

Sociocultural Factors and Parent–Therapist Agreement on Explanatory Etiologies for Youth Mental Health Problems

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Abstract Sociocultural factors were examined in relationship to parent–therapist agreement on beliefs about the etiology of mental health problems in a sample of youth receiving outpatient mental health services ($n = 277$ parents). When examined individually, racial/ethnic match was unrelated, but higher parental affinity to mainstream American culture, higher parent education level, and greater similarity in parent and therapist scores on affinity to mainstream American culture were all significantly associated with greater parent–therapist co-endorsement of etiological explanations, while higher parental affinity to an alternative/indigenous culture was significantly associated with lower co-endorsement. When examined simultaneously in one model, only parent education level remained significantly associated. Findings suggest a complex relationship between sociocultural factors and that attention to parent cultural affinity and parent education level may facilitate parent–therapist agreement on beliefs about child problem causes.

Keywords Cultural competence · Explanatory etiologies · Parent–therapist agreement

Introduction

Some have hypothesized that agreement between therapists and their clients upon key aspects of treatment is critical to culturally competent services. For example, Kleinman and colleagues have described the importance of understanding “explanatory models” from provider and patient perspectives and of “negotiating” these models prior to treatment (Kleinman and Benson 2006; Kleinman et al. 1978). These explanatory models include individual perspectives on the causes of problems, illness course, and treatment (Kleinman 1980; Kleinman and Benson 2006). In addition, Zane et al. (2005) emphasize the importance of “cognitive match” between therapists and clients as essential to cultural competence, and suggest such matches related to attitudinal, belief, and expectancy factors may be more directly related to treatment outcomes than client–therapist ethnic match. Indeed, Zane et al. (2005) found that client–therapist matches on interpersonally-related problem perception, avoidant coping orientation, or treatment goals predicted either session impact or short term treatment outcomes in a sample of White and Asian American adults.

In addition to receiving recognition as a potential component of cultural competence, the importance of considering multiple stakeholder perspectives has also been identified in other treatment- and team-related literature. The Institute of Medicine (IOM 2001) has described the need to have “patient-centered” care that “is respectful of and responsive to individual preferences, needs, and values...” The Substance Abuse and Mental Health

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Administration has also recognized the importance of shared decision-making (SAMHSA 2010), and the American Academy of Pediatrics has identified the need for care that is centered upon the patient and family (American Academy of Pediatrics 2012). In addition, the importance of fostering multiple party agreement has been described in the study of teams in industrial-organizational psychology (Mohammed et al. 2010; Mohammed and Ringseis 2001). Furthermore, treatment goal agreement and collaboration upon tasks are key components of client-therapist alliance (Bordin 1979; Horvath and Luborsky 1993), which has in turn been linked to therapy outcomes in adults (Horvath and Symonds 1991; Martin et al. 2000) as well as adolescents (Hawley and Garland 2008; Hawley and Weisz 2005; Shirk and Karver 2003). Indeed, a meta-analysis examining goal consensus and collaboration found that better outcomes can be expected when therapists and their adult clients agree upon treatment goals and processes (Tryon and Winograd 2011). The consideration of differences in patient and provider perspectives may be essential to facilitating treatment compliance, satisfaction, and outcomes (Kleinman et al. 1978).

In therapy with youth, understanding factors associated with parent-therapist cognitive match may be important due to the potential role of parents as treatment initiators, primary sources of transportation for clinic-based services, and/or participants in therapy and intervention implementation. One aspect of explanatory models is that of problem etiology (Kleinman 1980; Kleinman and Benson 2006). Parent-therapist agreement upon etiological explanations for the child's problems may have implications for treatment engagement and usage. Research has shown that some beliefs about child problem causes are related to later service use, and etiological explanations have been found to partially mediate the relationship between race/ethnicity and service use in an at-risk sample (Yeh et al. 2005). In addition, a relationship between causal beliefs and treatment choices was found in a sample of parents of children with autism spectrum disorder (Dardennes et al. 2011). Further, parental problem attributions may influence parent engagement in therapy (Morrissey-Kane and Prinz 1999). It is possible that parent-therapist agreement upon problem etiology may also play a similar or perhaps larger role than parental etiological explanations considered alone. While it is important to understand parent-therapist agreement on problem causes in general, across multiple domains, it may be additionally meaningful to focus specifically upon biopsychosocial etiological explanation agreement, given the wide acceptance and employment of a biopsychosocial approach in mental health care in the United States (Kaslow et al. 2007; Melchert 2007) and therefore, the likelihood that treatment may be influenced

by therapist understanding of biopsychosocial etiological factors specific to a particular case.

Understanding sociocultural factors that are linked to greater agreement on key explanatory model components may assist with the provision of culturally competent services. Poor agreement upon treatment goals or expectations between multiple stakeholders in youth treatment has been reported (Garland et al. 2004; Hawley and Weisz 2003), and one possible source of divergence in explanatory models may be related to racial/ethnic differences between therapists and families. Evidence of racial/ethnic differences in explanatory model components for adults (Alvirez 1999; Cooper et al. 2001; Hall and Tucker 1985; Narikiyo and Kameoka 1992; Sheikh and Furnham 2000) as well as for parents of children (Bussing et al. 1998a, b; Yeh et al. 2004) raises the question of whether client-therapist racial/ethnic match is associated with higher levels of client-therapist cognitive match and culturally-competent services. Indeed, some research has shown that client-therapist ethnic match is associated with a greater length of treatment, lower dropout rate, reduced substance use, and/or higher psychological functioning level at termination (Flicker et al. 2008; Hall et al. 2002; Russell et al. 1996; Sue et al. 1991; Wintersteen et al. 2005). In a sample of Asian American undergraduates who rated psychological processes related to a counseling vignette, Meyer et al. (2011) found that those who were racially matched perceived a higher level of experiential similarity with therapists and found a positive relationship between experiential similarity and therapist credibility. However, other studies, including three meta-analytic reviews (Cabral and Smith 2011; Maramba and Hall 2002; Shin et al. 2005), did not support a strong relationship between therapist-client ethnic match and treatment outcomes. A partial explanation for these mixed findings may be that ethnic match may be a variable that is "distal" to the desired outcomes (Zane et al. 2005), meaning that other factors, such as cognitive match, mediate the relationship between ethnic match and therapy outcomes. As such, ethnic match may predict outcomes only in so far as it predicts cognitive match or agreement, as it cannot be assumed that those of a particular ethnic background will adhere to certain cultural beliefs.

Thus, when compared to race/ethnicity, parents' degree of acculturation may provide a more accurate indication of whether or not adherence to particular culturally-influenced values and behaviors plays a role in service-related variables. Acculturation has been defined as "a process whereby the attitudes and/or behaviors of persons from one culture are modified as a result of contact with a different culture" (Moyerman and Forman 1992), and includes the orthogonal dimensions of affiliation with a mainstream culture and affiliation with an additional culture (Berry 1997). Therefore, individuals may be highly affiliated with

one, two (or more), or no specific culture. Ho et al. (2007) found that high affinity to mainstream American culture was positively associated with later mental health service use in a diverse sample of at-risk youth while high affinity to a culture other than mainstream American culture showed a negative relationship. Further, affinity to a cultural group other than mainstream American culture partially explained lower rates of mental health service utilization among Asian/Pacific Islanders and Latinos in this sample (Ho et al. 2007). In addition, studies suggest that African American culture may encourage youth to use willpower to overcome adversity and to avoid seeking outside help for problems (Poulin et al. 1997), which in turn results in delayed treatment seeking (Breux and Ryujin 1999). These findings suggest the importance of examining cultural affinity in relationship to parent–therapist agreement on etiological explanations in general due to their potential impact on service use and on biopsychosocial beliefs in particular given the likely emphasis upon these in services provided in the United States.

It may also be hypothesized that clients and therapists who have a higher level of similarity in their affinity to a particular culture will have higher levels of agreement on key explanatory model components. However, no studies have examined this among youth samples. Although one study among adults in substance abuse treatment failed to find an effect of client–therapist birthplace match, difference in scores of Hispanicism, and differences in scores of Americanism (Suarez-Morales et al. 2010), further research is warranted for different problem/program types, in other cultural groups, and for both adult and youth samples before firm conclusions can be reached.

Educational attainment may also be related to parent–therapist agreement on child problem etiologies. Therapists are likely to have some level of graduate education, and higher parental education may increase the degree of experiential similarity between them. In addition, educational attainment has been found to be associated with health literacy level (Cho et al. 2008; Yin et al. 2009). Greater similarity between parent and therapist educational level may promote greater similarity in health literacy, which may then translate into greater similarity in mental health beliefs specifically. Therefore, it may be important to understand if higher parental educational attainment may be associated with a greater level of parent–therapist agreement with therapists on etiological beliefs, and specifically, upon biopsychosocial beliefs, as these receive great emphasis in mental health services provided in the United States.

The current study examines sociocultural factors in relationship to parent–therapist agreement upon etiological explanations for the mental health problems of adolescents receiving outpatient therapy. Overall parent–therapist

agreement on problem causes was assessed. In addition, specific assessment of agreement on biopsychosocial etiological explanations was also assessed, due to the likely relevance of these beliefs to mainstream mental health services provided in the United States.

The study was guided by the following hypotheses:

- (a) Parent–therapist racial/ethnic match will be associated with greater parent–therapist agreement on etiological explanations in general and for biopsychosocial beliefs specifically.
- (b) Greater similarity between parents and therapists in affinity to mainstream American culture will be associated with greater parent–therapist agreement on etiological explanations in general and for biopsychosocial beliefs specifically.
- (c) Higher parental affinity to mainstream American culture will be associated with greater parent–therapist agreement on etiological explanations in general and for biopsychosocial beliefs specifically.
- (d) Higher parental affinity to an alternative/indigenous culture will be associated with lower parent–therapist agreement on etiological explanations in general and for biopsychosocial beliefs specifically.
- (e) Higher parental education level will be associated with greater parent–therapist agreement on etiological explanations in general and for biopsychosocial beliefs specifically.

Method

Participants

This study utilizes data from a prospective, longitudinal study of cognitive model consensus that collected data on 318 youths aged 12–18 who were receiving school-based or clinic-based outpatient mental health services. The study first recruited therapists who provided school-based or clinic-based outpatient psychotherapy to youths who were students of a large, metropolitan school district on the West Coast. Parents/youths were recruited from the client loads of therapists who had agreed to participate, following the provision of written permission to be contacted by the study. Youth and/or parents were excluded if parents reported that the youth received a diagnosis for mental retardation, severe brain injury, pervasive developmental disorder, or sensory impairment during telephone screening. In addition, youth were excluded if, at the time of telephone contact, the parent reported that the youth was receiving more intensive services in addition to the current outpatient psychotherapy, enrolled in a special demonstration project, receiving counseling/psychotherapy that

was involuntary/specifically time-limited, or in foster care. Institutional Review Board approval was obtained for the study, and informed consent was obtained prior to interview completion. Therapist interviews were conducted in English, parent/youth interviews were conducted in English or Spanish, and a translation-back translation process was utilized for measures for which Spanish translations were not available.

The current study involves only interviews conducted at Time 1. Time 1 surveys were completed in person during the early stages of the treatment episode for youths, their parents, and their therapists. The Time 1 survey included assessments of explanatory model components, symptomatology, functioning, and other hypothesized predictors of cognitive match between stakeholders. Parents, youths, and therapists were given gift certificates/compensation of \$30 for Time 1 interviews.

Cases from the larger project were excluded from the present analyses if parent/youth interviews took place more than 30 days after the initial treatment session and therapist interviews occurred more than 5 sessions after the initial treatment session, in order to try to focus upon agreement in the earlier stages of treatment. In addition, exclusions were made due to clustering considerations (individuals with a sibling in the study and a clinic with a single participant in the study), and cases were excluded if the parent or therapist was missing the etiological explanations measure under analysis. The resulting subsample for this study involved data associated with 277 youths at Time 1 interview.

Materials and Procedure

Parent–Therapist Racial/Ethnic Match

If the self-reported racial/ethnic identity of the parent matched that of the therapist, this was coded as a match. For multiracial individuals, a match was determined as present if the parent reported a primary race that matched that of the therapist. Of those 275 parent–therapist sets for whom racial/ethnic information was available, 34.9 % of parents were racially/ethnically-matched with their therapists.

Cultural Affinity

Cultural affinity was measured by the Pan-Acculturation Scale (PAN; Soriano 2013). The PAN assesses respondent social, linguistic, and cultural characteristics in relationship to mainstream American culture as well as another cultural group to which the respondent belongs that is important to the respondent and named by him/her. In this version of the

PAN, a total of 22 items were rated as being true for: My cultural group, American culture, Both, or Neither. Two subscales (American Cultural Orientation [ACO] and Other Culture Orientation [OCO]) were derived from the summations of responses across the items (e.g., an endorsement of “American culture” or “Both” for an item would be counted towards the ACO). Each subscale yielded a continuous score ranging from 0 to 22, with higher values denoting higher affinity to that particular culture. ACO scale alpha = .943 and OCO alpha = .959 for the larger project sample ($n = 291$). The gap between parent and therapist affinity to mainstream American culture was operationalized as the absolute value of the difference between the PAN therapist ACO and parent ACO scores. ACO mean scores were 11.51 ($SD = 7.12$; $n = 276$) for parents and 17.87 ($SD = 5.35$; $n = 277$) for the therapists. OCO mean scores were 16.91 ($SD = 6.95$; $n = 276$) for parents and 11.46 ($SD = 7.82$; $n = 277$) for therapists.

Parent Education

Parent education was assessed through self-report of highest level of schooling with 11 options ranging from “none” and “K-8” to “Professional/Doctoral degree” and were then grouped into the following categories for analyses (with two cases/.7 % missing this information): up to grade 8 (27.1 %), Grades 9–12 (no diploma; 13.0 %), High School Diploma/GED/Additional Certification (27.8 %), Some College (21.7 %), and College Degree or above (9.7 %).

Etiological Beliefs

Parent and therapist versions of a revised Beliefs About Causes of Child Problems questionnaire (BAC; original measure: Yeh and Hough 1997) were used to assess beliefs about the causes of child problems across 11 etiological categories, each of which involved items that described specific explanatory etiologies within that category, as well as a question that allowed respondents to indicate “other” causes within that category. The categories were then grouped into three overarching domains of etiology (with member categories listed): Biopsychosocial (28 items; physical causes, personality, relational issues, trauma, familial/parenting issues categories), Sociological (14 items; friends, American culture, prejudice, economic problems categories), and Spiritual/Nature Disharmony (12 items; spiritual causes and nature disharmony categories). Confirmatory Factor Analysis was used to examine the appropriateness of grouping the 11 etiological categories into three broad domains (biopsychosocial, sociological, and spiritual/nature disharmony) for the parents, youth, and therapists of the larger study. The three factor model fit the

parent ($n = 312$) and youth ($n = 312$) data well (CFI for parent = .93 and RMSEA = .05; CFI for youth = .88 and RMSEA = .06). A three factor and two factor solution fit the data equally well for the parent and youth. However the three factor solution for the therapist did not converge because there was severely limited variability in therapist responses on the items in the spiritual/nature disharmony domain as a function of low endorsement of these items. A two factor solution for the therapist data ($n = 311$) did fit well with a CFI of .91 and a RMSEA of .06. One-week pilot test–retest data indicated BAC Total scale values of $r = .799$ for parents ($n = 58$; M days = 8.09, $SD = 1.83$). Alphas were calculated with all available data from the larger study, yielding a Total scale alpha of .854 for parents ($n = 288$) and .816 for therapists ($n = 298$) and a Biopsychosocial scale alpha of .824 for parents ($n = 297$) and .759 for therapists ($n = 299$).

Calculations of Parent–Therapist Agreement

Due to the range of causes that may have constituted the “other” causes item endorsed within each category, endorsements upon this item were not eligible for agreement, resulting in 43 possible items for Total agreement and 23 items for Biopsychosocial agreement. Agreement was calculated by summing the number of times that both parent and therapist endorsed a “yes” response for the same belief. This was calculated for Total agreement as well as Biopsychosocial agreement. Mean Total agreement score was 8.01 ($SD = 4.17$) and mean Biopsychosocial agreement was 6.59 ($SD = 3.54$). Alphas for the BAC Total scale (43 items) and Biopsychosocial scale (23 items), omitting the “other” items, were: .836 for parent Total ($n = 292$), .793 for therapist Total ($n = 298$), .810 for parent Biopsychosocial ($n = 298$), and .746 for therapist Biopsychosocial ($n = 299$). Mean endorsements omitting the “other” items were: 12.09 ($SD = 5.87$) for parent Total, 8.63 ($SD = 4.27$) for parent Biopsychosocial, 15.31 ($SD = 5.01$) for therapist Total, and 12.00 ($SD = 3.54$) for therapist Biopsychosocial.

Data Analytical Plan

The analytical approach utilized mixed effects modeling to take therapist clustering into account as a random effect. Initial analyses also explored the possibility of clustering at the clinic level, but after accounting for the therapist effect, the clinic effect disappeared, and was therefore not included in these analyses. A correlation table (see Table 1) that included the five independent variables (parent–therapist racial/ethnic match, parent–therapist ACO difference score, parent ACO score, parent OCO score, and parent education level) and the two dependent variables (parent–

therapist agreement on Total causes, parent–therapist agreement on Biopsychosocial causes) revealed significant correlations between all of the five independent variables. Due to these significant intercorrelations between the independent variables and conceptual interest in whether or not each independent variable, as a unique construct, was individually associated with the dependent variables, separate models were created to examine the relationship between each of the independent variables and the two dependent variables. Then, in order to explore the unique and shared variance across the independent variables despite their high intercorrelations, the five independent variables were entered as a group in models with the dependent variables. All analyses adjusted for the following covariates: school-based vs. clinic-based services, services identified as Multi-Systemic Therapy, and number of sessions before therapist baseline interview. IBM SPSS Statistics for Windows, Version 21 was utilized to examine the study hypotheses (IBM Corp 2012).

Results

The mean age of parents/caregivers (hereafter referred to as parents) was 41.97 ($SD = 8.87$), and 90 % were female. Sixty-seven point nine percent of parents self-identified as Latino/Hispanic/Spanish of any race (hereafter referred to as Latino, with 91.5 % of this group being Mexican–American). Parents who did not identify as Latino were African American/Black (14.4 %), American Indian/Native American (.4 %), Asian American/Pacific Islander (1.8 %), non-Hispanic White (9 %), or Multiracial (5.8 %), with two individuals missing this information (.7 %). Mean household income was \$22,052.26 ($SD = 14,351.21$).

The youth sample was 60.6 % male and had a mean age at Time 1 of 14.08 years ($SD = 1.56$; range 12–18). The sample was 70.4 % Latinos of any race (90.77 % of whom were Mexican–American). Participants who did not self-identify as Latino were African American/Black (13.4 %), non-Hispanic White (5.8 %), Asian American/Pacific Islander (1.8 %), American Indian/Native American (.4 %), or Multiracial (6.5 %), with 5 persons (1.8 %) missing this information.

In the therapist sample ($n = 46$; therapists could participate in the study more than once), mean age at first interview with the larger project was 32.43 years ($SD = 6.75$), and 87 % of respondents were female. The therapist sample included 41.3 % Latinos of any race (84.21 % of whom were Mexican–American). Participants who did not identify themselves as Latino were non-Hispanic White (47.8 %), Asian American/Pacific Islander (6.5 %), or African American/Black (4.3 %). In addition,

Table 1 Summary of intercorrelations of the study's primary variables

Variable	1	2	3	4	5	6	7
Agreement on total causes	–	.947***	.038	–.117 ⁺	.186**	–.156**	.221***
Agreement on biopsychosocial causes		–	.009	–.118 ⁺	.196**	–.165**	.224***
Parent–therapist racial/ethnic match			–	.172**	–.185**	.201**	–.137*
Parent–therapist ACO difference score				–	–.775***	.444***	–.419***
Parent ACO score					–	–.623***	.526***
Parent OCO score						–	–.397***
Parent education level							–

Agreement parent–therapist co-endorsement, ACO American Cultural Orientation subscale of the PAN, OCO Other Culture Orientation subscale of the PAN

⁺ $p \leq .051$; * $p < .05$; ** $p < .01$; *** $p < .001$

highest education attained at the time of their first project interview was as follows: 4.3 % Bachelor's degree and 95.7 % Master's degree.

The first set of models investigated the relationship between each independent variable and the dependent variables separately. First, we examined whether racial/ethnic match between parent and therapist was associated with parent–therapist agreement upon explanatory etiologies of the child's problems. Racial/ethnic match was not significantly related to either Total ($B = .010$, $p = .99$) or Biopsychosocial beliefs agreement ($B = -.039$, $p = .939$; see Table 2).

Second, we examined whether the difference between parents and therapists upon ACO score was related to parent–therapist agreement on explanatory etiologies. Greater differences between parent and therapist scores on PAN ACO were significantly negatively related to Total

($B = -.086$, $p = .035$) and Biopsychosocial causes agreement ($B = -.081$, $p = .02$).

Third, we investigated whether parent ACO score was associated with parent–therapist agreement on problem etiologies. Parent PAN ACO score was related to both Total ($B = .110$, $p = .002$) and Biopsychosocial causes agreement ($B = .105$, $p = .001$).

Fourth, parent OCO score was examined in relationship to parent–therapist agreement on explanatory etiologies. The parent OCO score was negatively associated with both Total ($B = -.102$, $p = .005$) and Biopsychosocial causes agreement ($B = -.096$, $p = .002$).

Fifth, analyses examined whether parent education levels were related to higher levels of parent–therapist agreement. Parent education was significantly associated with both Total ($B = .737$, $p < .001$) and Biopsychosocial causes agreement ($B = .656$, $p < .001$).

Table 2 Standardized betas and confidence intervals for sociocultural variables entered individually in relationship to parent–therapist agreement on beliefs about causes of child problems

Independent variable	Agreement on total causes		Agreement on biopsychosocial causes	
	B	95 % CI	B	95 % CI
Racial/ethnic match	.010	[–1.175, 1.196]	–.039	[–1.036, .959]
Parent–therapist difference on ACO score	–.086*	[–.166, –.006]	–.081*	[–.149, –.013]
Parent ACO score	.110**	[.040, .179]	.105**	[.045, .164]
Parent OCO score	–.102**	[–.173, –.031]	–.096**	[–.157, –.036]
Parent education level	.737***	[.374, 1.099]	.656***	[.346, .966]

All analyses are adjusted for number of sessions before therapist 1st interview, school-based versus clinic-based service, and multi-systemic therapy (MST) versus not MST

Agreement parent–therapist co-endorsement, ACO American Cultural Orientation subscale of the PAN, OCO Other Culture Orientation subscale of the PAN, CI confidence interval

* $p < .05$; ** $p < .01$; *** $p < .001$

Finally, all five independent variables were included in the same model to explore unique and shared variance across the independent variables in relationship to parent–therapist agreement. With this model, only parent education level remained significantly associated with both Total ($B = .602, p = .005$) and Biopsychosocial causes agreement ($B = .512, p = .005$; see Table 3).

Discussion

The present study examined several sociocultural factors in relationship to parent–therapist agreement about etiological explanations held for the mental health problems of a sample of adolescents in the early stages of outpatient mental health treatment in schools or clinics. These factors were parent–therapist racial/ethnic match, difference between parent and therapist affinity to mainstream American culture, parent affinity to mainstream American culture, parent affinity to an alternative/indigenous culture, and parent education. With the exception of racial/ethnic match, findings that examined each sociocultural factor individually supported the association of the hypothesized indicators with parent–therapist agreement on etiological explanations for youth mental health problems. When all sociocultural factors were entered into the models at the same time, parent education level was the only variable that retained significant relationships to parent–therapist etiological explanation agreement. Results for the independent models will be discussed first, followed by findings for the models with simultaneous entries of the sociocultural factors.

Of the five sociocultural variables included in the study, racial/ethnic match between parent and therapist was the only variable that was not significantly associated with parent–therapist consensus when examined independently.

Although racial/ethnic group membership is an important construct, it may in this case be a “distal” variable that affects other more “proximal” factors (Zane et al. 2005). The lack of a significant relationship here may be due to the heterogeneity of cultural affinity that may be present within racial/ethnic groups and further supports the need for the assessment of variables such as cultural affinity, cultural identity, or specific cultural values.

Indeed, when examined independently, parents and therapists who were more similar in their ACO scores were more likely to agree on etiological beliefs, as hypothesized. This meant that the greater the difference in affinity to mainstream American culture between parents and therapists, the less likely parents and therapists were to agree upon the etiological explanations, both in totality and specifically for biopsychosocial beliefs. Thus, the match between parents and therapists in cultural affinity to mainstream American culture was more important than the racial/ethnic match between parents and therapists in our sample when determining agreement on this particular explanatory model component. However, it is possible that the kind of racial/ethnic mismatch that occurs between parent and therapist (e.g., Latino parent and non-Hispanic White therapist vs. Latino parent and Asian American therapist) may be associated with different levels of cognitive match, and it may be important to investigate differential effects of mismatch type in future studies.

When the role of parental cultural affinity was investigated specifically, there was support for the hypotheses that parental affinity to mainstream American culture would be positively associated with parent–therapist agreement, while parental affinity to an alternative/indigenous culture would have a negative association. These hypotheses were based upon the assumption that the therapists in our sample were likely to have received Western-based training in

Table 3 Standardized betas and confidence intervals for sociocultural variables entered simultaneously in relationship to parent–therapist agreement on beliefs about causes of child problems

Independent variable	Agreement on total causes		Agreement on biopsychosocial causes	
	B	95 % CI	B	95 % CI
Racial/ethnic match	.670	[−.513, 1.852]	.540	[−.460, 1.539]
Parent–therapist difference on ACO score	.032	[−.108, .173]	.029	[−.090, .147]
Parent ACO score	.055	[−.086, .196]	.054	[−.066, .173]
Parent OCO score	−.048	[−.139, .042]	−.048	[−.126, .029]
Parent education level	.602**	[.181, 1.023]	.512**	[.152, .873]

All analyses are adjusted for number of sessions before therapist 1st interview, school-based versus clinic-based service, and multi-systemic therapy (MST) versus not MST

Agreement parent–therapist co-endorsement, ACO American Cultural Orientation subscale of the PAN, OCO Other Culture Orientation subscale of the PAN

* $p < .05$; ** $p < .01$

psychotherapy, which may be more likely to involve etiological explanations that were more typical of mainstream American culture. It is notable that not only was ACO associated with greater agreement, but OCO was negatively associated, suggesting that when therapists want to engage parents in treatment, they may need to pay particular attention to the etiological explanations held by those who may be strongly affiliated with a culture in addition to, or instead of, mainstream American culture. It may be necessary to spend a greater amount of time negotiating explanatory models (Kleinman 1980; Kleinman et al. 1978) with clients, including explaining the therapist's perspective as well as understanding that of the client, in order to promote treatment engagement and prevent premature termination.

The hypothesis that parent education would be positively related to parent–therapist agreement upon causal beliefs for the child's problems was supported. Based upon level of statistical significance, this was the strongest relationship found amongst our five variables when examined independently. Further investigation upon which aspects of higher education may be related to cognitive model beliefs is warranted. For example, greater health literacy may be one explanation, or greater similarity to therapists who are likely to have at least a college education may be another. If health literacy is indeed a major factor, the provision of information to increase health literacy may be considered through various means such as therapist interaction, informational brochures, videos, classes, trained community members, or internet sites to increase engagement and empowerment of parents whose educational opportunities may have been limited. As with those of varying cultural affinities, therapists may need to spend additional time understanding the beliefs of those with varying educational backgrounds and in explaining their own rationales for treatment when engaging parents in treatment for their children.

In our final set of analyses, we entered all five independent variables into a single model, and only the relationship between parent education and agreement remained for both Total causes and Biopsychosocial causes. These analyses suggest that the shared variance between the five variables in our sample is best embodied by the parent education variable. We suspect that this finding reflects both the robustness of the parent education finding as well as the complex relationship between the independent variables. As seen in Table 1, all five independent variables were either significantly positively or negatively correlated with one another. The strongest intercorrelation amongst the sociocultural variables was a negative relationship between parent ACO score and parent–therapist ACO difference score. It is noted that parent education was highly positively related to parent ACO score and highly negatively correlated with parent OCO score, suggesting a

strong relationship between cultural affinity levels and parent education in our sample. There may be several reasons why education and cultural affinity may be so highly intertwined. Access to greater educational opportunities is a common reason for immigration to the U.S., and the average years of education of immigrants from various countries is much lower than that found in the United States. For example, 21 % of Mexican–Americans born in Mexico have a high school diploma, compared with 59 % of Mexican–Americans born in the U.S. (Gonzalez-Barrera and Lopez 2013). Thus, greater time in the U.S. may be directly tied to higher levels of education. This relationship may also be bidirectional for those receiving education in the U.S., with education potentially serving as the primary means through which mainstream American values are socialized. Given our original conceptualization of parent education as a possible indicator of health literacy, this finding is encouraging in that agreement between parent and therapist may potentially be increased through greater attention to educating parents about mental health problems. However, this should not lessen the importance for therapists to understand parental perspectives on their child's problems. The analyses as a whole also point to the importance of understanding how culture influences beliefs and indicate that parental beliefs may vary in degree of consistency with those of associated mental health providers.

The findings must be interpreted within the context of our sample. Although our sample is multiethnic, our parent sample was predominantly Mexican American; while our sample largely reflects the demographics of the public service-users in the population from which the study was drawn, these findings may not generalize to those of other racial/ethnic backgrounds or service users. Replication of the findings in other samples and in both public and private service-use sectors is recommended.

It is noted that although parent ACO, parent OCO, and parent education level were significant variables in the individual regression models, the significant correlations between those factors and Total causes and Biopsychosocial causes were relatively low. Also, although ACO difference score was a significant variable in the individual regression models, its correlations with Biopsychosocial causes and Total causes were marginally significant. These findings emphasize the import of our control variables in elucidating the true relationships between our sociocultural variables and our dependent variables.

Future Directions

Agreement between parties can be viewed in multiple ways, and this study focused upon an examination of parent–therapist co-endorsement of etiological explanations.

This method has the strength of considering both parent and therapist endorsements as equally important when determining agreement. However, there are other ways to examine agreement that may also be meaningful. For example, one could view the therapist as the primary driver of therapy and therefore be interested in parent agreement with therapists (i.e., using therapist endorsements as the denominator, with parent co-endorsements as the numerator). Future studies may look at different means for determining agreement, consideration of the youth's perspective, agreement on the most important cause, the assessment of other explanatory model components (e.g., treatment goals), and the relationship between cognitive model agreement and treatment engagement or mental health outcomes. Given the high correlation between Total causes and Biopsychosocial causes in our study, it may also be useful to examine co-endorsement upon etiological beliefs that are not biopsychosocial in nature separately. In addition, the findings point to the potential importance of investigating discussion of explanatory models and increased health literacy as possible avenues for engaging and empowering parents whose educational opportunities may have been limited. Finally, the specific mechanisms through which cultural affinity and education may impact cognitive match may be investigated.

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