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A Preliminary Investigation of Ethnic Differences in Resistance in Multisystemic Therapy

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Therapy process research suggests that an inverted U-shaped trajectory of client resistance, referred to as the struggle-and-working-through pattern, predicts positive treatment outcomes. However, this research may lack external validity given the exclusive focus on European Americans. This preliminary study explores differences in resistance patterns in a sample of African American and European American juvenile drug offenders and their families ($n = 41$) participating in Multisystemic Therapy. Resistance was coded from session recordings at the beginning, middle, and end of treatment. There were significant ethnic differences in (a) mean resistance at midtreatment, (b) resistance trajectories, and (c) predictive relationships between resistance trajectories and criminal desistance. Notably, a negative quadratic (i.e., inverted U-shaped) resistance trajectory was more characteristic of European Americans who desisted from crime, whereas a positive quadratic (U-shaped) resistance pattern was more characteristic of African Americans who desisted. There was no relationship between resistance trajectory and later drug abstinence (i.e., cannabis). Within the context of evidence-based therapies, core treatment processes may vary significantly as a function of client ethnicity. We recommend that clinical scientists make efforts to test for ethnic differences in treatment process so that therapies like Multisystemic Therapy can be understood in a more comprehensive and nuanced manner.

Client resistance is a central concern in nearly every major theory of psychotherapy, although definitions differ. Broadly, resistance is a label for the ways in which a client might oppose the course of treatment set forth by the therapist (Beutler, Moleiro, & Talebi, 2002). Behavioral examples of client

resistance include making confrontational statements, changing the subject, and refusing to answer questions. Resistance overlaps with some components of therapy alliance, such as agreement on goals and collaboration on tasks (Bordin, 1979; McLeod, 2011). However, alliance is a relatively enduring relational variable thought to emerge from the client–therapist dynamic over time, whereas resistance is more often conceptualized as changing from moment-to-moment within a therapy session (Beutler et al., 2002; Chamberlain, Patterson, Reid, Kavanagh, & Forgatch, 1984).

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Cognitive and behavioral therapies frequently characterize resistance as an obstacle to treatment effectiveness (Beutler et al., 2002), and some therapy process research supports this negative view. For example, several studies suggest that higher client resistance is associated with poorer engagement, weaker alliance, greater likelihood of dropout, and failure to change in therapy (e.g., Beutler et al., 2002; Chamberlain, Patterson et al., 1984; Watson & McMullen, 2005). In contrast, others describe resistance as a normal, nonpathological response to stress, fear, ambivalence, and perceived threats to freedom in clinical settings (Beutler et al., 2002; Brehm & Brehm, 1981; Cummings, 2006; Engle & Arkowitz, 2006). This normative process may not be a harbinger of treatment failure, and certain patterns of resistance could actually facilitate rather than hinder therapeutic change (Beutler et al., 1991; Chamberlain, Patterson et al., 1984; Ellis, 2002; Miller & Rollnick, 2013; Patterson & Chamberlain, 1994). Indeed, several studies show support for a negative quadratic (i.e., inverted U-shaped) resistance trajectory as a predictor of treatment-induced reductions in psychiatric symptoms and court-recorded arrests (Chamberlain, Patterson et al., 1984; Patton, Kivlighan, & Multon, 1997; Stoolmiller, Duncan, Bank, & Patterson, 1993).

Patterson and Chamberlain (1994) called this trajectory the “struggle-and-working-through” (SWT) pattern (see Figure 1) and argued that early in treatment, resistance is initially low because sessions focus mainly on information gathering and establishing rapport. At midtreatment, as target problems are addressed, resistance increases because therapists challenge clients to make difficult and uncomfortable, yet productive, changes. During the final phase of treatment, once the client achieves significant progress in terms of skill acquisition or symptom reduction, resistance should decrease in intensity. The SWT pattern emerged from research on parent management training (PMT; Patterson & Chamberlain, 1994), although a negative

quadratic resistance trajectory has also been shown to predict positive outcomes for adults receiving psychoanalytic counseling (Patton et al., 1997). Because it is not yet known whether this pattern of resistance predicts success in other intervention models, it would be valuable to explore the usefulness of the SWT concept within other treatment contexts, such as Multisystemic Therapy (MST). MST is an evidence-based, family-focused treatment, with success at reducing juvenile offending and substance use (Henggeler, 2011). Because MST and PMT share an emphasis on behavioral techniques and targeting family interactions to address youth problem behaviors, it is possible that similar resistance dynamics will unfold across both interventions. In addition, MST has three stages of treatment that map onto the timing of the SWT phases described by Patterson and Chamberlain (1994): an initial alliance-building phase, a middle intervention phase, and a final termination phase (Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 2008).

However, there are also important differences between MST and PMT that might result in divergent resistance patterns. The focus of PMT is generally on preadolescents with disruptive behaviors, such as aggression and noncompliance, whereas MST typically targets adolescents with more serious behavioral problems, including criminal activity and substance abuse. It could be that families enter MST with less hope than PMT clients, which might result in different resistance patterns. MST clients may also show different patterns of resistance compared with PMT clients because MST often targets juvenile justice-involved adolescents, who may hold antiauthority attitudes or feel coerced into treatment (Day, Tucker, & Howells, 2004; Levy, 2001). An additional possibility is that resistance might generally be lower in MST than PMT because some treatment components (e.g., providing treatment in the home) were designed specifically to reduce resistance (Cunningham & Henggeler, 1999; Henggeler, Melton, & Smith, 1992).

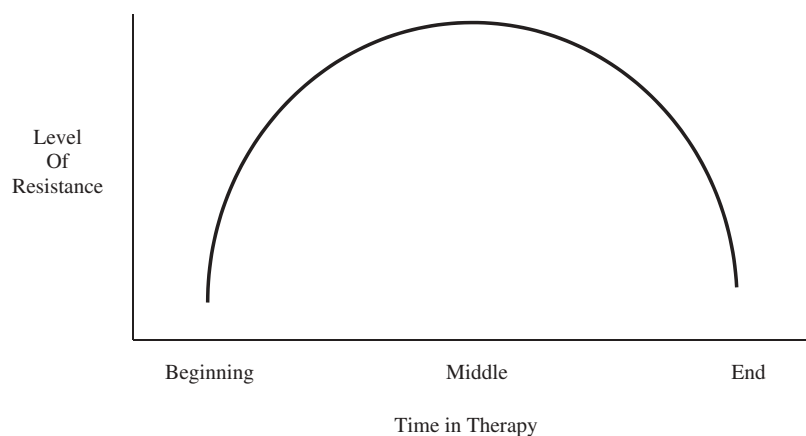


FIGURE 1 Theoretical struggle-and-working-through pattern of resistance.

Furthermore, there may be less resistance in MST than PMT because MST clinicians are trained to reframe “resistant” behaviors as barriers to treatment engagement and to take an iterative, hypothesis-testing approach to addressing these barriers (Cunningham & Henggeler, 1999). Given these potential differences in resistance, it is not known whether the SWT pattern will generalize to MST, and thus an empirical test is warranted.

Although research has validated the SWT pattern in predominantly European American samples (Chamberlain, Patterson 1984; Patton et al., 1997; Stoolmiller et al., 1993), resistance may function differently for African Americans at different stages of the treatment process. African Americans may be more resistant at the beginning of therapy because of initial mistrust of therapists and self-concealment due to stigma surrounding mental health treatment (Alvidrez, Snowden, & Patel, 2010; Nickerson, Helms, & Terrell, 1994; Sirey et al., 2001; Terrell & Terrell, 1984; Thompson, Bazile, & Akbar, 2004; Whaley, 2001). Clinicians may view such resistance negatively, alienate these clients, and thus promote higher rates of attrition among African Americans (Cullari, 1996; Sanchez-Hucles, 2000; Sue & Sue, 1977).

For African Americans who remain in psychotherapy, cultural hegemony may promote high levels of resistance throughout treatment. Guilfoyle (2002, 2005) described how societal inequality may contribute to problematic power dynamics in therapy. Clinicians often treat clients in ways that are permitted in the context of the therapeutic relationship but would otherwise be considered disrespectful (Guilfoyle, 2002). Clients may feel disempowered to express their displeasure assertively with the therapist, leaving resistant behaviors such as not answering questions or changing the subject as the only practical methods for opposing “the cultural expectation that therapists know what is best” (Guilfoyle, 2005, p. 107). Guilfoyle predicted that any client might show resistance in response to the implicit power differential between therapist and client, but he expected disadvantaged populations to display even higher resistance, reflecting societal power imbalances. Woller, Buboltz, and Loveland (2007) echoed this reasoning, suggesting that minority group members must constantly defend personal freedoms in a majority-oriented society, which leads to higher sensitivity to any encroachment on self-determination, including in psychotherapy. Survey research shows that African Americans do report stronger resistance to restrictions on liberty than European Americans (Seemann, Buboltz, Jenkins, Soper, & Woller, 2004; Woller et al., 2007). When therapists engage clients in therapeutic tasks, African Americans may be more inclined to perceive threats to freedom, and therefore resist intervention.

More than 20 years ago, the American Psychological Association Office of Ethnic Minority Affairs (1993) advised psychologists to consider ethnicity as an important

contributor to psychological processes. However, research on ethnic differences in therapy process and change mechanisms remains sparse (Fuertes, Costa, Mueller, & Hersh, 2005; Ho, McCabe, Yeh, & Lau, 2010; Huey, Tilley, Jones, & Smith, 2014). Utilizing existing data from a study of ethnically diverse families participating in MST (Henggeler et al., 2006), we explored whether different patterns of resistance emerged for African Americans versus European Americans. We also conducted preliminary analyses examining whether different resistance patterns were associated with treatment outcomes across ethnicity. In addition, given the scant research on resistance trajectories outside of PMT, an additional aim of this study was to explore whether the SWT pattern might generalize to MST.

METHOD

Participants

This study is a secondary analysis of a randomized trial evaluating the combined and separate effects of MST and juvenile drug court (Henggeler et al., 2006). The initial trial included 161 juvenile drug offenders and their primary caregivers. Families were randomly assigned to one of four treatment conditions: community services, drug court with community services, drug court with MST, or drug court with MST enhanced with contingency management. In drug court, participants underwent urine screens and received supervision regarding compliance with home rules, school behavior, and participation in community treatment. In addition, judges were able to provide incentives (e.g., sports tickets) and sanctions (e.g., community service) to support behavior change (Henggeler et al., 2006). The contingency management aspects included vouchers for clean substance screens, detailed functional analysis of drug use behaviors, and protocols for self-management (Budney & Higgins, 1998; Cunningham et al., 2003). The current study included only the 41 youth and their caregivers in the two MST conditions for whom session audio-recordings were available.

Intervention

MST is a context-sensitive, home-based treatment for behavior problems that targets the multiple systems surrounding youth (Henggeler et al., 2008). MST services are intensive (contact is sometimes daily) yet time limited (averaging 4 months in duration) and are delivered in the family’s natural environment (e.g., home, school, neighborhood) by therapists trained in the use of evidence-based interventions. MST requires therapists to target well-defined problems, identify and utilize family strengths, intervene within and between systems, and engage family members as primary agents of change. Interventions involve a variety of empirically supported strategies based on

cognitive-behavioral approaches (e.g., contingency contracting, cognitive restructuring, role-play) and strategic/structural family therapy (e.g., joining, reframing). MST has been used to successfully treat delinquent youth, resulting in lower recidivism rates, decreased drug use, and improved family functioning (e.g., Henggeler, Clingempeel, Brondino, & Pickrel, 2002; Henggeler et al., 1992).

Procedure

After randomization and pretreatment assessment, MST families were treated by six master's-level therapists with prior experience in social work or a related field. Initial training consisted of 40 hours of didactic and experiential training in MST, and therapists received approximately 3 hours of weekly group supervision from a Ph.D.-level expert in MST. Three therapists were African American and three were European American. Each therapist delivered interventions in only one of the MST conditions. Informed consent from caregivers and assent from minors were obtained from all participating families, and the study was conducted in compliance with the Institutional Review Board at the Medical University of South Carolina. Further assessment was conducted 4 months after randomization (i.e., posttreatment) and 12 months after randomization (i.e., follow-up). More information on procedures in the randomized trial is available elsewhere (Henggeler et al., 2006).

Measures

Client Resistance. Four research assistants were trained over 4 months to use the Therapy Process Code (TPC; Chamberlain, Davis et al., 1984) until they achieved reliability of $\kappa \geq 0.75$, calculated based on agreement on each coding decision. The TPC is a microanalytic observational system designed to measure client and therapist behaviors during treatment sessions. The TPC has shown good interrater reliability, sensitivity to changes in resistance over time, and discriminant validity with unrelated constructs (Stoolmiller et al., 1993). All responses made by a nontherapist participant (e.g., parent, target youth, sibling) during the session were coded to avoid missing any instances of in-session resistance. Research assistants were instructed to code all of an individual's statements occurring between the boundaries of other individuals' statements as one unit.¹ If a participant's response was judged to impede the direction set by the therapist, one of eight resistance categories was coded (Table 1). For the present analyses, all resistance codes were collapsed into an overall resistance category. The frequency of resistant responses in a session was divided by the session duration in order to generate a resistance per minute score that

TABLE 1
Resistance Codes

<i>Resistance Category</i>	<i>Definition</i>
Confront/Challenge/Disagree	Client expresses dissatisfaction or disagreement with therapist.
Hopeless/Blame/Complain	Client describes inability to change or attributes problems to an outside source.
Defend Self/Other	Client justifies or pardons the current behaviors of self or others.
Interfamily Conflict	Client makes negative or critical comments about other family members.
Sidetrack/Own Agenda	Client discusses a different issue than the one the therapist raised or something tangential to the goals of therapy.
Answer For	Client answers a question the therapist directed to a different family member.
Not Answering	Client withholds information or does not answer a question from the therapist.
Disqualify	Client contradicts a previously made statement.

served as the dependent variable. Reliability of $\kappa \geq 0.75$ was maintained throughout the coding process.

To examine quadratic resistance trajectories, audio-recordings from three phases of MST (i.e., beginning, middle, and end) were coded. Because MST does not have a prescribed number of sessions and terminates when families achieve individualized treatment goals, the exact timing of each phase differs across participants. When available, one tape was randomly selected from each of the following treatment phases: within the first 2 weeks (Phase 1), the middle 2 weeks (Phase 2), and the last 2 weeks (Phase 3) of treatment. Phase 2 was identified by dividing the total number of sessions in half for a given family and selecting the midpoint (Stoolmiller et al., 1993). In cases where the available tapes did not meet the aforementioned criteria, the periods were extended from 2 weeks to 1 month. Families who were excluded from the present study lacked audio-recordings or the recordings that did exist were of poor quality.

Cannabis Use. Urine drug screens were collected before each court appearance throughout the study, using the 3-Test Integrated Cup supplied by BioTechNostix (Markham, OH). Cannabis was the only substance used frequently enough by participants to provide sufficient statistical power for analyses in this study (Henggeler et al., 2006). The minimum detectable level for cannabis is 50 ng/l and the sensitivity is 50%. Youth were categorized by cannabis abstinence status (i.e., negative vs. positive urine screens for cannabis) at posttreatment (between treatment initiation and 4 months) and at follow-up (between 4 and 12 months after treatment initiation).

Criminal Desistance. Official arrest data for each participant was taken from records maintained by the South Carolina Law Enforcement Division and the South

¹ Reliability was not calculated for raters' decisions about boundaries between statements.

Carolina Department of Juvenile Justice. Youth were categorized by desistance status (i.e., arrested vs. not arrested at least once) at posttreatment (between treatment initiation and 4 months) and at follow-up (between 4 and 12 months after treatment initiation).

Data Analysis

All hypotheses were tested using a mixed-model analysis of variance (ANOVA), because the data included a combination of between-participant (i.e., criminal desistance, cannabis abstinence, and ethnicity) and within-participant (i.e., resistance) factors (B. H. Cohen, 2014; Howell, 2002; Seltman, 2015).² A mixed-model ANOVA allows for a quadratic contrast (Rosenthal & Rosnow, 1985; Scheffé, 1999), which is an important focus of our study. For the present study, we tested whether there were significant differences in the mean level of resistance over treatment. Then, specific linear and quadratic contrasts were tested to characterize how slopes differed. When the linear or quadratic resistance trajectories differed significantly across participant factors, the resistance means at each time point for relevant subgroups were graphed and the differences were interpreted (e.g., Howell, 2002; Maxwell & Delaney, 2004). We used an alpha level of $p < .05$ for all tests.

The following analyses were conducted to explore whether the SWT pattern generalized to MST, whether African American and European American families showed different resistance trajectories, and whether the relationships between resistance trajectories and outcomes differed by ethnicity. First, we examined overall ethnic differences in resistance at each treatment phase using t tests and ethnic differences in resistance trajectories using 3×2 ANOVA tests. Second, we used 3×2 ANOVAs to explore whether the SWT resistance pattern predicted criminal desistance or cannabis abstinence at posttreatment and follow-up. Finally, we used $3 \times 2 \times 2$ ANOVA tests to assess whether the relationships between resistance trajectories and desistance/

abstinence differed by ethnicity at posttreatment and follow-up. To characterize the typical resistance trajectory for specific ethnic groups, we ran post hoc ANOVA tests that contrasted European Americans or African Americans who desisted or abstained with all other youth.

The effect size for each ANOVA F test was calculated using η^2 and was interpreted according to J. Cohen's (1988) guidelines for determining small ($\eta^2 \approx .02$), medium ($\eta^2 \approx .13$), and large ($\eta^2 \approx .26$) effects. Expectation-maximization was utilized to impute a complete data set, which preserved the intended sample size and the observed parameters (McLachlan & Krishnan, 2008). Using G*Power software, we found that we had statistical power of greater than .99 to detect medium-to-large relationships using this imputed data set.

RESULTS

Of the overall sample, 58.5% were African American and 41.5% were European American. The mean age of youth was 15.4 years, with a range of 14–17 years, and 80.5% of participants were male. Eighteen participants were assigned to MST (55.6% African American) and 23 were assigned to MST enhanced with contingency management (60.9% African American). Across conditions, youth were present in 63.2% of sessions; male caregivers were present in 31.6%, female caregivers in 89.5%, and siblings in 42.1%.

The resistance means and standard deviations for each relevant subgroup are presented in Table 2, based on the complete data set. Participants spent between 0% and 33% of session time exhibiting resistance, based on TPC ratings. Phase 2 sessions occurred, on average, 62.97 days ($SD = 31.01$) after treatment began, and Phase 3 sessions occurred, on average, 132.86 days ($SD = 89.11$) after treatment began. There were no significant mean, $F(1, 39) = .60, p = .104$; linear, $F(1, 39) = .03, p = .860$; or quadratic slope, $F(1, 39) = .94, p = .337$, differences in resistance trajectories between the two MST conditions. Resistance data were missing at increasing levels at each successive treatment phase (Phase 1 = 9.8% missing, Phase 2 = 17.1% missing, Phase 3 = 41.5% missing). Missing resistance data were not significantly related to adolescent ethnicity, age, or gender at any phase. There were no significant ethnicity, age, or gender differences between youth who were included in the analyses versus those who were excluded due to lack of session recordings. Furthermore, age and gender were not significantly related to resistance over time and therefore were not included in ANOVA tests as covariates.³

² Typically, between-participant factors are conceptualized as causal or preceding variables in a mixed-model ANOVA, and within-participant factors are conceptualized as resulting from these between-participant variables. However, a mixed-model ANOVA can be used to assess for relationships between variables regardless of the timing of measurement (Seltman, 2015). There are multiple examples in the literature that apply a mixed-model ANOVA to test for relationships between within-participant independent variables and between-participant dependent variables (e.g., Ben Amor et al., 2005; Critchfield, Henry, Castonguay, & Borkovec, 2007; Sterling et al., 2007; Subotnik & Nuechterlein, 1988), especially as an exploratory data analytic technique (Henry, Schacht, & Strupp, 1986, 1990). There are also precedents in the literature for using a three-way mixed-model ANOVA to examine relationships between a within-participant variable and two between-participant variables (Jones, Reichard, & Mokhtari, 2003; Nolen-Hoeksema, 2000).

³ In separate analyses, we included family income as a covariate in order to examine whether different results would emerge. The results largely remained the same. The only two exceptions were 1) the quadratic slope difference in resistance between African Americans and European Americans was marginally significant ($p = .057$), and 2) African American desisters had a marginally significant quadratic slope difference in

TABLE 2
Descriptive Statistics for Total Sample and Subgroups

Sample Category	n	Resistance M (SD)		
		Phase 1	Phase 2	Phase 3
Total	41	.06 (.08)	.06 (.07)	.07 (.07)
Adolescent Ethnicity	—	—	—	—
African American	24	.06 (.08)	.04 (.04)	.07 (.09)
European American	17	.06 (.08)	.10 (.10)	.07 (.05)
Posttreatment	—	—	—	—
Rearrested	14	.08 (.09)	.03 (.03)	.03 (.03)
African American	9	.03 (.04)	.03 (.03)	.03 (.03)
European American	5	.15 (.11)	.04 (.04)	.03 (.03)
Desisted	27	.06 (.08)	.08 (.08)	.09 (.08)
African American	15	.08 (.09)	.04 (.05)	.10 (.10)
European American	12	.02 (.03)	.12 (.10)	.08 (.05)
Follow-Up	—	—	—	—
Rearrested	23	.03 (.04)	.07 (.08)	.06 (.06)
African American	12	.03 (.04)	.03 (.02)	.05 (.07)
European American	11	.03 (.04)	.10 (.10)	.06 (.05)
Desisted	18	.07 (.09)	.06 (.07)	.09 (.09)
African American	12	.10 (.10)	.04 (.06)	.09 (.10)
European American	6	.02 (.02)	.09 (.09)	.07 (.06)

Resistance and Ethnicity

African American families displayed significantly less resistance at Phase 2 than European Americans, $t(39) = 2.84$, $p = .007$, although no ethnic differences were found at Phase 1, $t(39) = -.09$, $p = .929$, or Phase 3, $t(39) = -.19$, $p = .852$. Neither the mean level of resistance across treatment phases, $F(1, 39) = 1.49$, $p = .230$, nor the linear slope over time, $F(1, 39) = .01$, $p = .941$, differed by youth ethnicity; however, there was a significant ethnic difference in the quadratic slope of resistance, $F(1, 39) = 4.38$, $p = .043$, $\eta^2 = .10$, 95% confidence interval (CI) [.00, .29]. Figure 2 shows that European American families displayed a negative quadratic trajectory that reflected the SWT pattern; in contrast, African American families showed a U-shaped pattern. When mean resistance at each phase is graphed for the total sample, the resulting trajectory appears linear and flat (Figure 2).

Because therapist–client ethnic match was a predictor of MST outcomes in two prior studies (Chapman & Schoenwald, 2011; Halliday-Boykins, Schoenwald, & Letourneau, 2005), we also tested whether resistance means or trajectories differed as a function of ethnic match. Of the 41 families included in these analyses, 61% were paired with a European American therapist and 39% with an African American therapist. One third of African American youth were paired with an African American therapist, and 37% of European American youth were paired with a European American therapist. The overall

resistance in contrast with all other youth ($p = .053$). Both relationships had been significant ($p < .05$) when income was not included as a covariate.

mean of the resistance slope did not differ by ethnic match, $F(1, 39) = 2.94$, $p = .095$. Moreover, neither linear, $F(1, 37) = 1.95$, $p = .170$, nor quadratic resistance, $F(1, 37) = .08$, $p = .786$, slopes differed based on ethnic match between clients and therapists.

Resistance, Cannabis Use, and Desistance

To test whether the SWT pattern applied to MST families, we examined whether resistance trajectories differed by desistance status at posttreatment and follow-up. There was a large difference in linear slopes, $F(1, 39) = 10.08$, $p = .003$, $\eta^2 = .21$, 95% CI [.03, .40], such that families of youth who desisted showed an increase in resistance over treatment, whereas families of youth who were arrested showed a decrease at posttreatment (Figure 3). There were no significant mean, $F(1, 39) = 4.02$, $p = .052$, or quadratic, $F(1, 39) = .47$, $p = .497$, slope differences by desistance status at posttreatment. Moreover, there were no significant differences in means over time, $F(1, 39) = 1.02$, $p = .318$; linear slopes, $F(1, 39) = 2.91$, $p = .096$; or quadratic slopes, $F(1, 39) = 3.12$, $p = .082$, at follow-up.

At posttreatment, there were no significant differences in mean resistance, $F(1, 39) = .21$, $p = .650$; linear resistance slope, $F(1, 39) = .01$, $p = .910$; or quadratic resistance slope, $F(1, 39) = .02$, $p = .904$, between those testing positive for cannabis and those testing negative. Moreover, there were no significant differences in mean resistance, $F(1, 39) = .19$, $p = .667$; linear resistance slope, $F(1, 39) = .10$, $p = .754$; or quadratic resistance slope, $F(1, 39) = .17$, $p = .681$, at follow-up.

Ethnic Differences in Relationships Between Resistance and Youth Outcomes

The relationship between mean resistance and posttreatment desistance did not differ by ethnicity, $F(1, 39) = 2.01$, $p = .165$. However, there were ethnic differences in the relationship between linear resistance slope and desistance, $F(1, 37) = 10.40$, $p = .003$, $\eta^2 = .22$, 95% CI [.03, .42], and between quadratic resistance and desistance, $F(1, 37) = 8.26$, $p = .007$, $\eta^2 = .18$, 95% CI [.02, .38]. Post hoc ANOVA tests comparing desisters of one ethnicity with all other youth helped clarify the patterns of resistance predictive of positive treatment outcomes. When European American youth who desisted were contrasted with all other youth, results indicated that their optimal resistance trajectory included both a linear increase in resistance, $F(1, 39) = 6.75$, $p = .013$, $\eta^2 = .15$, 95% CI [.01, .34], and a negative quadratic resistance trajectory, $F(1, 39) = 11.68$, $p = .001$, $\eta^2 = .23$, 95% CI [.04, .42]. That is, families of European Americans who desisted were significantly more likely than all other youth to display a resistance trajectory that had a peak at midtreatment similar to the SWT pattern and showed linear growth in resistance

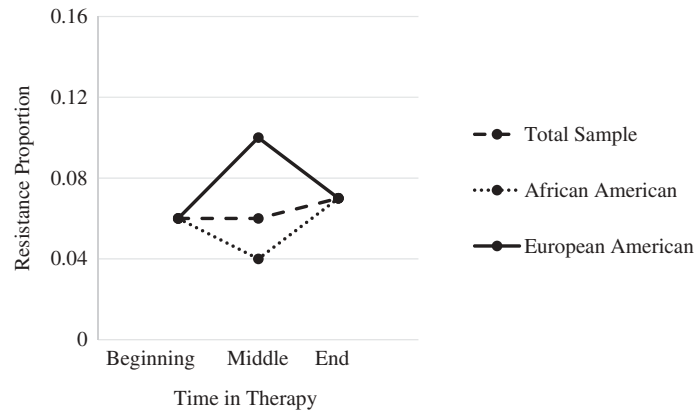


FIGURE 2 Significant quadratic differences in resistance trajectories for families of African American youth vs. families of European American youth.

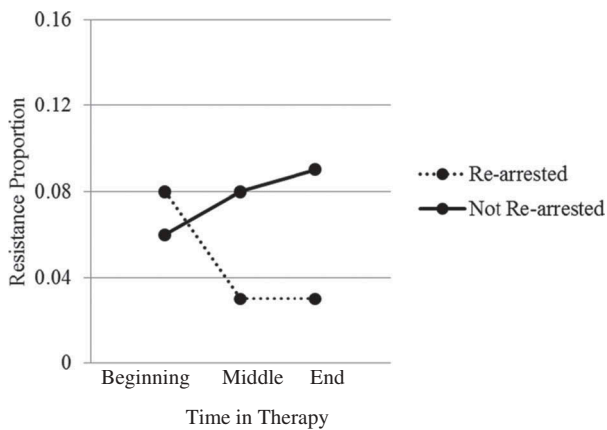


FIGURE 3 Significant linear differences in resistance trajectories by posttreatment desistance status.

from the beginning to the end of treatment (Figure 4). However, when African American youth who desisted at posttreatment were contrasted with all other youth, the

optimal resistance trajectory was characterized by a positive quadratic resistance pattern, $F(1, 39) = 5.31, p = .027, \eta^2 = .12, 95\% \text{ CI } [.01, .28]$. In other words, families of African American desisters tended to show a substantial dip in resistance midway through treatment, followed by an increase near the end of treatment (Figure 5).

At follow-up, the relationships between mean resistance, $F(1, 39) = 4.11, p = .050, \eta^2 = .10, 95\% \text{ CI } [.00, .30]$; linear resistance slope, $F(1, 37) = 1.45, p = .223$; or quadratic resistance slope, $F(1, 37) = .22, p = .640$, and desistance did not differ by ethnicity. However, because visual trends in the data suggested that curvilinear trends might persist over time, especially for African Americans, exploratory tests were run to assess whether patterns evident at posttreatment remained at follow-up. Results showed that families of African Americans who desisted at follow-up were more likely to display a positive quadratic resistance trajectory, $F(1, 39) = 4.61, p = .038, \eta^2 = .11, 95\% \text{ CI } [.00, .26]$, compared with all other families (Figure 6), similar to the pattern at posttreatment. Resistance trajectories did not

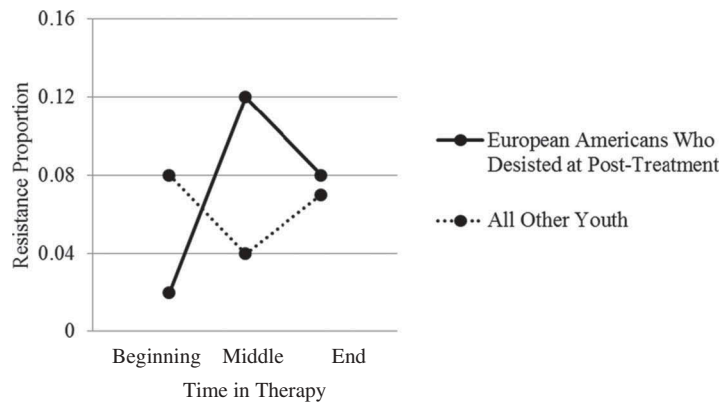


FIGURE 4 Significant quadratic and linear differences in resistance trajectories for families of European Americans who desisted at posttreatment vs. all other youth.

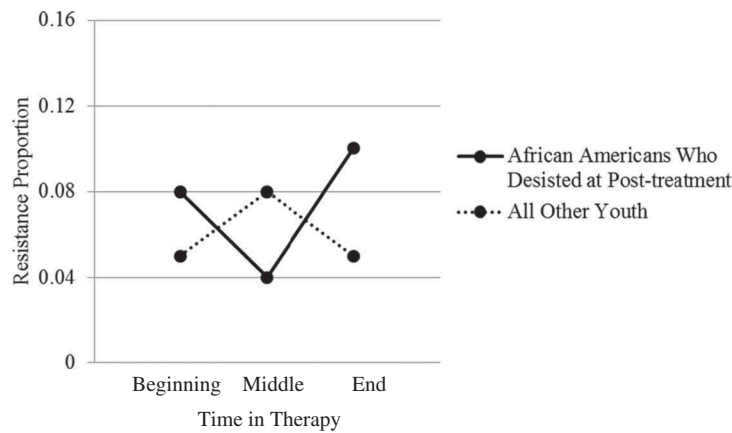


FIGURE 5 Significant quadratic differences in resistance trajectories for families of African Americans who desisted at posttreatment vs. all other youth.

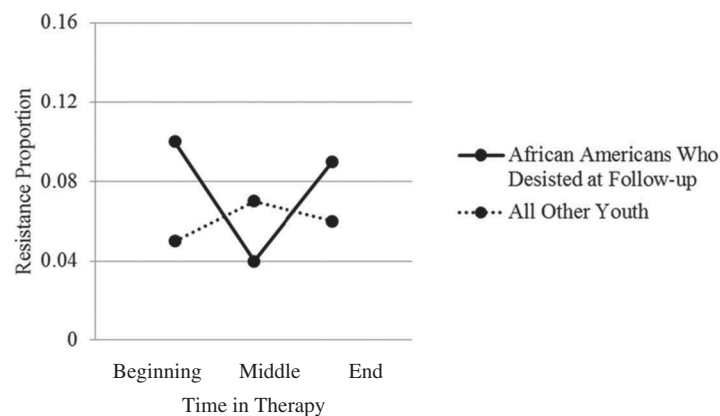


FIGURE 6 Significant quadratic differences in resistance trajectories for families of African Americans who desisted at follow-up vs. all other youth.

differ between families of European American desisters and all other families.

No significant effects were found for drug use. At post-treatment, the relationships between cannabis abstinence and mean resistance, $F(1, 39) = .11, p = .743$; linear resistance, $F(1, 37) = 1.01, p = .321$; and quadratic resistance slope, $F(1, 37) = .37, p = .549$, did not differ by ethnicity. Similarly, at follow-up, the relationships between cannabis abstinence and mean resistance, $F(1, 39) = .16, p = .696$; linear resistance, $F(1, 37) = .58, p = .453$; and quadratic resistance slope, $F(1, 37) = 3.50, p = .069$, did not differ by ethnicity.

DISCUSSION

This preliminary study demonstrates that treatment resistance may function differently by ethnicity. Midway through treatment, European American families showed significantly higher resistance than African American families. Moreover, the overall resistance trajectories and predictive

relationships between resistance and desistance differed by ethnicity. Whereas families of European Americans who desisted displayed the inverted U-shaped resistance trajectory predicted by Chamberlain, Patterson et al. (1984), families of African American desisters showed a U-shaped trajectory. The predictive relationships between resistance trajectories and desistance were of medium-to-large magnitude (J. Cohen, 1988) for both European Americans and African Americans, suggesting that these results may be clinically meaningful. Resistance patterns did not differ significantly between youth who abstained from cannabis versus those who did not.

This study provides some support for the SWT pattern among a subset of families receiving MST. For European American families, an inverted U-shaped resistance trajectory was the dominant pattern, and predicted desistance at post-treatment. This suggests that successful European American clients showed relatively less resistance early in treatment when demands were low, followed by increased resistance midtreatment in response to challenging work, and reduced resistance once clinical gains were achieved. These results

suggest that MST therapists working with European American families should expect more questioning and opposition midway through treatment and interpret such resistance as a natural by-product of the change process.

In contrast, the SWT pattern was not observed for African American families. Rather, a U-shaped resistance trajectory was more likely for African Americans—a pattern also associated with greater desistance in this group at posttreatment and follow-up. Why would families of African Americans who desist display a dip in resistance midway through treatment whereas families of desisting European American youth show the opposite pattern? It is possible that European Americans and African Americans interact differently with mental health care providers and that dissimilar interaction styles predict positive treatment outcomes for clients of different cultural backgrounds. The limited research on race differences in patient–physician interactions suggests that European Americans are more assertive and questioning with their clinicians, whereas African Americans may be more inclined to defer to authority and seek harmonious interactions with providers (Gordon, Street, Sharf, & Soucek, 2006; Peek et al., 2009; Schouten & Meeuwesen, 2006). It could be that, during the most active phases of psychotherapy, African Americans display cooperative, nonresistant behaviors as indicative of active engagement in treatment. For European Americans, however, communicating in an assertive manner may have been coded as “resistant” but also been an indication of active engagement in services and a collaborative give-and-take with therapists. The most noticeable difference in resistance occurred at midtreatment, which suggests that cultural influences on client–provider interactions may be strongest not during the initiation or termination of therapy but during periods when families are focused on active behavior change. This result suggests that therapists should be especially attuned to the impact of cultural factors for ethnic minority clients midway through treatment.

This study had one important result in common with previous research: A flat, low-resistance trajectory did not predict treatment success for either ethnic group. These results suggest that therapists should not view client resistance as a treatment barrier that needs to be eliminated at all cost. Rather, MST therapists should continue working within model guidelines of conceptualizing resistance as an informative process variable and address it with MST-consistent techniques as needed (Huey, Henggeler, Brondino, & Pickrel, 2000). Resistance does not necessarily suggest poor intervention fit but may simply indicate that the clients are engaging in the hard work of making change.

Future Directions

Our preliminary results highlight how treatment processes may differ across ethnic groups. This study provides a launching point for future research that could help illuminate how therapy unfolds for different populations. Studies

with larger samples and repeated measures could use growth modeling to examine how youth, caregiver, therapist, and intervention factors impact resistance. Specifically, it would be helpful to learn how adolescent and caregiver resistance interrelate; how treatment fidelity might affect resistance; and vice versa; and how resistance interacts with other therapy process variables, such as alliance, over time. Finally, future studies should include more frequent measures of resistance throughout therapy in order to confirm whether quadratic patterns, or possibly more complex trajectories, emerge.

Strengths and Limitations

Several limitations warrant caution in interpreting the results of this study. First, the small sample size reduced statistical power, although there was sufficient power to detect medium and large effects. Second, missing data could have biased results in unknown ways; however, we did impute missing data using the expectation-maximization procedure and found that missing data were not related to demographic variables. Third, the simple, dichotomous measurement of ethnicity did not allow for more nuanced analyses of culturally important client variables, such as beliefs about psychotherapy, perceived racism, socioeconomic status, or therapist variables such as cultural sensitivity or competence (Huey et al., 2014; Karlsson, 2005). Finally, this study uses data from a trial of MST conducted within a drug court context. Thus, the generalizability of these results to other treatment contexts is unclear.

A major strength of this study is the focus on ethnic differences, which is rare in therapy process research. Unfortunately, the small body of research on whether ethnicity influences therapy processes has relied heavily on session attendance as a key process measure (e.g., Godley, Hedges, & Hunter, 2011), which is a limitation of the literature. The current study examined a more theoretically salient index of therapy process by investigating client resistance in the context of a family-based treatment. Another strength is the use of observational and archival sources to assess our independent and dependent variables, which eliminates common method variance as an explanation for resistance effects.

Conclusions

This study follows the advice of previous researchers to examine the role of ethnicity in how people change within the context of psychosocial interventions (Fuentes et al., 2005; Leong & Gupta, 2008). The results of this preliminary study have implications, not only for our understanding of resistance in MST but also for how ethnicity and culture should be considered in clinical practice more broadly. It is important that both researchers and clinicians attend to the possibility that change in therapy may develop differently for clients from diverse ethnocultural backgrounds.

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