

Meta-analysis of therapeutic relationship variables in youth and family therapy: The evidence for different relationship variables in the child and adolescent treatment outcome literature

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Abstract

This meta-analysis examines associations between therapeutic relationship variables, and the extent to which they account for variability in treatment outcomes, in 49 youth treatment studies. Correlations between therapeutic relationship variables ranged from modest to strong. Among the best predictors of youth outcomes were counselor interpersonal skills, therapist direct influence skills, youth willingness to participate in treatment, parent willingness to participate in treatment, youth participation in treatment, and parent participation in treatment. Adequacy of current approaches to conceptualizing and measuring therapeutic relationship variables, such as the therapeutic alliance, in youth and family therapy is discussed. This paper represents the most comprehensive analysis of therapeutic relationship constructs in the youth treatment literature.

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Since 1995, there has been an increasing emphasis on identification and dissemination of empirically supported treatments (ESTs)—therapeutic interventions that work best for specific mental health problems. The most notable publications representative of this movement were produced by Division 12 of the American Psychological Association (APA). Based on an exhaustive review of the adult treatment outcome literature, the Division 12 Task Force on Promotion and Dissemination of Psychological Procedures produced lists of treatments that were determined to have sufficient empirical evidence demonstrating their efficacy and/or effectiveness for particular psychological disorders (Chambless, 1996; Chambless & Hollon, 1998). More recently, lists of ESTs also were produced that included the youth treatment field (Burns, Hoagwood, & Mrazek, 1999; Chambless & Ollendick, 2001; Chorpita et al., 2002; Lonigan, Elbert, & Johnson, 1998).

Although this shift towards evidence-based practice may be beneficial for the mental health field, the EST movement has largely ignored more universal aspects of the therapeutic process that may be of even greater

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importance to treatment outcomes. As Lambert and Barley (2002) noted, common process factors¹ reportedly account for 30% of the variance in adult treatment outcomes, above and beyond the 15% of variance accounted for by specific therapeutic techniques. Furthermore, empirical research suggests that one common process factor, the therapeutic alliance, is among the most robust predictors of treatment outcomes for both adult and youth clients (Horvath & Bedi, 2002; Shirk & Karver, 2003).

Recognizing the need for more research on therapeutic relationship variables, Division 29 of APA formed the Task Force on Empirically Supported Therapy Relationships to determine which relationship variables are evidence-based (Norcross, 2002). This Task Force concluded that demonstrably effective therapeutic relationship variables in *adult* treatment were goal consensus and collaboration, the therapeutic alliance, cohesion in group psychotherapy, and therapist empathy. In addition, several other relationship variables were identified to be promising and probably effective components of the therapeutic process in adult treatment.

The Task Force's omission of research from the youth treatment field represents a major limitation of their work. It has been suggested that therapeutic relationship variables may be equally, if not more, critical in youth and family therapy, as child and adolescent clients typically are not self-referred and often enter into treatment unaware of their problems, in conflict with their parents, and/or resistant to change (DiGiuseppe, Linscott, & Jilton, 1996; Shirk & Karver, 2003). It follows that developing strong therapeutic relationships with young clients and/or their family members may facilitate engagement and lessen resistance to treatment by providing a stable, accepting and supportive context within which therapy may take place. In fact, researchers and clinicians have considered the importance of these variables in youth mental health treatment dating to the 1960s (e.g., Hansen, Zimpfer, & Easterling, 1967*; Hartley, 1969; Myrick, 1969). Research in this area remained sparse until the late 1990s, when the quantity of research on therapeutic relationship variables grew significantly in the youth mental health literature. Shirk and Karver's (2003) meta-analysis of this literature provides preliminary evidence that therapeutic relationship variables are moderately strong predictors of treatment outcomes for children and adolescents.

Another significant limitation of the Division 29 Task Force's report is that all of the studied relationship variables were presented in isolation, without a conceptual model or theoretical framework to guide synthesis of the data and further understanding of how therapy works. In response, Karver, Handelsman, Fields, and Bickman (2005) recently presented a model that depicts the hypothetical links between therapist and client pretreatment variables, therapist behaviors such as self-disclosure, interpersonal skills, and direct influence behaviors, client emotional, cognitive, and behavioral reactions to the therapist and therapy and clinical outcomes.

The primary objectives of the present meta-analysis were to determine the overall strength of associations between specific therapeutic relationship variables and youth clinical outcomes and the existing evidence for the therapeutic process model proposed by Karver et al. (2005). Consequently, all of the available empirical research on therapeutic relationship variables in the child and adolescent treatment literature was collected, coded, and evaluated using meta-analytical procedures. It should be noted that this article focuses exclusively on post-intake therapeutic relationship variables (i.e., therapeutic relationship variables measured after treatment has begun). See Dew and Bickman (2005) for a review of the empirical research on pretreatment common process factors in youth treatment.

1. Method

To obtain relevant sources for this paper, a literature review of 29 constructs² (alliance, empathy, goal consensus, collaboration, resistance, therapy relationship, positive regard, congruence, rupture/impasses and repair, self-disclosure, countertransference, relational interpretations, expectations and preferences, assimilation, attachment, engagement, treatment induction, openness, bond, comfort, cooperation, treatment difficulty, treatment involvement, willingness, participation, treatment transactions, warmth, trust, therapy process) associated with the therapeutic relationship was conducted using the PsychInfo database (years 1870–2003), publication alerts from Ingenta (2003–2004), and reference sections of collected articles. In addition, the authors of pertinent articles were individually searched in PsychInfo to determine if they had published additional research of relevance to the present review.

¹ Lambert and Ogles (2004) point out and attempt to clarify the confusion in what is a common process factor. For clarity, we restate here that all therapeutic relationship variables are common process factors but all common process factors are not therapeutic relationship variables. This paper emphasizes therapeutic relationship variables as did the Division 29 Task Force.

² The choice of constructs was guided by an attempt to replicate Norcross (2002) using the youth treatment literature.

1.1. Inclusion criteria

Studies were included in this review if they (a) examined individual, family and/or parent treatment(s) delivered to or for clients under the age of 18 years; (b) were empirical; (c) were clinical, rather than analogue; (d) included one or more quantitative process measure(s) given sometime after the first session; (e) included one or more measure(s) of child/adolescent treatment outcome; (f) were published in a journal or available as a dissertation; and (g) were written in English. Out of the 360 studies initially collected, 49 studies (an additional 12 studies were collected that examined multiple therapeutic relationship variables but did not relate them to outcome) met all of these criteria and, therefore, were included in the analyses.

1.2. Construct domains

In reviewing the literature, it became apparent that researchers have used multiple terms to represent identical or overlapping relationship constructs (e.g., client participation, client effort, client on-task behavior, etc.). Due to this, 44 constructs were identified in our search. After carefully examining how each construct was defined and measured, three of the authors sorted the 44 constructs into what each felt was the appropriate construct domain³. Reliability of the sorting was high ($K=0.66$). For the few cases of coder disagreement, the constructs in question were discussed by the authors and ultimately categorized based on group consensus. Refer to Karver et al. (2005) for descriptions and histories of the various construct domains.

1.3. Coding of potential moderators

All 49 studies were coded independently by three of the authors. Interrater agreement was assessed for age of client sample ($K=0.83$), referral problem ($K=0.85$), treatment type ($K=0.90$), and time of measurement of the process variable ($K=0.92$). The authors intended to examine these characteristics as potential moderators of the process to outcome relationship as was done in Shirk and Karver (2003), but there were too few studies within each construct domain to provide adequate power for separate analyses. When all construct domains were combined, none of the four characteristics were significant moderators of the overall process-to-outcome relationship.

1.4. Meta-analytic procedures

Constructs were assessed using meta-analytic procedures similar to those described in Shirk and Karver (2003). In all cases, the product-moment correlation coefficient r was converted to its Fisher's Z equivalent, to aid in nonbiased estimation of effect size. For those studies in which process-to-outcome findings were either omitted or only reported as statistically nonsignificant, attempts were made to contact the original authors. Unfortunately, in many cases the data was no longer available, and thus a conservative r of 0 was assigned. In order to calculate the overall effect size across studies for a given construct domain, the results from each study were weighted by sample size. When a minimum of six studies within a given construct domain was not met (the same standard used by Beutler et al., 2004), results were viewed as having questionable generalizability. Effect size values were interpreted based on Cohen's (1992) criteria.

2. Results

A total of 49 studies was included in this meta-analysis (18 studies of Behavioral or Cognitive-Behavioral approaches, 16 of Treatment as Usual in the community, 8 of some form of Family Therapy, 4 of Psychodynamic approaches, and 1 of play therapy). Across all construct domains, the process-to-outcome weighted effect size was 0.17. Initially, this seemed surprisingly low. Upon closer examination, however, it was determined that one study was

³ Sorting was to organize similar constructs into one inclusive construct domain. An exception was made for similar constructs that the study authors explicitly identified as being a unique construct. Thus, the therapeutic alliance construct was not combined with the therapeutic relationship construct despite the obvious definitional overlap.

disproportionately impacting the results. Specifically, the Littell (2001)* study had a sample size that comprised 40% of our total sample across studies and only had an effect size of 0.03. Further analyses revealed that the overall process-to-outcome effect size without weighting was 0.28 (S.D.=0.24) and the weighted effect size excluding the Littell study was 0.26. In addition, the effect sizes calculated in this review may be underestimates, as a conservative value of zero was assigned whenever specific process-to-outcome data were reported as a nonsignificant relationship and the data was unavailable (this was done for 58 process to outcome correlations). Overall, results of the current meta-analysis are consistent with the moderate process to outcome relationship reported by Shirk and Karver (2003). Shirk and Karver (2003) was more narrowly focused on constructs called therapy alliance or constructs similar to the therapy alliance construct. This paper reports on a wider variety of therapy relationship constructs (see Table 1) and provides process to outcome and process to process relationships for *each* specific construct (Shirk and Karver only reported an overall effect size across all therapy relationship constructs). The construct domains reviewed in the subsequent sections cover the therapy relationship from the behaviors of the therapist toward the client to the client reactions toward the therapist. Counselor interpersonal skills are most typically represented by the facilitative conditions of empathy, warmth, and genuineness (Cormier & Nurius, 2003). Therapist self-disclosure is defined as whether therapists provide information about their thoughts, feelings, personal activities or experiences (Hill & Knox, 2002). Therapist direct influence skills are measures of directive therapist behavior such as active structuring of a session, providing a rationale for a treatment approach, giving specific instructions, etc. (Karver et al., 2005). Autonomy is a client's demonstration of self-direction in his/her relationship with the therapist (Taylor, Adelman, & Kaser-Boyd, 1986*). Affect toward the therapist is the emotional bond the client feels with the therapist (Karver et al., 2005). Willingness to participate in treatment is the client's (parent or youth) feelings of acceptability of treatment and desire/commitment to participate in therapy (Karver et al., 2005). Client participation in treatment is the client's (parent or youth) effort, involvement, collaboration, cooperation, and engagement in therapy or therapy homework tasks (Karver et al., 2005). The therapeutic relationship and the therapeutic alliance appear to be the same construct called by different names. These constructs consist of any or all of the following constructs: an emotional connection such as the affective bond with the therapist, a cognitive connection such as hopefulness about treatment or willingness to participate in treatment, and/or behavioral participation in treatment (Karver et al., 2005). The therapeutic alliance has been differentiated from the therapeutic relationship as a more mature form of the therapeutic relationship (Shirk & Saiz, 1992*).

2.1. Counselor interpersonal skills

Counselor interpersonal skills were examined in 19 treatment process studies, 16 of which included process-to-outcome data. Across all studies, counselor interpersonal skills were correlated 0.37 (S.D.=0.24) with various therapeutic process variables (i.e., treatment attendance, the therapeutic alliance, treatment engagement). Note that studies correlating multiple counselor interpersonal skills with one another (e.g., empathy with warmth or genuineness) were included in this process-to-process analysis.

The relationship between counselor interpersonal skills and youth outcomes varied widely across process-to-outcome studies, with effect sizes ranging from 0.06 to 1.32. The weighted mean effect size fell in the moderate range, at 0.35. This estimate is consistent with the effect size between therapist empathy and treatment outcome reported in the adult literature (Bohart, Elliot, Greenberg, & Watson, 2002).

2.2. Therapist self-disclosure

The only therapist self-disclosure study found in the children's treatment literature (Braswell, Kendall, Braith, Carey, & Vye, 1985*) resulted in no relationship between observational coding of this process construct domain and treatment outcome ($r = -0.09$). No therapist self-disclosure studies involving adolescents, parents, or families were found. Similarly, no studies examining clients' perceptions of therapist self-disclosure, or the relationship between therapist self-disclosure and other process variables, were found in the youth treatment literature. The adult treatment literature has not produced clear findings on therapist self-disclosure either (Hill & Knox, 2002). More research will be necessary in order for the role of therapist self-disclosure in youth treatment to be better understood.

Table 1
Summary of results

Construct domain	Measures	Weighted effect size	Average unweighted Z	p
Counselor interpersonal skills	The Barrett-Lennard Relationship Inventory The Carkhuff Empathy, Regard, Genuineness Scales The Truax Relationship Questionnaire The Counselor Rating Form The Empathic Understanding Scale The Parent Questionnaire Perception of Importance of Therapeutic Relationship (1 item) Therapist–patient rating scale—positive regard/interest scale Origin Climate Questionnaire (Trust dimension and warmth subscale) Role Construct Repertory Test (Understanding score) 16PF Personality Factor Questionnaire “How would you rate the therapist’s warmth toward the client in this session”—single item	0.35	0.36	0.000**
Therapist self-disclosure	Observational Coding System (based on frequency of behavior)	−0.09	−0.09	—
Therapist direct influence skills	Therapist–patient rating scale—competency/experience scale Therapist–patient rating scale—activity/direct guidance scale Psychotherapy process inventory—therapist directive support scale Unnamed observational coding system Single questions in separate studies	0.40	0.44	0.009**
Therapeutic relationship with the youth client	Mentor Quality measure The Four Relationship Questionnaire Child’s Perception of Therapeutic Relationship Client–Therapist Relationship Scale Client–Therapist Preference Rating Scale	0.37	0.21	0.086
Therapeutic alliance with the youth client	Penn Helping Alliance Questionnaire Penn Facilitative Behaviors Questionnaire Modified Working Alliance Inventory Treatment Alliance Scale Family Engagement Questionnaire Therapeutic Alliance Scale for Children Early Adolescent Alliance Scale Alliance Factor containing a Relationship with Interventionist measure and a Program Satisfaction measure Family Therapy Alliance Scale Therapeutic Alliance Difficulty Global Scale	0.21	0.23	0.001**
Affect toward therapist	Emotional Discomfort Scale of the Play Therapy Observation Instrument Affective Expression Rating Scale	0.21	0.21	0.001**
Youth client willingness to participate	Single questions in one study	0.27	0.27	—
Client autonomy	Origin Climate Questionnaire	0.15	0.15	—

Table 1 (continued)

Construct domain	Measures	Weighted effect size	Average unweighted Z	<i>p</i>
Youth client participation	Psychotherapy Process Inventory—client participation scale Menninger Collaboration Scale Percentage of assigned CBT homeworks completed (1 item) Unnamed observational coding system Child Involvement Rating Scale Vanderbilt Psychotherapy Processing Scales Treatment engagement (1 item) Therapist Behavior Rating Scale (1 item) Therapist Self-report Checklist (1 item) Child Prosocial and Aggressive Behaviors Checklist (cooperation with therapeutic activities factor) Therapist Ratings of client on task behavior Therapist and client ratings of client effort Patient Problems Scale (Inaccessibility Factor)	0.27	0.32	0.005**
Therapeutic relationship with the parent	Parent Evaluation Questionnaire Treatment Alliance Scale Parent Questionnaire (4 items) Family Engagement Questionnaire (Factors four and five) Therapeutic Alliance Scale for Children Family Therapy Alliance Scale Parent Involvement Scale Family Hospitalization Alliance Scale	0.11	0.19	0.049*
Parent willingness to participate	Parent Evaluation Inventory	0.31	0.31	0.032*
Parent participation	Barriers to Treatment Participation Scale 12 Page Service Summary Form (compliance factors) Family Problems in Involvement Scale Therapy Process Coding System Weekly Homework Ratings Questionnaire Therapist–Client Cohesion Scale Client involvement rating Client resistance code Unnamed parent involvement measure	0.05	0.26	0.026*
Therapeutic alliance with the family	Family Therapy Alliance Scale Purdue Family Therapy Satisfaction Scale Family Psychotherapy Alliance Scale	0.22	0.30	0.058

* $p < 0.05$.** $p < 0.01$.

2.3. Therapist direct influence skills

Therapist direct influence skills were examined in six process studies, five of which provided process-to-outcome data. Overall, therapist direct influence skills were correlated 0.19 (S.D.=0.31) with other therapeutic process variables. There was substantial variability across studies, as this construct appeared to have high correlations with treatment participation measures, but relatively low correlations with general therapeutic alliance measures.

The relationship between therapist direct influence skills and youth outcomes also varied widely across studies, with effect sizes ranging from 0.21 to 0.68. The weighted mean effect size for this construct fell in the moderate to almost large range, at 0.40. Interestingly, while the adult treatment literature also has reported a wide range of process-to-outcome effect sizes (−0.17 to 0.79), the weighted mean effect size between therapist direct influence skills and adult clinical outcomes is reportedly only 0.06 (Beutler et al., 2004).

2.4. *Therapeutic relationship with the youth client*

The therapeutic relationship with youth clients was examined in five process-to-outcome studies—two of which also provided process-to-process data—and two additional process-to-process studies that did not measure treatment outcomes. The average correlation between this construct and various other therapeutic process variables (i.e., therapist interpersonal skills, service utilization, treatment engagement, and ratings of session quality) was 0.45 (S.D.=0.25).

Across process-to-outcome studies, associations between the therapeutic relationship with youth clients and treatment outcomes were quite variable, with effect sizes ranging from 0.02 to 0.55. The weighted mean effect size fell in the moderate to almost large range, at 0.37. This effect size is larger than what has been reported in the adult treatment literature (Beutler et al., 2004). However, the present finding may be an over-estimate, given the small number of process-to-outcome studies used in calculating this effect size. Specific features of any one study could have inflated the overall result. In fact, the unweighted effect size for this construct was a more modest 0.21 (S.D.=0.21), which is not statistically significant. It is noteworthy that four of the five instruments used to measure the therapeutic relationship with youth clients included a therapeutic bond component. Unfortunately, there was no way to determine what impact this particular aspect of the therapeutic relationship had on youth treatment outcome.

2.5. *Therapeutic alliance with the youth client*

The therapeutic alliance with youth clients was examined in 14 treatment process studies, 10 of which provided process-to-outcome data. Across studies, the therapeutic alliance with youth clients was correlated 0.35 (S.D.=0.17) with various other therapeutic process variables (i.e., therapist empathy, the inverse of child hostility toward treatment staff, parent–therapist relationship, ratings of session impact, and child participation in treatment).

The relationship between the therapeutic alliance with youth clients and treatment outcomes varied widely across studies, with effect sizes ranging from 0.05 to 0.49. The weighted mean effect size fell in the small to moderate range, at 0.21, which is consistent with effect sizes reported in the adult treatment literature (Martin, Graske, and Davis, 2000). The present data suggest that the relationship between the therapeutic alliance with youth clients and treatment outcomes is highly generalizable, as it has been found across a wide variety of treatment settings (inpatient, outpatient, residential treatment centers, group homes, and in-home treatment) and treatment types (psychodynamic, behavioral, family systems, and treatment-as-usual in the community).

2.6. *Affect toward therapist*

Only one treatment process study examining youth affect toward the therapist was found in the child and adolescent literature. In this study, Berg (1999*) examined observer ratings of both positive and negative affect toward the therapist in relation to various therapeutic process variables and treatment outcomes, respectively. The average correlation (absolute value) between affect toward the therapist and other therapeutic process variables (i.e., various therapist behaviors, in session play disruption, emotional discomfort in session) was 0.30 (S.D.=0.26). More specifically, positive affect was positively related to therapist behaviors such as praise, while negative affect was inversely related to therapist behaviors such as limit setting. Affect toward the therapist had a small to moderate relationship with outcome in this one study ($r=0.21$). There were no studies that examined affect toward the therapist from the perspectives of clients, parents/family members, or therapists themselves.

2.7. *Youth willingness to participate in treatment*

Youth willingness to participate in treatment was explored in only one process study (Adelman, Boyd-Kaser, & Taylor, 1984*). In that study, this construct was examined in relation to several other therapeutic process variables (i.e., actual participation in treatment, sessions attended, progress half way through treatment, etc.) as well as treatment outcomes. The average process-to-process correlation was a conservative estimate of 0.23 (S.D.=0.22) as several relationships were only reported as nonsignificant. Youth willingness to participate was found to have a moderate relationship with outcome in this one study ($r=0.27$). Considering the magnitude of this effect size, it is surprising that this construct has not earned more attention in the youth treatment literature.

2.8. *Autonomy*

Autonomy was examined as a therapeutic relationship construct in only one study, conducted almost 20 years ago (Taylor et al., 1986*). In that study, the average correlation between autonomy and various other process variables (i.e., client participation in treatment) was 0.37 (S.D.=0.11).

Autonomy was found to have only a modest relationship with outcome ($r=0.15$). As such, it is not surprising that this construct has not been the subject of further research. However, the measure of autonomy used in that study was problematic. Instead of simply asking for clients' perceptions of their autonomy, the measure asked clients and therapists to report their perceptions of the therapists' *intentions* to provide autonomy. This was likely difficult for the youth to determine and, as one might expect, there was very poor agreement between clients and their therapists on this measure ($r=-0.125$).

2.9. *Youth participation in treatment*

Youth participation in treatment was examined in 13 studies, 3 of which provided only process-to-process data. Across all studies, youth participation was correlated 0.30 (S.D.=0.17) with various other therapeutic process variables (i.e., several different therapeutic alliance measures, ratings of therapist empathy, and ratings of therapist flexibility).

The relationship between youth participation and treatment outcomes varied widely across studies, with effect sizes ranging from 0.11 to 1.05. The weighted mean effect size fell in the moderate range, at 0.27. It is difficult to compare this finding to the adult literature, as the most recent review of this construct in adult treatment did not do a meta-analysis, but concluded that client participation in treatment has demonstrated a positive relationship with clinical outcomes in most adult treatment studies (Tryon & Winograd, 2002). On the one hand, present results support the generalizability of findings in youth treatment, as the relationship between youth participation and clinical outcomes has been found across a wide variety of treatment settings (e.g., inpatient, within schools, community outpatient, university-based treatment clinic, and in-home treatment) and treatment types (e.g., Psychodynamic, behavioral, cognitive-behavioral, family systems, and treatment as usual in the community). On the other hand, interpretation of the data is problematic in that numerous youth participation measures have been used in the youth treatment literature. Considering the wide range of effect sizes across the studies included in this review, it is possible that some variability may be due to the measures themselves. Furthermore, it reasons that the relationship between youth participation and outcomes may be significantly impacted by moderating variables, but there was inadequate power to conduct these analyses.

2.10. *Therapeutic relationship with parents*

The therapeutic relationship with parents was examined in 10 treatment process studies, 9 of which provided process-to-outcome data. Across all studies, the therapeutic relationship with parents was correlated 0.30 (S.D.=0.18) with various other therapeutic process variables (e.g., parental mental health efficacy, service utilization, the therapeutic alliance with the child, and family participation in treatment). Association between the therapeutic relationship with parents and youth outcomes varied widely across studies, with effect sizes ranging from -0.09 to 0.67. The weighted mean effect size was surprisingly modest, at only 0.11. Without weighting, the effect size increased to 0.19 (S.D.=0.24), as one study with an effect size of 0.05 had a sample size that comprised half of the total sample. This effect size is still considerably lower than one might expect, if one assumes that parents play an important role in child and adolescent treatment outcomes. It should be noted that seven of the studies involved non-behavioral treatments and four of those seven were unpublished dissertations. Study characteristics could have impacted the overall results, but there was insufficient power to conduct moderator analyses.

2.11. *Parent willingness to participate in treatment*

Parent willingness to participate in treatment was examined in four therapeutic process studies, two of which provided only process-to-process data. Across studies, parent willingness to participate was correlated 0.34 (S.D.=0.12) with various other therapeutic process variables (e.g., treatment acceptability, perceived barriers to

treatment, treatment dropout, and treatment participation). The relationship between parent willingness to participate in treatment and youth outcomes fell consistently in the moderate range in the two studies with outcome data, at 0.31 (S.D.=0.02).

2.12. Parent participation in treatment

Parent participation in treatment was examined in eight process studies—five provided process-to-process data—and six measured outcomes. Across studies, parent participation in treatment was correlated 0.33 (S.D.=0.20) with various other therapeutic process variables (e.g., parental treatment expectations and parent willingness to participate in treatment). The relationship between parent participation in treatment and youth outcomes varied widely across studies, with effect sizes ranging from 0.03 to 0.54. The weighted mean effect size was surprisingly small, at only 0.05, suggesting that this construct is not an important process variable. However, without weighting, the effect size was 0.26, as one study (Littell, 2001*) with an effect size of 0.03 had a sample size of 2191, which comprised 92% of the combined sample. It is likely that parent participation in youth treatment is important to outcomes, and the relationship was absent from this one large study due to specific characteristics of that treatment (family preservation services with frequent reporting of abuse). It should also be noted that all of the other five studies of parent participation involved behavioral or cognitive-behavioral treatment approaches. Another noticeable feature of these studies is that none included parents' ratings of their own participation in treatment.

2.13. Therapeutic alliance with the family

The therapeutic alliance with families was examined in five process studies—four included process-to-outcome data and only two included process-to-process data. In one study, the therapeutic alliance with families was found to be significantly correlated with treatment satisfaction at termination ($r=0.58$). In the other study, the therapeutic alliance with families was correlated 0.17 with treatment completion.

The relationship between the therapeutic alliance with families and youth outcomes varied widely across studies, with effect sizes ranging from 0.16 to 0.59. The weighted mean effect size was in the small to moderate range, at 0.22. It is noteworthy, however, that the unweighted mean effect size for this process-to-outcome relationship was 0.30 (S.D.=0.20). This suggests that, in the small sample of studies, one study had relatively more influence, thereby lowering the weighted mean effect size. Nonetheless, the unweighted effect size should be viewed with caution, as it failed to reach statistical significance ($p>0.05$). It should also be noted that this small sample of studies had several important limitations, including that three of the four studies were unpublished dissertations, the samples were overwhelming Caucasian, and levels of therapist experience were predominantly low.

3. Discussion

It has been suggested that therapeutic relationship variables play critical roles in the treatment process and, therefore, have a significant impact on clinical outcomes of children and adolescents. Understanding how specific aspects of the therapeutic relationship are related to youth outcomes may facilitate efforts to improve clinical training and develop more effective interventions for children and adolescents. The primary aim of the present review was to consolidate the empirical evidence on therapeutic relationship variables in the youth treatment literature in order to determine which relationship constructs have demonstrated significant associations with treatment outcomes. An additional aim of this study was to examine the empirical validity of the therapeutic process model proposed by Karver et al. (2005).

Overall, results of this meta-analysis, based on 49 independent studies, were consistent with the recent findings of Shirk and Karver (2003). However, going beyond Shirk and Karver (2003), the present analyses revealed that some therapeutic relationship variables have been more strongly related to outcomes than others. Therapist direct influence skills and the therapeutic relationship with the youth client had moderate to large relationships with treatment outcomes. Counselor interpersonal skills, parent willingness to participate in treatment, youth willingness to participate in treatment, client participation in treatment, and parent participation in treatment were all moderately related to treatment outcomes. The therapeutic alliance with the family, the therapeutic alliance with the youth client, affect toward the therapist, the therapeutic relationship with parents, and autonomy all demonstrated small to

moderate relationships with treatment outcomes. Lastly, therapist self-disclosure was found to have demonstrated no relationship with treatment outcomes.

These results suggest that certain therapist behaviors may have important implications for youth treatment outcomes. Not surprisingly, therapists' use of interpersonal skills (such as empathy, warmth, etc.) predicted positive treatment outcomes. This is consistent with the beliefs of Rogers (1957) and with Bohart et al.'s (2002) review of empathy in the adult treatment literature. Bohart et al. also added that, in practice, one would be unlikely to find a clinician high in empathy and not high in other interpersonal skill areas. Lambert and Ogles (2004) add that virtually all schools of therapy accept that variables such as empathy, positive regard, warmth, and genuineness are necessary for client progress in psychotherapy.

Interestingly, therapist direct influence skills also were prominent predictors of treatment outcome. Considering the measures that have been used for this construct, this finding is not surprising. It reasons that clients would have been responsive to therapists who presented information clearly and with an understandable rationale. This may contribute to a client perceiving the therapist as competent and, thus, worth working with. Providing a rationale for treatment to clients may also foster clients' positive expectancies regarding treatment effectiveness (Weinberger, 2002). It should be noted, however, that 80% of the studies on therapist direct influence skills included in this meta-analysis were from a cognitive/behavioral orientation, an orientation that typically emphasizes the need for therapists to clearly communicate a rationale for the treatment (e.g., Hembree, Rauch, & Foa, 2003; Mynors-Wallis, 2001; Soechting et al., 1998). Considering the mixed findings in the adult treatment literature (Beutler et al., 2004), more research on this construct is necessary with clinicians from other treatment orientations. Perhaps the importance of therapist direct influence skills depends on the type of treatment that is being delivered. Another area requiring further exploration is that of client resistance. In the adult literature, Beutler et al. (2004) found that client resistance was a moderator of the effect therapist directiveness has on outcomes. It reasons that resistance may be even more important in treating adolescents, as youth often do not want to be in treatment (Shirk & Russell, 1996). However, this has not been explored in the youth treatment literature.

Another interesting result was that parent willingness to participate in treatment, youth willingness to participate in treatment, youth participation in treatment, and parent participation in treatment were all moderately related to treatment outcome. That all of these somewhat related constructs would be linked to treatment outcomes is not surprising. A number of reviews in the adult treatment literature has found various indicators of client willingness to participate and actual participation in treatment to be predictive of positive treatment outcomes (Clarkin & Levy, 2004; Orlinsky, Ronnestad, & Willutzki, 2004; Tryon & Winograd, 2002). It reasons that participating in therapeutic tasks would lead to positive treatment outcomes if, in fact, those tasks are helpful (an important point made by EST researchers). That this same effect would be found for parent involvement in youth treatment should not be surprising. Parents have a significant impact on the lives of their children and thus if the parents are actively working in treatment, it is more likely that they will be making changes that will result in an environment more conducive to positive youth outcomes. Considering these findings, it is surprising that parent willingness to participate has not been the subject of further research. The construct has been studied more extensively as a pretreatment variable (see Dew & Bickman, 2005). More research on this construct is needed during treatment, especially outside of a university-based clinic, with parents from a variety of cultural backgrounds, and with parents of children experiencing a wide variety of referral problems.

On the other hand, our findings did not provide much support for affect toward the therapist or autonomy. However, these results were based upon only one study for each construct. Considering that the affect toward therapist construct is a typical component of most therapeutic alliance and therapeutic relationship measurement (e.g., Bordin, 1979; Safran & Muran, 2000), often referred to as the affective bond component, more research should be done to discover the importance of this construct. Perhaps it leads directly to treatment outcomes because the client just feels better around the therapist and thus feels more capable (Weinberger, 1995) or perhaps the positive feeling toward the therapist makes the client more willing to participate in treatment (Bohart, 2000) or perhaps it is not as important as other treatment processes relative to change in therapy. As for autonomy, it is notable that it had a moderately strong relationship with participation in treatment (which we know is related to treatment outcome). Perhaps, clients having a sense of independence in treatment motivates them to participate in treatment. In the adult rehabilitation literature, it has been suggested that increasing patient autonomy would lead to increased motivation to participate in treatment (Cardol, de Jong, & Ward, 2002). This also would fit with theories of intrinsic motivation, that is, that autonomy would lead to being intrinsically motivated, which leads to greater persistence toward behavioral change (Deci &

Ryan, 1987). Considering our finding and the minimal research that has been done, this seems an area worth further exploration in the child mental health treatment literature.

Two findings on the surface appeared rather puzzling. The therapeutic *relationship* with the youth had a moderate to large relationship with treatment outcome while the therapeutic *alliance* with the youth or family, or parent–therapist *relationship* only had a small to moderate relationship with the outcome. The question is raised as to why such a difference would exist relative to constructs that are seemingly quite alike. However, a closer examination of effect sizes with and without weighting suggests that occasionally individual studies with larger sample sizes were highly influential and for the most part, the overall results were equivalent for these constructs. That is, general therapeutic relationship/alliance measures (to youth, parents, or family members) appear to have a small to moderate relationship with treatment outcome. In fact, a comparison of unweighted effect sizes showed no significant differences between the four constructs, $F(3, 24) = 0.313$, $p = 0.816$. In addition, close examination of instruments and domains of instruments used to measure these constructs suggests that they are all measuring the same thing with authors just calling the construct an alliance or a therapeutic relationship based on individual preference. Most measures across all four areas had a bond or emotional connection, about half of all measures had an agreement on goals or tasks component (a cognitive connection component), and about half of all measures had a client participation component. Despite the commonality in what these instruments were measuring, there was huge variability in measures. For the most part, every study had its own measure. Depending on the quality of all of these measures, this could have introduced a great deal of variability in trying to understand these constructs.

Moreover, we suggest that questions should be raised about what is being measured when one measures a therapeutic relationship or alliance. At present, most of these measures appear to consist of several overlapping domains. The review of the research suggests an important take away message is that we do not know enough about the domains that make up these measures. It could be that separate constructs that occur at different points in the therapy process are all being included simultaneously in these general alliance and relationship measures. We suggest that perhaps treatment process researchers have made a mistake in making these general therapeutic alliance and relationship measures. It is possible that three separate constructs (emotional connection, cognitive connection, and behavioral participation) may occur at different points during treatment. Forcing these constructs together in these general measures may be resulting in loss of information about the process of therapy.

Although the quantity and quality of studies per construct needs to be improved, for the most part, the results from our meta-analysis suggest that the various relationship constructs are related in some manner to treatment outcomes. We looked at some of the relationships between constructs in order to examine whether there was any evidence that supported Karver et al.'s (2005) hypothesized model of relationship constructs affecting one another to eventually lead to treatment outcomes (such as therapist characteristics and behaviors influencing client's cognitive, affective, and behavioral reactions to the therapist and therapy and client's cognitive and affective reactions to the therapist and therapy influencing actual participation in treatment). Before summarizing the results, it should be noted that the data for relationships between constructs is even sparser than the relationship constructs to outcomes data. Again, we emphasize the need for more research testing links in the model. We did find a number of relationships consistent with the proposed model. Across several studies, various counselor interpersonal skills were found moderately related to therapeutic alliance or relationship measures. More specifically, counselor interpersonal skills in several studies were found moderately related to treatment attendance and client participation in treatment. This should not be surprising considering that Patterson and Forgatch (1985) 20 years ago found therapist facilitating and supportive interventions to be related to increased youth compliance with treatment. Barbera and Waldron (1994) found therapist supportive behaviors to be related to increased compliance of all family members attending treatment. Oetzel and Scherer (2003) state that therapist interpersonal skills such as empathy and genuineness are critical to engaging adolescent clients in therapy.

Interestingly, therapist direct influence skills were found to be moderately related to participation in treatment but inversely related to affect toward the therapist. In addition, therapist direct influence skills were found to have little relation to general therapeutic relationship measures. Perhaps these general relationship measures contain affect and participation constructs that cancel out one another's effects thus leading to no association with therapist direct influence skills. This is potentially more evidence for not combining constructs into general alliance or relationship measures.

Also, as hypothesized, client and parent willingness to participate in treatment were found to be moderately related to client and parent actual participation in treatment and treatment attendance. This is consistent with the model of

Drieschner, Lammers, and van der Staak (2004), which suggests that various factors contribute to a client's treatment motivation or willingness to participate in treatment and this leads to treatment engagement. That we did not find a perfect correlation is also explained by the Drieschner et al. (2004) model in that various limitations and barriers to volitional control such as the capabilities of the client can affect whether treatment engagement occurs. We would also add that treatment is a dynamic process that constantly changes such that events or therapist behaviors may occur that could disrupt the client's willingness to participate in the treatment.

3.1. Limitations and future studies

The research reported here has several limitations that should be considered. This meta-analysis provides some evidence supporting the hypothesized model; however, many aspects of the model lack any data or only had minimal data. At present there have not been studies looking at relationships between any of these constructs and therapist credibility or persuasiveness in the child mental health literature. There are insufficient studies examining therapist self-disclosure and there is no research looking at the relationship between counselor direct influence skills and counselor interpersonal skills—does use of one prevent the use of the other? We also note the lack of research on affect toward the therapist. Is this an important part of successful treatment? Perhaps it leads to willingness to participate in treatment or perhaps it is not necessary? Further research should attempt to answer these questions.

Another limitation is that our meta-analysis includes the problems of the literature that it summarizes. For example, 42% of the measures were administered at the same time as outcome measures that were given. There are several possible problems from this (see Shirk & Karver, 2003). One is that the subjects completing the measures were completing them based on memory of the process construct as opposed to rating at the time of occurrence of the construct. In addition, completing the measures at the same time as the outcome measures means that the process ratings could have been influenced by the outcome of treatment. An additional limitation is that 25% of the studies were never published in peer-reviewed journals. On the one hand, it is less likely that our meta-analysis suffers from a file drawer problem of not including unpublished studies with differing results. However, this does mean that a substantial portion of the studies reviewed never passed through the peer review process. It is possible that many lower quality studies may be included in which findings may be more questionable. Another notable issue is that in 57% of the studies, process and outcome measures solely were completed by the same informant (see Shirk & Karver, 2003). The obvious problem from this is that process-to-outcome relationship may thus be inflated due to the shared variance in who is completing the measures.

An additional area needing research is that of developmental differences in treatment processes. For example, perhaps for child cases, parental involvement in treatment will be found very important for treatment success whereas Kendall and Choudhury (2003) suggest that parental involvement in adolescent cases may be harmful for treatment. Along the same lines, autonomy in treatment may be very important for adolescent clients who are seeking autonomy from their parents whereas this may be an inappropriate process with child clients who may be more dependent on a therapist assuming more of a directive, parent type role.

Another problem with the research is the frequent simultaneous measurement of process variables. This does not allow for the means to test mediational relationships. To best test the hypothesized mediational model from Karver et al. (2005) will necessitate studies including sets of process variables measured at *separate times* so that some idea of causality can be considered and tested. In addition, by including sets of process variables in the same study, one would be able to determine which process variables produce the best independent estimates of treatment outcome and which process variables should be discarded from further research. Short term changes in symptoms throughout treatment also should be assessed to test whether symptom change drives changes in relationship constructs or whether changes in relationship constructs drive changes in symptoms. Some evidence has been found supporting the idea that relationship construct change does drive symptom change (Klein et al., 2003). Overall, there is a need in this treatment literature for studies of changes in therapy relationship constructs and outcome measures that enable examining the process of treatment as dynamic.

Other limitations to the literature include excessive variability in how constructs were measured (i.e., there were a multitude of instruments used to measure the therapeutic alliance with youths), on some constructs inadequate assessment of varying perspectives, frequent use of one item measures which would be unlikely to adequately assess the construct (i.e., single items were used to measure counselor interpersonal skills in five studies. Nevertheless, the findings did not reveal a distinctive pattern of effect sizes based on number of items used to measure this construct.),

inconsistency as to which type of outcome measures were used in studies (i.e., for direct influence, treatment outcomes were based solely on global ratings of improvement or impairment while other process constructs were related to symptom change), and many constructs not having enough studies completed in order to form strong conclusions or to be able to test for the effects of content or methodological moderators. Considering these concerns, more studies are needed to be done in order to make sure, through moderator analyses, that the results are not artifacts of methodological issues such as when process measures were given, which measure of a process construct was used, who completed the measures, what outcome measure was used, and inadequate measurement of constructs. On the positive side, moderator analyses across the entire sample did not find any significant effects for any moderators, but it is possible that effects within constructs could have been cancelled out across constructs. A limitation to generalizability did exist within some constructs—some constructs were not studied outside of narrow contexts such as only outpatient treatment, only university-based clinics, or only behavioral treatments. On the other hand, it is a strength that many constructs were studied across a wide variety of mental health settings (e.g., inpatient, outpatient, residential treatment, in-home treatment, etc.) and across a wide variety of treatments (behavioral, cognitive-behavioral, psychodynamic, “treatment as usual in the community”, etc.).

In addition, as the first attempt to separate and empirically examine relationship constructs in the youth treatment literature, this article offers important information about the robustness of effects across a wide variety of therapeutic relationship constructs. Thus, our investigation reveals the general strengths and weaknesses of therapeutic relationship variables research involving youth, parents, and families. This is important because these trends can be hard to determine from looking at a collection of individual studies. Hopefully this study will inspire new and improved research of therapeutic relationship constructs in the youth mental health field.

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