</tr>
<tr>
<td>Kukla &amp; Bond</td>
<td>Client</td>
<td>Measure of alliance with vocational worker developed for specific study</td>
<td>Longitudinal</td>
<td>91 psychiatric rehab. clients with SMI</td>
<td>Vocational services</td>
<td>Employment</td>
<td>Duration of paid employment; mean paid job tenure</td>
<td>No association</td>
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<tr>
<td>Meaden et al.</td>
<td>Observer</td>
<td>Client-therapist interaction rating from the HEM</td>
<td>Cross-sectional</td>
<td>45 clients with SMI</td>
<td>Case management</td>
<td>Readmission</td>
<td>No. hospital admissions; bed days; length of stay</td>
<td>Strength of client-therapist interaction rating inversely associated with no. of admissions &amp; bed days over the past year</td>
</tr>
<tr>
<td>Authors</td>
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<tr>
<td>Mohamed et al. (2010)</td>
<td>Client, provider</td>
<td>WAI-C; WAI-T</td>
<td>Longitudinal</td>
<td>1,402 veterans enrolled in intensive case management 2002-4</td>
<td>Case management</td>
<td>Participation</td>
<td>Retention in program vs. early termination (&lt;1 year) or late termination (1-3 years)</td>
<td>WAI-T &amp; WAI-C positively association with longer retention in program</td>
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<td>Social functioning</td>
<td>Global functioning (GAF &amp; global outcome (client &amp; case manager rated)</td>
<td>WAI-C predicted client rated global outcome. WAI-T predicted improvement in GAF &amp; case manager rating of global outcome</td>
</tr>
<tr>
<td>Priebe &amp; Gruyters (1993)</td>
<td>Client</td>
<td>HAS-k</td>
<td>Longitudinal</td>
<td>72 adults with SPMI</td>
<td>Case management</td>
<td>Readmission</td>
<td>Hospitalization index (composite of duration &amp; severity)</td>
<td>Total HAS score predicted lower hospitalization index score</td>
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<td>Employment</td>
<td>Improvement in work &amp; independent living</td>
<td>Total HAS score predicted improved work functioning but not independent living</td>
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<tr>
<td>Sells et al. (2006)</td>
<td>Client</td>
<td>BLRI (positive regard, empathy, unconditionality subscales)</td>
<td>Longitudinal</td>
<td>137 clients with SPMI &amp; co-occurring substance abuse disorders in RCT of intensive case management with or without peer support</td>
<td>Case management</td>
<td>Participation</td>
<td>Treatment motivation (substance abuse, psychiatric treatment) &amp; self-reported frequency of attendance at 12-step groups</td>
<td>BLRI empathy scores predicted higher drug treatment motivation; positive regard scores predicted higher alcohol &amp; psychiatric treatment motivation &amp; frequency of 12-step attendance</td>
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<tr>
<td>Skeem et al. (2007)</td>
<td>Client, provider, observer</td>
<td>DRI-R client, probation officer, &amp; observer versions; WAI-C &amp; WAI-T also measured</td>
<td>Longitudinal</td>
<td>90 probationers with SPMI</td>
<td>Specialty probation &amp; parole services for people with mental illness</td>
<td>Readmission</td>
<td>Rule compliance (probation violations, probation revocation)</td>
<td>Client &amp; probation officer DRI-R scores associated with fewer violations. Officer DRI-R score predicted longer time w/out violation. No association between WAI &amp; rule compliance</td>
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<tr>
<td>Solomon et al. (1995)</td>
<td>Client, provider</td>
<td>WAI-C, WAI-T</td>
<td>Cross-sectional</td>
<td>96 outpatients with SPMI &amp; low social functioning</td>
<td>Case management</td>
<td>Participation</td>
<td>Medication attitudes (not validated)</td>
<td>WAI-C predicted medication attitudes</td>
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<td>Psychiatric status</td>
<td>BPRS</td>
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<td>Social functioning</td>
<td>Income, family contact, social activity (QOLI)</td>
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<td>Subjective</td>
<td>Overall life satisfaction (QOLI), treatment satisfaction</td>
<td>WAI-C predicted QOLI &amp; satisfaction with services</td>
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<tr>
<td>Authors</td>
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<td>Design</td>
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<tr>
<td>Startup et al. (2005)</td>
<td>Provider, observer</td>
<td>AES; WAI-O</td>
<td>Longitudinal</td>
<td>20 inpatients with schizophrenia spectrum disorders</td>
<td>Outpatient-CBT</td>
<td>Participation</td>
<td>Retention in therapy</td>
<td>Patients who dropped out of therapy had lower AES scores &amp; lower WAI-O scores on task &amp; goal subscales. WAI-O bond subscale did not predict retention</td>
</tr>
<tr>
<td>Strauss &amp; Johnson (2006)</td>
<td>Client</td>
<td>WAI-C</td>
<td>Longitudinal</td>
<td>58 clients with bipolar I disorder</td>
<td>Outpatient &amp; inpatient psychiatric treatment</td>
<td>Psychiatric status</td>
<td>Depressive symptoms (MHRSD); manic symptoms (BRMS)</td>
<td>Alliance at 2 mos. associated with decreased mania 6 mos. later but not with changes in depressive symptoms</td>
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<tr>
<td>Weiss et al. (2002)</td>
<td>Provider</td>
<td>WAI-T, short form</td>
<td>Longitudinal</td>
<td>162 clients with psychotic disorders in outpatient psychiatric clinic</td>
<td>Outpatient psychiatric treatment</td>
<td>Participation</td>
<td>Medication adherence; rated by therapist</td>
<td>WAI-T associated with longer time adherent to medication for initially adherent clients &amp; associated with likelihood of adherence over time</td>
</tr>
<tr>
<td>Zeber et al. (2009)</td>
<td>Client</td>
<td>HCCQ</td>
<td>Cross-sectional</td>
<td>435 VA patients with bipolar disorder receiving either inpatient or outpatient VA treatment</td>
<td>Outpatient or inpatient psychiatric treatment</td>
<td>Participation</td>
<td>Self-reported medication adherence; medication attitudes (Morisky scale)</td>
<td>HCCQ summary score predicted better medication adherence; no association with medication attitudes</td>
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</tbody>
</table>

Note. AES = Active Engagement Scale from the Psychotherapy Status Report, observer rated; ASI = Addiction Severity Index; BLRI = Barrett-Lennard Relationship Inventory; BRMS = Bech-Rafaelsen Mania Scale; BPRS = Brief Psychiatric Rating Scale, observer rated; BSI = Brief Symptom Inventory; CALPAS = California Psychotherapy Alliance Scale; DRI-R = Dual Role Relationship Inventory; GAS = Goal Attainment Scale; GAS-D = Global Assessment Scale-Disability only; GAS-S = Global Assessment Scale-Symptoms only; GSI = Global Severity Index; GSDS = Groningen Social Disability Schedule; HADS = Hospital Anxiety and Depression Scale; HAS = Helping Alliance Inventory (-k = for relationship with key worker, client version; -v = for relationship with vocational worker, client; -p-k = for relationship with client, keyworker version, -p-v = for relationship with client, counselor); HCCQ = Health Care Climate Questionnaire, client rated; HEM = Hall Engagement Measure; MIHSIP = Mental Health Statistics Improvement Program Consumer Report Card; MHRSD = Modified Hamilton Rating Scale for Depression; PANSS = Positive and Negative Symptom Scale, observer rated; PHQ-9 = Patient Health Questionnaire; QOLI = Quality of Life Inventory; RCT = Randomized Controlled Trial; SASB = Structural Analysis of Social Behavior; SLDS = Satisfaction with Life Domains Scale; SLOF = Specific Level of Functioning Scale; SMI = serious mental illness; SPMI = serious and persistent mental illness; TPI = Treatment Participation Index; WAI = Working Alliance Inventory (-C = Client version; -O = Observer version; -T = Therapist version); WBI = Work Behavior Inventory.
Discussion

A major conclusion of this review is that the client-provider relationship appears to be a consistent predictor of process and a somewhat less consistent predictor of social service outcomes. This conclusion is consistent with early conceptual work of social work scholars and with clinical understandings of social work practitioners. Results of this review refine this conclusion with findings that the client-provider relationship has particularly consistent associations with the process variables of participation and retention. Although these process variables were measured most frequently in the substance abuse treatment literature, the finding appears to be consistent across the three service sectors of substance abuse, child welfare, and mental health. The finding appears to be particularly robust for measures of retention in treatment, especially when retention is measured as a continuous variable (e.g., as number of sessions, number of home visits, or number of days or weeks in treatment). Both child welfare studies that measured treatment participation, 6 of 9 substance-abuse services studies that measured retention, and all 10 mental health studies that measured some aspect of treatment participation found that the client-provider relationship was associated with outcomes of participation and retention. Thus, findings from the review indicate a robust association between client-provider relationship and retention of clients in treatment.

It is important to note that the finding that client-provider relationship has a robust relation to retention in the social services literature is inconsistent with recent findings from the psychotherapy literature. When Horvath et al. (2011) examined the correlation of client-provider relationship with retention in a subset of studies that operationalized retention as a categorical dropout (Y/N) measure, they found correlations significantly different and lower than those for subsets of studies correlating client-provider relationship with other outcome measures. It is likely the explanation for this inconsistency is the differences in the measurement of retention, especially differences in the use of categorical versus continuous variables. However, the difference might possibly reflect differential motivation for treatment for clients in psychotherapeutic settings versus social service settings.

In addition to assessing the nature of the association of client-provider relationship with social service outcomes, the purposes of this systematic review were to (a) describe the association and potential causal relations among variables, (b) define core concepts and variables and inter-relationships, (c) identify moderating mechanisms, and (d) highlight promising directions for future research and practice. What have we learned from this systematic review related to these specific purposes?

First, despite the fact that the fundamental question of interest in this review is whether the client-provider relationship has some causative impact on treatment outcomes, we have been careful to use terminology describing the association and correlation between client-provider relationship and outcome rather than more causally oriented language. As in all nonintervention studies in which randomized controlled designs are not possible or appropriate, we initiated this review understanding the conditions required for strong causal inferences were difficult to meet. However, as an initial step to addressing the causal question in social service settings, we carefully defined key concepts and evaluated the consistency of the associations among these concepts. We anticipate that this conceptual work will prove useful for future systematic reviews and meta-analyses in this area.

Second, we learned that the conceptual framework applied here that identified intermediate and ultimate service outcomes across the three service sectors could usefully bridge some of the definitional silos that have characterized services research in the past. The consistent and persistent association of client provider relationship with intermediate outcomes—whether measured as participation, engagement, or retention—serves to reinforce long-held clinical understandings of the importance of client engagement to successful treatment (National Institute of Mental Health, 2011). Further, we found that the client-provider relationship was associated with ultimate treatment outcomes even though the outcomes were defined and measured quite differently (in all, eight different categories of ultimate outcomes were defined and measured) across the three service sectors.

Relatedly, we learned that the operationalization and measurement of key concepts may account for some of the variability in the associations of client-provider relationship with intermediate and ultimate outcomes. Overall, studies used several measures of the client-provider relationship, of intermediate outcomes and ultimate outcomes, and these measures varied across three dimensions of quality, immediacy, and sensitivity. All measures varied in terms of quality, that is, in the extent to which reliability and validity had been established. Some of the client-provider relationship measures consisted of one or two items on a questionnaire whereas others had well-established reliability and validity. Further, the review identified an interaction between research design and quality of measures in the substance abuse domain, which showed studies with larger samples and longer periods of client follow-up were less likely to use validated measures. In addition, measures differed in terms of
timing. The closer the timing of measurement to the
treatment or the time when the client and provider
were engaged in relationship, the stronger the
expected associations. In treatment research using
longitudinal, posttreatment measures of outcome,
some decrement in the treatment effect might be
expected (Kazdin & Nork, 2003). For example, in
studies reviewed in the mental health area, the sector
in which longitudinal measurements were most often
conducted, stronger associations were found with the
near-term measures than with long-term measures.
Last, measures evaluated in this review differed in
terms of sensitivity. For example, individual-level
measures of psychological functioning, such as
measures of depression or symptom change, tended to
be more sensitive and malleable than system-level
measures such as readmission to hospitalization or
reunification with families. System-level measures are
vulnerable to a range of contextual and service system
influences outside the client-provider relationship.
Thus, the operationalization and measurement of key
concepts might have contributed in a number of dif-
ferent ways to the variability in associations found
in this review.

A third major finding of this systematic review
relates to the influence of the two moderator variables:
rater perspective and treatment setting. Based on our
conceptual framework, our review explicitly investi-
gated whether the connection of the client-provider
relationship to outcome would differ under different
conditions of rater perspective (client, provider,
observer) and setting (inpatient, outpatient, other).
Generally, evidence exists in services research sup-
porting that (a) only modest agreement exists between
client ratings and provider ratings, and (b) client rat-
ings generally provide stronger predictors of outcome
than provider ratings (Fenton et al., 2001; Gerstein et
al., 1997). However, in this review, findings were
inconclusive in terms of the effect of rater perspective
on measured treatment outcome.

Similarly, when we examined possible moderat-
ing effects of treatment setting, we found the charac-
ter of the treatment setting made little difference in the
predictive capacity of client-provider relationship.
Similar to rater perspective, the effect of treatment
setting has received previous scrutiny as a possible
predictor of outcome in the three literature domains. It
was beyond the scope of this review to explicitly code
whether research was carried out in voluntary or
involuntary settings. However, studies from the sub-
stance abuse and child welfare domains have provided
some evidence that settings likely to be involuntary
(e.g., residential substance abuse treatment or child
welfare interventions in which the outcome of interest
is family visitation or return home) were less likely to
find an association between the client-provider rela-
tionship and outcome. Further, findings from the sub-
stance abuse treatment domain indicated that the cli-
ent-provider relationship has less effect on outcome if
interventions are medication-based. Such findings add
to the possibility that external constraints in the setting
(such as court mandates, locked facilities, or pharma-
caceuticals) may reduce the capacity of the client-pro-
der relationship to influence outcome. Overall, the
small number of studies in this review and the vari-
ability of measures used hamper our capacity to draw
firm conclusions. However, the lack of dramatic shifts
in the the client-provider relationship’s associations
with outcomes across different raters and settings
lends support to the idea that neither client-provider
perspective nor treatment setting is a powerful mod-
ernating variable for the association between the client-
provider relationship and outcome.

As we consider what we learn from this system-
atic review, it is important to keep in mind the limita-
tions. This systematic review is based on a synthesis
of research results that met uniformly applied inclu-
sion criteria across services research in three social
service sectors. By including published research that
met multiple and diverse search terms included in
Table 1, we have collected and summarized studies of
diverse adult client populations, presenting problems
and intervention strategies. Studies were coded and
evaluated according to a conceptual framework that
focused on client-provider relationship, intermediate
outcomes, ultimate outcomes and two moderating
variables as they were defined and coded across the
three domains. The advantage of this approach is that
it extends knowledge beyond psychotherapy settings
(where the outcome of interest is most typically psy-
chological functioning) to social service settings
(where outcomes of interest include social and eco-


nomic functioning). One disadvantage or limitation of
study selection procedures is that the studies include
diverse populations, problems and intervention types
that are left uncontrolled in the analysis. An additional
disadvantage of study selection procedures is that the
inclusion of only published studies may introduce a
bias against including studies where results support
the null hypothesis.

A further limitation of our selection criteria is that
we did not limit ourselves to studies in which we
could extract a quantitative estimate of the relation
between the client-provider relationship and outcome.
As a result, our quantitative analysis was limited to a
count of the number of statistically significant associ-
ations between the client-provider relationship and
outcome under specific conditions. Although meta-
analyses based on quantitative estimates with controls
for relevant factors, such as sample size of study,
would be desirable, and should be conducted in the future, this review makes a contribution by identifying important conceptual and definitional issues that will need to be addressed in future systematic reviews and meta-analyses.

A final limitation of this review is that only two moderating variables were coded and evaluated in terms of their influence on the consistency of the relationship between the client-provider relationship and outcome. A number of other moderating variables have been evaluated in the psychotherapy literature. For example, in the Horvath et al. (2011) meta-analysis, categorical moderators of the alliance-outcome relation evaluated included the type of alliance measure (CALPAS, HAq, VPPS, WAI), rater perspective (client, therapist, observer), time of assessment (early, mid, late, averaged), and the type of outcome (Beck’s Depression Inventory, Symptom Checklist, dropout). Evaluating these moderators, as well as several others, would be useful in social service settings. For example, it would be useful for future studies to focus on whether the strength of the client-provider-outcome relation in social service settings is affected by (a) whether the intervention has been through all the developmental steps necessary to develop a formal protocol or manual, (b) extent of fidelity to treatment protocol, (c) extent of demographic and educational differences between clients and providers, and (d) education type and level of provider.

Last, findings from this research point to one additional moderator whose effects should be evaluated in social service settings. Although this review indicated that the client-provider relationship’s association with outcome did not vary across three categories of setting (when loosely defined as inpatient, outpatient and other), some evidence from the review indicated some setting characteristics which were not included in this systematic review, specifically, whether programs were mandated or involuntary. might affect this relationship. Given that the voluntary or involuntary nature of services is a key consideration in the delivery of social services, this characteristic of settings should be coded and analyzed in future systematic reviews.

In addition to what we have learned about gaps in our knowledge and promising directions for future research, we observed that differences across the service systems appear to be explained more by the maturity of services research in a service sector than by substantive differences in the client-provider relationship. Client-provider relationship has been most extensively studied as a service component in mental health services research and least extensively studied in child welfare. Most measures of the client-

provider relationship have developed in the mental health area and primarily in reference to psychotherapy clients. These measures, including the WAI and the HAq, have been used in the substance abuse and child welfare sectors. Services research in mental health and substance abuse sectors also focuses on outcome and effectiveness studies, which are more prevalent in those sectors than in child welfare; as a result, outcome measures are more developed in those two fields. Research into the active components of treatment in child welfare is relatively new, so few studies were available for our review. Further, the measures used in existing studies are of limited validity and reliability. Treatment process research is more mature as a field of inquiry in substance abuse and mental health. As a result, those sectors yielded more studies that were relevant, and the measures used were more developed. Therefore, we have less confidence in conclusions about the client-provider relationship’s effects on intermediate and ultimate outcomes in child welfare than in conclusions on effects in the two other service systems.

Over the last 20 years, it increasingly has been assumed that social workers, psychologists, counselors, nurses, and physicians, and in fact all health and social service providers, will provide evidence-based treatments as a matter of professional practice. In other words, the predominant assumption is that professionals will provide treatments shown through controlled clinical trials to be effective. Although substantial progress has been made in the development, evaluation, dissemination, and implementation of these practices, much work remains to be done. Over the same period, research has recognized that the beneficial effects of empirically based practices can result as much from factors involved in all interventions as from specific interventions (Lambert & Barley, 2002). Thus, social services research increasingly seeks to go beyond treatment technology, identifying active elements that affect outcome and that are common to all interventions. This review reveals the client-provider relationship to be an active component of care and consistently connected with outcome across three service sectors. The findings point to the need to further refine conceptualization and measurement of client-provider relationship as well as outcomes, particularly those in child welfare, where services research is less developed. In sum, findings from this systematic review suggest that evidence-based social services could be enhanced if delivered in the context of a positive client-provider relationship. The translation of evidence into real-world practice will develop more effectively with increased focus on this important element in service delivery and therapeutic change.
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