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# Provider Cultural Competency, Client Satisfaction, and Engagement in Home-Based Programs to Treat Child Abuse and Neglect

Amy Damashek<sup>1</sup>, David Bard<sup>2</sup>, and Debra Hecht<sup>2</sup>

## Abstract

Home-based programs to treat child abuse and neglect suffer from high rates of attrition, limiting their impact. Thus, research is needed to identify factors related to client engagement. Using data ( $N = 1,305$ ) from a statewide family preservation program, this study investigated the role of program type (i.e., SafeCare<sup>®</sup> [SC] vs. Services as Usual [SAU]) and client perceived provider cultural competence on client satisfaction and engagement with services. Families in SC completed more treatment goals than those in SAU. In addition, provider cultural competence and client satisfaction were higher in SC than in SAU. Higher provider cultural competence was associated with higher goal attainment and satisfaction, and these effects partially mediated the service program differences. The effects of service type and cultural competence on goal attainment and satisfaction varied somewhat by client ethnicity. Findings suggest that clients receiving manualized programs for child maltreatment may be more likely to meet their goals and may perceive such programs to be culturally appropriate and satisfactory.

## Keywords

cultural/ethnic issues, treatment, home-based services

Approximately 9.3 out of 1,000 children in the United States were victims of child maltreatment in the year 2009 (U.S. Department of Health and Human Services [USDHHS], 2010). Many studies have documented the deleterious physical, emotional, behavioral, social, and educational outcomes associated with maltreatment (Anda et al., 2006; Boney-McCoy & Finkelhor, 1996; Dubner & Motta, 1999; Eckenrode, Laird, & Doris, 1993; Erickson & Egeland, 2002; Fantuzzo, 1990; Kendall-Tackett, 2003; Mannarino & Cohen, 1996; Rogosch, Cicchetti, & Abre, 1995; Widom, 1999; Widom, Schuck, & White, 2006). In an effort to reduce such negative outcomes, programs to treat or prevent child abuse and neglect have been disseminated throughout the United States. Many of these programs are delivered in the home to reduce barriers to treatment engagement (e.g., lack of transportation or child care); however, home-based programs still suffer from high rates of attrition (up to 67%; Duggan et al., 2000; Gomby, Culross, & Behrman, 1999; McGuigan, Katzev, & Pratt, 2003; Navaie-Waliser et al., 2000). Such high rates of attrition may limit the impact of home-based child maltreatment programs; thus, it is important for researchers to identify factors that are related to client engagement in home-based programs to increase their effectiveness.

With the exception of a few (Damashek, Doughty, Silovsky, & Ware, 2011; Daro, McCurdy, Falconnier, & Stojanovic, 2003; Josten et al., 2002; McCurdy et al., 2006; McGuigan et al., 2003; Silovsky et al., 2011), most studies examining factors related to

engagement in home-based services have focused on client demographic and risk variables (e.g., child's low-birth weight or disability, caregiver's mental health problems, caregiver's attachment style, family stress; Ammerman et al., 2006; Daro et al., 2003; Duggan et al., 2000; Josten et al., 2002; McFarlane et al., 2010; McGuigan et al., 2003; Moore et al., 2005; Navaie-Waliser et al., 2000; Raikes et al., 2006). However, the Integrated Theory of Participant Involvement (ITPI; McCurdy & Daro, 2001) suggests that program (e.g., funding and supervisory caseload) and provider (e.g., cultural competence and training) characteristics as well as client perceptions of services (e.g., attitude toward services and subjective program experience) are important predictors of engagement in services. Moreover, empirical studies have found that several program factors are related to client engagement in home-based services. For example, Damashek, Doughty, Silovsky, and Ware (2011) found higher levels of goal completion in a manualized child

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maltreatment prevention service (SafeCare [SC]+) compared to a nonmanualized approach. Other researchers have found that higher levels of provider supervision (McGuigan et al., 2003), client-provider ethnic match (Daro et al., 2003), and higher provider attachment anxiety (McFarlane et al., 2010) are related to client engagement in home-based services.

The ITPI also suggests that provider cultural competence is an important predictor of client engagement in services (McCurdy & Daro, 2001). The ITPI model conceptualizes cultural competence as a provider variable; however, it may also be construed as a client perception variable if measured from the client's perspective. Cultural competence has been defined in many different ways and is typically defined as a multidimensional construct (Ridley, Mendoza, Kanitz, Angermeier, & Zenk, 1994; Sue, 2001b). For example, Sue's (2001a) definition contains three components, including attitudes/beliefs about one's own personal values, knowledge about the worldviews of other cultures, and skills in providing culturally appropriate services. Switzer, Scholle, Johnson, and Kelleher (1998) found evidence for a four-factor model of culturally competent delivery of mental health services, including respect for cultural differences, providing easy access to care for clients, engagement of the family and community in treatment, and the client's perceived ethnic match with the therapist. Despite these findings, researchers often use a single variable to measure cultural competence.

Overall, provider cultural competence has been found to be related to greater client satisfaction (Constantine, 2002; Fuertes et al., 2006) as well as greater engagement in clinic-based services (Wade & Bernstein, 1991), which suggests that client satisfaction and client engagement may be enhanced by focusing on provider cultural competence. However, little research has examined the relation of clients' perceptions of provider cultural competence to clients' satisfaction or engagement in home-based services. Examining factors such as perceived cultural competence might be particularly important in home-based services because the potential for cultural misunderstandings may be greater when practitioners are meeting with clients in their homes. Such perceptions may also carry greater importance when attempting to change culturally bound behavior, such as parenting and house-keeping practices (Caughy & Franzini, 2005; Rudy & Grusec, 2006; Varela et al., 2004), particularly when clients and practitioners do not share common cultural backgrounds.

Only a few studies have examined the relation of provider cultural competence to client engagement in home-based services. A recent review of eight Healthy Families programs found that project staff reported that provider cultural competence was an important aspect of client engagement; yet, the relation between perceived cultural competency and client engagement was not formally assessed (Brand, Walker, Hargreaves, & Rosenbach, 2010). Damashek et al (2011), on the other hand, did formally assess client perceived provider cultural competence and found no significant association with service completion. However, more research is needed to determine the role of provider cultural competence in client engagement and satisfaction with services.

Client perceptions of services (e.g., satisfaction with services and perception of provider cultural competence) may also be particularly important to examine in manualized evidence-based protocols. Some mental health providers have raised concerns that structured evidence-based approaches are too rigid and cannot be adjusted to meet the individual needs of their clients (Addis & Krasnow, 2000; Addis, Wade, & Hatgis, 1999). However, a recent study found that participants in a manualized child maltreatment prevention service reported higher levels of client satisfaction and cultural competence than did families in the nonmanualized group (Damashek et al., 2011). Further examination of client satisfaction and perceptions of cultural competence in evidence-based treatments would provide information about whether manualized home-based child maltreatment prevention and treatment services can be provided in a way that is perceived as acceptable to clients.

In summary, research is needed on factors related to client engagement in home-based child maltreatment services to identify ways to reduce attrition from such programs. Much research has focused on client demographic and risk variables, but little research has focused on program factors and clients' perceptions of services (i.e., satisfaction with services and provider cultural competence). In addition, research is needed on client perceptions of manualized treatments to address concerns about clients' reactions to structured protocols. Finally, research examining the role of provider cultural competence in client satisfaction and engagement in services is needed to determine whether improvements in provider cultural competence may positively impact client satisfaction and goal attainment.

The present study sought to address these gaps in the literature by examining the relations between service type, client satisfaction, perceived provider cultural competence, and goal completion in home-based services. The effect of service type was examined by comparing a manualized evidence-based treatment for child neglect (SC) to Services as Usual (SAU) in a child welfare population. Based on previous research, it is hypothesized that (a) clients in SC will meet more of their treatment goals than those in SAU and will report levels of client satisfaction and perceived provider cultural competence that are higher than or equal to those in SAU; (b) higher perceived provider cultural competence will predict increased client satisfaction and goal completion; (c) the relationship between (i) service type and client satisfaction and (ii) service type and goal completion will be partially mediated by perceived provider cultural competence; and finally, (d) client satisfaction will be positively related to client goal completion. Exploratory analyses of differences in findings from goals 1-4 across Caucasian and non-Caucasian families were also examined.

## Method

### *Participants and Procedures*

Participants were 1,305 caregivers of children receiving child welfare services, who were enrolled in a large site-randomized

clinical trial examining the effectiveness of SC versus SAU in a statewide family preservation program. The larger study was designed to be a cluster-randomized  $2 \times 2$  trial with roughly half of the state assigned to receive SC (48%) as part of their services and half to receive SAU only (52%). The SC modules were embedded within the SAU services and were delivered by the same provider. The second factor of the design involved ongoing live coaching (OC) versus no coaching of providers. Coaches were specially trained staff persons who were designated to help the providers deliver services more effectively. They accompanied providers on home visits and gave them direct feedback about their therapy skills (e.g., rapport building, problem solving, and appropriate delivery of SC modules). Coaching condition differences (main and interactions with service type) effects on outcomes were investigated and are reported below but were not hypothesized to exhibit strong predictive influence. More information on aspects of the design specific to the OC factor can be found elsewhere (Chaffin, Bard, Bigfoot, & Maher, 2011; Chaffin, Hecht, Bard, Silovsky, & Beasley, 2011).

**Treatment models.** SC is a manualized, empirically supported home visitation model designed to treat child abuse and neglect for children ages 0–5 (Lutzker & Bigelow, 2002); however, in the present study, the treatment was delivered to parents of children ages 0–12. The model has been studied extensively and has been found to reduce child maltreatment recidivism when compared to other services (Gershater-Molko, Lutzker, & Wesch, 2002; Lutzker & Rice, 1987; Wesch & Lutzker, 1991). The model has also been found to increase positive parenting skills (i.e., responding appropriately to child illness, engaging in positive interactions with young children, and reducing home hazards; Gershater-Molko, Lutzker, & Wesch, 2003; Lutzker, Bigelow, Doctor, & Kessler, 1998; Lutzker, Tymchuk, & Bigelow, 2001; Tertinger, Greene, & Lutzker, 1984). SC uses behavioral intervention techniques (e.g., ongoing measurement of observable behaviors, skill modeling, direct skill practice with feedback, and training skills to criterion) and includes three modules: child and infant health, home safety, and parent and child bonding.

In SAU, providers identified the specific needs of each family and provided education related to that problem area (e.g., child discipline) and/or linked the family to other services in the community. Areas of need often included parenting, employment and housing aid, budgeting, and social support. Both the SC and SAU providers had discretionary funds of up to \$600 per family available to assist with concrete needs. SAU providers served families with children ages 0–12. In both conditions, contact between the family and the home visitor was intensive, with visits occurring for about 2 hr a week until the case goals were met, or for 6 months, whichever occurred first.

**Recruitment.** All families that were enrolled in the statewide family preservation program and met eligibility criteria (e.g., at least one child under the age of 12, referral not primarily for

sexual abuse, English was their primary language) were approached for participation in the study. An independent data collector recruited the families rather than the service providers. The families were notified that their data would be kept confidential and would not be shared with their service providers or the Department of Human Services.

**Data collection.** Parent self-report data regarding perception of services and client demographics were collected in client homes by research staff (and not the service providers). Data regarding client goal completion were reported by treatment providers at the end of treatment. Self-report demographic and client perception (i.e., perceived provider cultural competence and client satisfaction) data were captured by a voice-enhanced computer-assisted self-interview (CAI) after the end of treatment. CAI items were presented to participants on a notebook computer screen and simultaneously presented verbally over headphones connected to the computer. This method was used because participants are generally more willing to disclose sensitive or personal information using CAI methods (Dwight & Feigelson, 2000). In addition, the audio component makes it easier for individuals with limited literacy to respond to the items. When there was more than one parent or caretaker in the family, the children's primary caretaker who participated in services was selected for assessment. If the family could not identify which caretaker was primary, one was selected randomly. The present study procedures were approved by the Institutional Review Board of the University of Oklahoma Health Sciences Center.

## Measures

Participants in the larger study completed pretest assessment measures (e.g., demographic questionnaire) prior to participating in treatment and at Wave 2; Wave 2 occurred post treatment. There was some variability in the time at which Wave 2 assessments were conducted, but the average was 7.5 months after baseline, which was typically within 3 months of the closing date of services. Only participants who completed a second wave of self-report interviews were included in the present investigation. The second-wave interview was the only data collection wave to administer the cultural competence and satisfaction measures described below. Goal completion was recorded by treatment providers at the end of treatment.

**Treatment goal completion.** At the end of treatment, providers rated the number of treatment goals that clients completed using a 1–4 scale (i.e., 1 = none, 2 = some, 3 = most, and 4 = all). For those in the SC group, goals included completion of each of three modules in the SC program as well as other individual goals (e.g., housing stability). In SAU, treatment goals were individually determined collaboratively by treatment providers and clients.

**The client cultural competence inventory (CCCI).** The CCCI (Switzer, Scholle, Johnson, & Kelleher, 1998) is a 12-item

self-report measure that assesses a client's perception of the cultural competency of mental health services. (e.g., the provider accepts our family and treats us with respect) using a 1–5 Likert-type scale. The measure also includes 1 item asking whether the provider is from the same ethnic/racial background from the client. The instrument has a low susceptibility to social desirability bias and good internal consistency ( $\alpha = .76$ ) and temporal stability and has been used in mental health services utilization research. Eight items were used for the present study and also for the larger study. Coefficient alpha for the present sample is .87.

**Client satisfaction survey.** The client satisfaction survey (CSS) was developed in the ongoing evaluation program to measure parents' perceptions of how much home-based services have helped their family. The questionnaire contains 18 items assessing client's opinions about the services they received (e.g., did the services meet your needs?) and parents rate each item using a 1–4 Likert-type scale. Coefficient alpha for the present sample is .95.

### Factor Analysis Investigation of the CCCI and CSS Measures

An exploratory factor analysis (EFA) was performed as a data reduction technique for both the CCCI and CSS. Several factor solutions were fit to the raw item scores, and an oblique GEOMIN (Browne, 2001; Yates, 1987) rotated solution was utilized for interpretation of factor loadings. Model selection was dependent on proper convergence, acceptable fit criteria, and interpretability of factors. Final models for both measures specified two factors. For the CCCI, correspondence of results with Switzer et al. (1998) led to adoption of their factor labels: “respect for cultural differences” and “facilitating community and family involvement.” The estimated correlation between these two factors was .78. Two CCCI items did not load on these factors (appointment convenience and race congruency of therapist to client) and were used as separate effects/outcomes in subsequent models. The client satisfaction EFA resulted in a “service satisfaction” and a “personal improvement” factor, and these correlated .58. These factors were used in subsequent analyses. Factor loadings, fit criteria for each model, and complete details of the exploratory factor analyses for both measures are available online (<http://www.oumedicine.com/body.cfm?id=1560>).

### Data Analysis

All predictive models were run within Mplus 6.0 software (Muthén & Muthén, 1998–2010) and utilized the Mplus sandwich estimator of standard error (Asparouhov & Muthén, 2006) to adjust for the possible nonindependence of client data nested within specific providers. A dummy variable, equal to 1 for SC clients and 0 for SAU clients, was used as a covariate predictor in models to capture service-type differences on outcomes. All item indicators of cultural competency and client satisfaction

as well as the indicator of treatment goal attainment were modeled as ordered categorical variables using probit regression. Structural equation modeling (SEM) using a weighted least squares estimator was used to assess effects of predictors on latent variable (factors) and latent response (single categorical items) outcomes.

To test Hypothesis 1, the prediction of goal attainment, client satisfaction, and perceived provider cultural competence by service type were examined in separate SEM regression models. Controlling for service-type differences, Hypothesis 2 was tested with SEM models that regressed satisfaction factors and the goal attainment response variable on the cultural competence factors. To examine the mediation models (to test Hypothesis 3), the product of coefficients method (MacKinnon, Warsi, & Dwyer, 1995) was used to test whether the coefficient of the service-type indicator on client satisfaction and goal completion changed significantly when controlling for provider cultural competence (the general specification of these latent variable mediation models closely aligned with those described in Lau & Cheung, in press). To test Hypothesis 4, the goal attainment outcome was regressed on both satisfaction factors (while controlling for service type). Finally, all model effects above were explored, separately, within the Caucasian subgroup and within a general minority ethnicity subgroup. Models for Hypotheses 1 and 2 were also examined separately for clients in SC and clients in SAU (dropping the service-type predictor). Wald's  $z$  tests of significance of effects were used to assess predictive reliability and plausibility of hypotheses.

### Handling of Missing Data

The Wave 2 interview response rates differed significantly between groups,  $\chi^2(1, n = 2,170) = 10.4, p < .01$ , with 54.1% responding in the SC condition and 64.0% in SAU; yet, the Wave 2 groups were nearly equivalent on baseline demographics (see below). All but the exploratory factor models (which did not include imputed values for dependent variables) were analyzed using multiple imputed data sets of outcomes and covariates. Ten imputation data sets were created using the Markov chain Monte Carlo (MCMC) method of the Proc Mi package of SAS 9.2, and final model estimates were generated using Rubin's (1987) aggregation rules as implemented in Mplus 6.0 (Muthén & Muthén, 1998–2010). Covariates, outcomes, and treatment group indicators were included in the imputation model under the assumption of a joint multivariate Normal distribution for all variables. After imputation data sets were created, we dropped all CSS and CCCI items and replaced them with their original incomplete versions due to concerns about the quality of imputations under multivariate Normality assumption for ordered categorical dependent variables. Missingness in these dependent variables was handled through our later covariate-informed structural models that included all records, even partially complete dependent variable records (see von Hippel, 2007, for further rationale). Multivalued categorical data were transformed to binary dummy variables for imputation and imputed values were not rounded (see Ake,

2005; Allison, 2006; Horton, Lipsitz, & Parzen, 2003, for similar procedures). A total of 10 covariates were used in the imputation procedure and each was allowed to predict outcomes in all models reported below. These 10 covariates were (a) Ever had a child removed from the home; (b) Are any children currently removed from the home; (c) client education; (d) number of family members supported on household income; (e) number of children in the home; (f) household income; (g) client and partner cohabitation; (h) client race/ethnicity (Caucasian, African American, American Indian, and Other); (i) client gender; and (j) client age. A binary indicator for the OC design factor of the larger study was also included in models (statistical tests for inclusion of an SC by OC interaction were nonsignificant in all models, so only the main effect of OC was retained in models). Only item nonresponses from Wave 2 participants were considered during imputation. Participants who did not complete a Wave 2 self-report interview (i.e., unit nonresponse) were not included in analysis or imputation procedures.

## Results

### Client Demographics

Caregivers' median age was 29.5 and ranged from 15.5 to 68. Median family monthly income was \$1,000 per month (range of 0–10,000) and the majority (50.4) of families supported three to four children. The majority of participants in the current investigation were female (80%) and Caucasian (70%). Other ethnicities represented were American Indian (16%), African American (8%), Hispanic American (4%), or Other (2%). The largest portion of caregivers had a 9th- to 12th-grade education (28.7%), a high school diploma (21.7%), or some college (18.3%). Others had less than a ninth-grade education (7.0%), a general equivalency diploma (GED; 13.0%), had attended vocational technical school (6.4%), or had graduated college (4.9%). Many of the caregivers were married (34.3); however, a substantial proportion had never been married (20.7%). Others were divorced (17.9%), separated (13.6%), living with a partner (12.0%), or widowed (1.5%).

There were no significant differences between the two treatment groups on age or income; nor were there significant differences between the two treatment groups on gender, marital status, education, or number of children supported. However, there was a significant difference with regard to ethnicity,  $\chi^2(5, n = 1,300) = 17.5, p < .01$ , such that there were more American Indian clients in the SC group (19.3%) than in the SAU group (12.8%). There were also more Latino (4.8% of SAU participants vs. 2.4% of SC participants) and Caucasian (73.1% of SAU participants vs. 66.6% of SC participants) clients in SAU than in SC. The results presented below attempted to adjust for these differences through covariate control.

### Descriptive Statistics

The overall mean (for participants in both groups) for a summed score of all client satisfaction items was relatively

**Table 1.** Effects of SafeCare Service-Type Indicator on Client Perception Variables and Goal Attainment

Predicted Outcomes	$\beta$	SE	$p$ Value
Cultural competency			
Cultural differences	.14	.07	.04
Community and family	.12	.07	.08
Appointments	.08	.08	.35
Matched ethnicity	.06	.11	.57
Client satisfaction			
Service satisfaction	.12	.06	.06
Personal improvement	.09	.06	.14
Treatment engagement			
Attained goals	.30	.12	.01

high ( $M = 61.8$  of the 72 possible,  $SD = 10.2$ , range = 18–72). The mean of this summed satisfaction score was significantly higher in the SC group ( $M = 62.6, SD = 9.3$ ) than in the SAU group ( $M = 61.1, SD = 11.0$ ), although the actual difference was small,  $t(1,206) = -2.5, p = .01$ . Overall summed scores of perceived provider cultural competence were also relatively high ( $M = 34.2$  of the 40 possible,  $SD = 6.8$ , range 2–40) and were significantly higher in the SC group ( $M = 34.6, SD = 6.2$ ) than in SAU,  $M = 33.7, SD = 7.3; t(1,283) = -2.4, p = .02$ . Overall ratings of goal completion were high ( $M = 3.4, SD = 1.0$ , range 1–4) and were significantly higher in the SC group ( $M = 3.5, SD = 0.9$ ) than in SAU, ( $M = 3.3, SD = 1.1; t(638) = -2.6, p = .01$ ). Subscale differences using the SEM latent variable models are discussed below.

### Service-Type Effects on Cultural Competency, Client Satisfaction, and Goal Attainment

For Hypothesis 1, we examined service group differences in cultural competency factors, client satisfaction factors, and client goal attainment from separate prediction models. As noted in the last section, raw mean differences in goal completion were significantly different across service-type groups. Service-type differences remained significant when treating goal attainment as an ordinal outcome (using ordinal logistic regression) as shown in Table 1. With regard to perceived provider cultural competence, we observed significant positive SC main effects on the respect for cultural differences factor and marginally significant ( $p = .08$ ) SC effects on the community and family involvement factor. Differences were not evident for convenience of appointments or provider–client ethnic match across the two types of services. With regard to client satisfaction, positive SC effects approached significance for the prediction of the service satisfaction factor ( $p = .06$ ). Satisfaction with personal improvement did not differ between the service groups.

### Effects of Cultural Competency on Client Satisfaction and Goal attainment

For the test of Hypothesis 2, we regressed the service goal attainment outcome and, in a separate model, the client

**Table 2.** Effects of Cultural Competency on Client Satisfaction and Goal Attainment

Predictors of Service Satisfaction Factor	$\beta$	SE	p Value
Cultural differences	.35	.06	<0.01
Community and family	.54	.05	<0.01
Appointments	<.00	.04	.92
Matched ethnicity	-.04	.02	.07
Predictors of personal improvement satisfaction factor			
Cultural differences	.15	.09	.11
Community and family	.55	.06	<.01
Appointments	-.12	.07	.08
Matched ethnicity	-.05	.04	.18
Predictors of goal attainment			
Cultural differences	.33	.19	.08
Community and family	-.08	.16	.63
Appointments	.03	.16	.85
Matched ethnicity	.06	.06	.36

satisfaction factors on the set of client perceived provider cultural competence predictors. Results of these models appear in Table 2. The service satisfaction factor was significantly predicted by the cultural competence factors of respect for cultural differences and community and family Involvement, and both of these effects were positively directed. The personal improvement satisfaction factor was also positively and significantly related to the community and family involvement cultural competence factor. Of the four cultural competency predictors, none significantly predicted goal attainment, although the prediction from the respect for cultural differences factor was in the expected direction and approached statistical significance ( $p = .08$ ). Models run separately for each service type (SC and SAU) revealed the same general findings.

### *Indirect Effects of Service Type on Satisfaction Factors and Goal attainment via Cultural Competence Factors*

Hypothesis 3 predicted that one or more cultural competence factors would mediate the relationship between (a) service type and client satisfaction factors and (b) service type and goal completion. Figure 1 provides a pictorial example of possible indirect influences of service type on goal attainment and satisfaction by way of cultural competence factors. The dashed lines reflect the direct effect of service type after controlling for possible influences of cultural competence factors. If these direct effect estimates change substantially relative to the direct effects described in the Table 1 (effects of service type on satisfaction factors and goal attainment without controlling for cultural competence factors), then we might conclude part of the relationship between service type and these outcomes is indirect and is mediated by cultural competence (i.e., partially depends on the service-type relationship with cultural competence factors). The direct effects of service type on cultural competence factors and the direct effects of cultural competence factors on satisfaction factors and goal attainment within the mediation models closely mirrored results discussed in the previous sections (see Tables 1 and 2). However, the direct

effect of service type on both client satisfaction and goal completion declined substantially (see below), providing evidence for mediation.

*Cultural competence factors as mediators of the relationship between service type and client satisfaction factors.* The direct effect of service type on satisfaction declined from .12 to .01 for the service satisfaction factor, and from .09 to .01 for the personal improvement factor. The sum of the indirect influences of service type on service satisfaction and personal improvement via influences on cultural competence factors were statistically significant (sum = .11(.05),  $p = .04$ , for service and sum = .07(.04),  $p = .05$ , for personal improvement satisfaction factors). The direct effects of service type on the satisfaction factors were no longer significant after controlling for these indirect cultural competence pathways of influence. The most influential indirect pathway leading to the Service Satisfaction factor involved the respect for cultural differences factor, and the most influential pathway leading to personal improvement factor involved the community and family involvement factor.

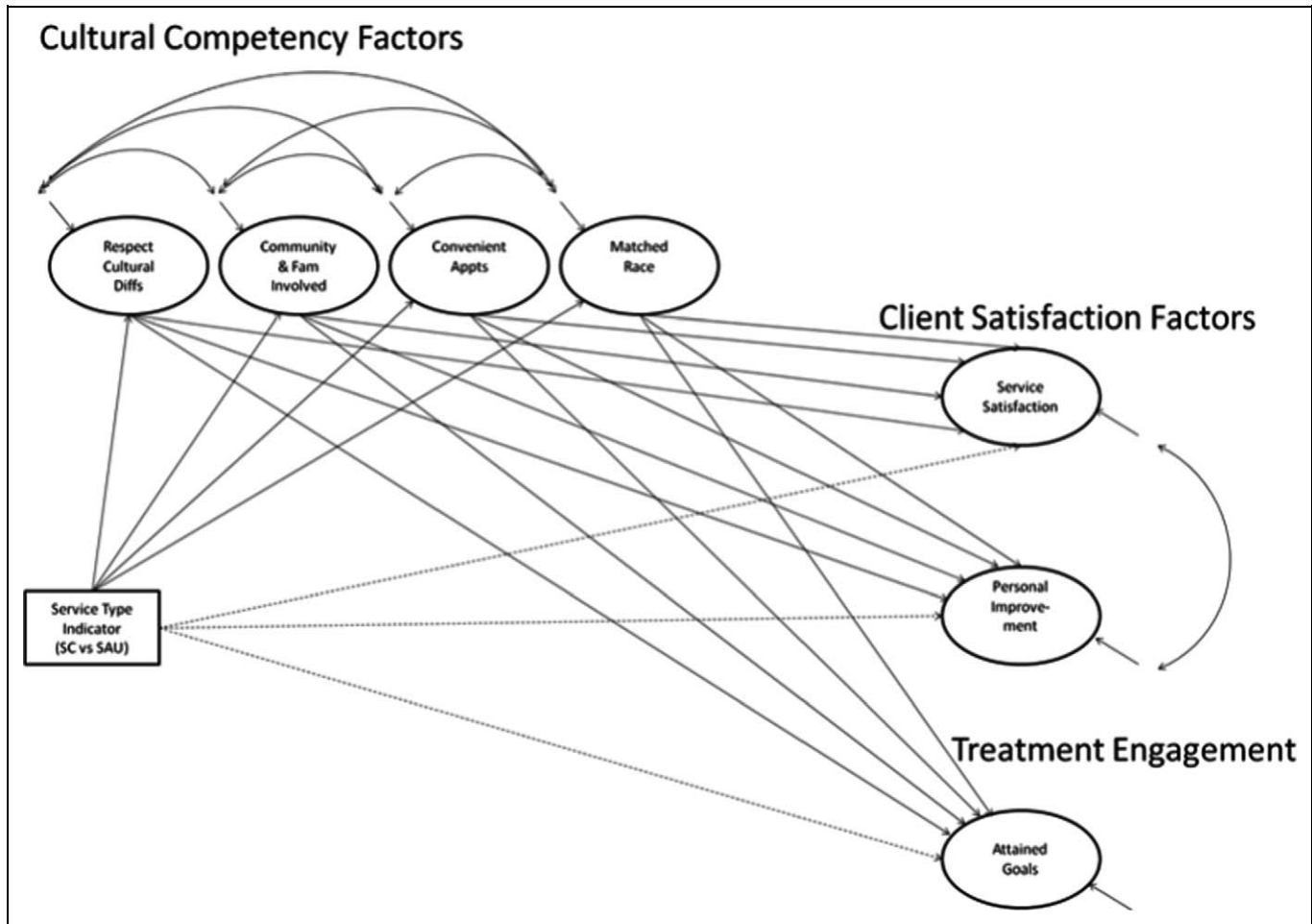
*Cultural competence factors as mediators of the relationship between service type and goal attainment.* The direct effect of service type on goal attainment declined from .30 to .25. The sum of the indirect pathways leading from service type to Goal Completion via Cultural Competence factors approached significance (sum = .04(.03),  $p = .09$ ). The single most influential indirect pathway between service type and goal completion again involved the respect for cultural differences factor. Despite the trend toward mediated service impact, the direct effect of service type on goal completion remained significant after controlling for cultural competence factors.

### *Relationship Between Perceived Satisfaction and Goal Attainment*

To evaluate the satisfaction and goal completion relationship (Hypothesis 4), we constructed an ordinal regression of goal completion on the two satisfaction factors. The results of this model are presented in Table 3. Only the influence of Service Satisfaction predicted goal completion significantly. This relationship was strong and positively directed (higher Service Satisfaction predicted greater Goal Completion). These findings were consistent across separate models for each service-type group.

### *Subgroup Analysis by Race/Ethnicity*

The most frequent self-identified race/ethnicity in our sample was Caucasian, which reflects the overall demographics in Oklahoma. The Caucasian race/ethnicity indicator significantly and positively predicted responses to the Cultural Competency item about matching provider race/ethnicity (i.e., more Caucasian participants were matched with Caucasian providers). Given the potential importance of provider ethnic matching



**Figure 1.** Mediation model. *Note.* Dashed lines indicate direct effects of service type on Satisfaction factors and the Engagement outcome that remain after controlling for indirect influences related to change on Cultural Competency factors.

on goal attainment, we sought to explore differences in our prediction models between our Caucasian and non-Caucasian participants. Results from these models are described below.

We observed some intriguing differences between our full sample model and these subgroup models. First, the service-type effects on the cultural competence factors and satisfaction factors were not as strong in the Caucasian-only subgroup, producing smaller effect sizes and no statistically significant differences between SC and SAU (all  $p > .20$ ). Service-type effect sizes for the non-Caucasian subgroup were typically larger than those observed in the full sample models but only the effect on Community and Family Involvement, Service Satisfaction, and Personal Improvement reached significance ( $p = .04, .01, \text{ and } .04$ , respectively). We found these differences in treatment impact compelling, but it is also noteworthy that tests of these coefficient differences across groups (using multiple-group SEM Wald's chi-square tests) never reached significance. The service-type effect on goal attainment was comparable across subgroups and approached significance in each (the full sample model effect reached significance due to larger, combined sample size). Tests of Hypotheses 2 in the Caucasian-only subgroup produced findings similar to those of

**Table 3.** Effects of Client Satisfaction on Goal Attainment

Predictors of Goal Attainment	$\beta$	SE	$p$ Value
Service satisfaction	.26	.08	<.01
Personal improvement	.00	.09	.95

the full sample model above. These tests in the non-Caucasian group, however, led to very different results. In this subsample, Respect for Cultural Differences did not predict Goal Attainment, while both Convenience of Appointments ( $p < .01$ ) and the Matched Race/Ethnicity ( $p = .04$ ) items were significantly and positively related to Goal Attainment. Multigroup SEM comparisons of these coefficient differences were all significant. Differences among effects describing mediation of service type on goal attainment mirrored these Hypothesis 2 subgroup differences, but statistical tests of mediation within both subgroups failed to reach significance. The relationship between the Satisfaction and Goal Attainment outcomes did not differ across subgroups and matched that of the full sample (i.e., only service satisfaction predicted changes in Goal Attainment).



## Discussion

Home-based child maltreatment prevention and treatment programs have suffered from relatively high rates of attrition; therefore, research on factors related to client engagement in such programs is needed. Prior research has focused primarily on the relation of client demographic and risk (i.e., child health, caregiver mental health, and family violence) variables to client engagement; however, some researchers have argued for the role of program factors in predicting client engagement, as well as the role of clients' perceptions of services (McCurdy & Daro, 2001). The present study examined: (a) the effect of program type on client perceptions of provider cultural competence, client satisfaction with services, and client engagement by comparing a manualized child abuse and neglect treatment (SC) to SAU; (b) the effect of client perceptions of provider cultural competence on client satisfaction and goal attainment; (c) whether provider cultural competence mediated the relation of (i) service type to client satisfaction and (ii) service type to goal completion, and (d) whether client satisfaction and goal attainment were related.

We found that program type did impact client engagement such that clients who were enrolled in SC attained more of their goals than those families enrolled in SAU. These findings are somewhat similar to a previous study that found that those enrolled in SC+ (a modified version of SC) were more likely to enroll in and complete services than those enrolled in SAU (Damashek et al., 2011). Although the present investigation did not isolate particular factors related to program type that might result in a higher level of goal completion, it is possible that the highly structured nature of the SC program may have contributed to this finding. SC providers are trained to work with families on a skill until a particular criterion is reached, which may make it more likely that families will meet designated goals before moving onto other problem areas. In contrast, SAU providers address a variety of goals, and methods of attaining those goals vary among providers. SC also uses active strategies, such as caregiver practice with feedback, to teach skills, and this type of approach may keep caregivers more interested in and engaged in sessions than a more passive didactic style.

We also found differences between SC and SAU with regard to clients' perceptions of services. The Respect for Cultural Differences factor of cultural competence was significantly higher in SC than in SAU. There was also a trend for the Service Satisfaction factor of client satisfaction to be higher in SC than in SAU. Despite concerns that manualized structured treatments might be too rigid to fit individual client needs, we found that clients responded well to the structured nature of SC and that they felt that their providers were respectful of their individual differences. Interestingly, our subgroup analyses suggested that these particular SC benefits may have been exclusive to the study's non-Caucasian participants.

We also found evidence for the effect of client perception variables on client goal completion. There was a trend for one perceived provider cultural competence subscale, Respect for Cultural Differences, to predict higher goal completion.

Subgroup analyses seemed to suggest, though, that this factor was only relevant for the study's Caucasian participants. Among non-Caucasian participants, only convenient appointment times and matched therapist–client race/ethnicity predicted goal completion. It is somewhat surprising that respect for cultural differences appeared to be more important for the Caucasian subgroup and may indicate that it is important for providers to show respect for families' beliefs and practices, even if they are not an ethnic minority. Indeed, there may be significant cultural differences between Caucasian providers and clients based on socioeconomic status. The finding that ethnic match predicted goal completion for non-Caucasian participants is consistent with previous research that has found that ethnic match predicted home-based service engagement, particularly for non-Caucasian families (Daro et al., 2003; McCurdy et al., 2006). The respect for cultural differences and the community and family involvement cultural competence factors did predict both Satisfaction factors (general Service Satisfaction and Personal Skill Improvement). These effects were consistently observed even in subgroup analyses.

With regard to the mediation analyses, we found evidence for a mediating role of client-perceived provider cultural competence factors in the relation between (a) service type and client satisfaction factors and (b) service type and goal attainment. For the full sample, the responses about respect for cultural differences seemed to drive these indirect influences on goal attainment and satisfaction (for both satisfaction factors). The direct effect of service type on goal attainment was still strong even in the presence of cultural competence factors; however, the service-type effect on the satisfaction factors essentially disappeared after controlling for these same factors. The results suggest that the observed goal completion and satisfaction benefits of SC were substantially related to improvements in perceived cultural competence (particularly the Respect for Cultural Differences) among SC clients.

Finally, we found strong support for an association between client engagement and the service satisfaction factor of our client satisfaction measure. Those who reported higher general satisfaction with services had higher levels of goal completion. The satisfaction factor related to perceived skill-level improvement only predicted goal completion in our non-Caucasian subgroup. Surprisingly, this skill factor did not predict well in analyses confined to those receiving SC. This is especially surprising, given that the factor's items reflected specific skills targeted in the SC model. Perhaps the goals that were related to SC were not perceived by the clients to be the areas in which they needed improvement.

## Study Limitations

Despite the present study's contribution to our understanding of factors related to client engagement in services, the present study has some limitations. First, as noted above, we were not able to isolate specific program factors (e.g., caseload and treatment procedures) that may have accounted for differences in client goal completion. Similarly, SC was provided to families

that also received SAU, making it even more difficult to isolate individual program effects. Studies are needed that can isolate the particular program-related variables that might be related to client engagement in services. Although some studies have done so (Daro et al., 2003; McGuigan et al., 2003), more research in this area is needed.

Second, client engagement in services can be conceptualized and measured in several different ways, and it can be challenging to interpret results from studies that use different outcome measures. Although other investigators have also used client goal completion as an outcome variable (Josten et al., 2002), the majority of studies have focused on enrollment in services (e.g., Duggan et al., 2000; McCurdy et al., 2006; Moore et al., 2005), duration of services (e.g., Ammerman et al., 2006; Daro et al., 2003; McGuigan et al., 2003; Raikes et al., 2006), or both frequency and duration (e.g., Daro et al., 2003; McCurdy et al., 2006). It is not completely clear which measure may best capture client engagement in services. Goal completion may be a better measure of engagement than service duration because clients may remain enrolled in a service for a long period of time without attending appointments or actively using the information and resources presented. However, it may be most useful to include several measures of client engagement in one study to get a fuller picture of whether outcomes are differentially predicted. Additionally, our measure of goal completion was taken from documentation in case management files, and we were not able to assess reliability for this measure.

Third, while the findings from the ethnic subgroup analyses were certainly of interest, the inspection of group differences in prediction was performed as an exploratory analysis, and the differences observed were not anticipated. Power to assess significance of some of the subgroup influences, particularly mediation pathways, was limited and should be replicated with independent data. We suspect that the differences highlighted may have more to do with the matching of therapist–client race/ethnicity than with discrete racial or ethnic group differences in prediction. Future studies may also benefit from comparisons of matched and unmatched client–therapist pairings.

Fourth, the differences observed across the service-type groups are limited by the relatively low response rates obtained for these posttreatment measurements. While client characteristics did not vary substantially across those responding in each group, the lower SC response rate does temper our ability to causally interpret these differences. The findings may partly or wholly reflect differences among responders of each service-type group on characteristics not measured in our study. A final limitation is that perceived provider cultural competence was assessed after our measure of goal completion, despite the fact that we used cultural competence to predict goal completion. However, clients' responses on the cultural competence measure did pertain to events that occurred before clients completed treatment and should still be valid indicators of clients' perceptions of services. Moreover, these perceptions are not likely to change substantially after treatment completion.

## Clinical Implications

Results of the present study indicate that clients' perceptions of cultural competence may be a key factor in improving clients' satisfaction with and engagement in services. In addition, manualized treatments for child abuse and neglect, such as SC may be perceived as helpful and culturally sensitive by clients and may be more effective than nonmanualized services for maintaining client engagement in services.

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