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Family Functioning and High Risk Adolescents' Aggressive Behavior: Examining Effects by Ethnicity

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Abstract

The relationship between family functioning and adolescents' physical aggression has been well established, but whether these relationships might differ by ethnicity has received less attention. Ethnic variations may be important for targeting prevention programs to specific youth and families. This study examined the longitudinal relationship between family cohesion, parental monitoring, and physical aggression using data from the Multisite Violence Prevention Project sample of high-risk youth (elevated aggression). Participants were 1,232 high-risk middle school students (65% male; 70% African American; 15% Hispanic). Meaningful demographic variations were identified. After controlling for intervention condition and study site, family cohesion was significantly negatively related to physical aggression, more so for Hispanic youth. Parental monitoring was negatively associated with physical aggression for African American youth only. Our findings point to the importance of developing culturally sensitive family interventions to prevent physical aggression in middle school.

Keywords

physical aggression; family cohesion; parental monitoring; ethnicity

Introduction

Interventions that aim to prevent aggressive behavior in adolescence often target aspects of family functioning (Kumpfer & Alvarado, 2003; Henry, Tolan, & Gorman-Smith, 2001; Tolan, Gorman-Smith, & Henry, 2004). Two major aspects of family functioning are often

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targeted in intervention programs (1) family cohesion, which is a felt sense of shared affection, support, and caring within the family (Moos & Moos, 1976); and (2) parental monitoring, which is "a set of correlated parenting behaviors involving attention to and tracking of the child's whereabouts, activities, and adaptations" (Dishion & McMahon, 1998; p. 61). Interventions that include a focus on family functioning have been shown to prevent a number of problem behaviors in adolescence, including delinquency and aggression (Bradshaw, Zmuda, Kellam & Ialongo, 2009; Conduct Problems Prevention Research Group [CPPRG], 2011; Gorman-Smith, Tolan, Henry, Quintana, Lutovsky, & Leventhal, 2007; Kumpfer & Alvarado, 2003).

Ethnic minority adolescents and families living in the United States have a unique cultural experience and face particular challenges (Coll & Pachter, 2002; Coll et al., 1996). The ability to develop and implement culturally sensitive intervention programs hinges on the ability to identify unique predictors of minority adolescents' aggressive behaviors (Hill, 2006; Kumpfer, Alvarado, Smith, & Bellamy, 2002). However, much of what is known about the relationship between family functioning and the development of aggressive behavior is drawn from samples of White adolescents. The experiences of African American and Hispanic adolescents are often studied in the context of high-risk high poverty environments (Hill, 2006, Tolan et al., 2004). The purpose of this study is to examine the links between two commonly targeted aspects of family functioning—family cohesion and parental monitoring—and adolescents' aggressive behavior for subgroups differentiated by ethnicity in a large sample of African American, Hispanic, and White adolescents drawn from 4 communities in the United States.

Garcia-Coll's integrative theory for the study of minority children highlights the importance of culture in youth development (Coll et al., 1996). In this model, culture is directly related to both family dynamics and children's outcomes. Culture is also indirectly related to children's outcomes through its effects on family dynamics, underscoring the unique importance of culture in the relationship between family functioning and youth development. Ethnic minority families living in the United States face unique challenges and experiences (Coll & Pachter, 2002). Research on Hispanic families consistently indicates the importance of family and consistently identifies Hispanic families as more family oriented than White families (Fuligni, 1998; Fuligni, Tseng, & Lam, 1999; Harwood, Leyendecker, Carlson, Asencio, & Miller, 2002). African American families face particular challenges with regards to structural racism and discrimination, and African American parents often endorse parenting styles that are "no-nonsense" or authoritarian (Hill, Murry, & Anderson, 2005; McAdoo, 2002). This parenting style is characterized by greater levels of parental authority and the use of more harsh disciplinary practices (Baumrind, 1972; Hill et al., 2005).

Much of what is known about the etiology of aggression in African American and Hispanic adolescents comes from studies of high-risk inner city youth and families (Hill, 2006; Tolan et al., 2004). This is problematic because ethnicity is often confounded with socioeconomic status (SES) in these studies (Hill, 2006). Thus, research is needed that examines family functioning, adolescents' behavior, and ethnicity across a broad range of SES levels in order to more accurately disentangle the unique contributions of ethnicity from the contributions

of SES to the relationship between family functioning and adolescents' behavioral development (Hill, 2006).

Family cohesion has been extensively studied and has emerged as one of the aspects of family relationships that is most consistently linked to aggressive behavior in childhood and adolescence (Gorman-Smith & Tolan, 1998; Lindahl, 1998). For example, in a sample of high-risk inner city Latino and African American adolescent boys (N = 362) participating in the Chicago Youth Development Study (CYDS), family cohesion was significantly negatively related to aggressive behavior (Tolan, Gorman-Smith, Huesmann, & Zelli, 1997) and violent delinquency (Gorman-Smith, Tolan, Zelli, & Huesmann, 1996). Tolan and colleagues (1997) controlled for caretaker's marital status, household income, and ethnicity. Gorman-Smith and colleagues (1996) examined effects by ethnicity and reported that the relationship between family cohesion and violent delinquency is significant for both Latino and African American boys. However, Gorman-Smith and colleagues (1996) pointed to the importance of further examination and replication of the work on variation in effects by ethnicity within other datasets. One construct of family relationships, beliefs about family (i.e., importance of family relationships and family beliefs about development subscales), was related to youths' violence in opposite directions for African American and Latino youth (Gorman-Smith et al., 1996).

In a sample of 823 children oversampled for low birth weight, mother's report of family cohesion at age 6 years significantly negatively predicted externalizing problems at age 11 (Lucia & Breslau, 2006). Lucia & Breslau (2006) controlled for urban vs. suburban residence. The urban sample was predominantly Non-White (approximately 80%) and the suburban sample was predominantly White (approximately 95%). Andreas and Watson (2009) used a representative community sample (N = 440) to examine the relationship between family environment and aggressive behavior trajectories from age 7 to age 19 years; higher levels of family cohesion were related to lower growth in aggression among the youth most at risk for aggressive behavior. The sample had approximately even proportions of children that were African American, European American, and Hispanic, and distributions on socioeconomic status (SES) were also approximately evenly distributed. They reported no significant variation in the relationship between family cohesion and aggression by subgroups differentiated by ethnicity or SES. Andreas and Watson (2009) hypothesize that this lack of variation may be due to the community sampling approach, as compared to the high-risk sampling approach.

Low levels of parental monitoring have also been extensively linked to the development of aggressive behavior (Crouter & Head, 2002; Dishion & McMahon, 1998; Patterson & Stouthamer-Loeber, 1984). This finding has been replicated in a number of studies using diverse samples of urban at-risk and low-risk youth (Fulkerson, Pasch, Perry, & Komro, 2008; Jacobson & Crockett, 2010; Laird, Pettit, Bates & Dodge, 2003; Patterson & Stouthamer-Loeber, 1984; Patterson, Reid, & Dishion, 1998). However, it is not well known how the association between parental monitoring and aggression varies by ethnicity (Rowe, Vazsonyi, & Flannery, 1994). There is some evidence that parenting practices (e.g., parental monitoring) in particular may have differential effects on the development of problem behavior for different ethnic subgroups (Deater-Deckard & Dodge, 1997). For example,

Deater-Deckard and colleagues (Deater-Deckard, Dodge, Bates, & Pettit, 1998) examined the relationship between parenting risk factors and the development of externalizing problems in a representative community sample of 466 European American and 100 African American children. Parenting risk was measured using parental reports on eight parenting risks, including (1) amount of nonmaternal childcare, (2) biological father's involvement, (3) parental conflict, (4) exposure to violence, (5) harsh discipline, (6) physical harm, (7) positive parenting, and (8) mother's attitudes towards aggression. Deater-Deckard and colleagues (1998) reported that higher parenting risk was related to higher externalizing problems, but only for European American children and not for African American children. Similarly, using the same sample, mother's report of physical discipline was related to higher levels of externalizing behaviors for European American adolescents, but to lower levels of externalizing behaviors for African American adolescents (Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004).

The Current Study

The current study builds from theory and prior research on family functioning and adolescents' aggression by focusing on potential variation in effects by ethnic subgroups (Coll et al., 1996; Hill, 2006). Using a diverse sample of high-risk adolescents in 37 schools from four communities across the United States, we address two research questions. First, are there differences in the mean levels of family cohesion and parental monitoring for African American, Hispanic, and White families? Second, are there ethnic differences in the correlations between family cohesion and parental monitoring and adolescents' aggression for African American, Hispanic, and White adolescents?

Method

Participants

Participants were 1,232 high-risk middle school students (65% male) participating in the Multisite Violence Prevention Project (MVPP), a 5 year project focused on the use of targeted and universal interventions (see Henry, Farrell, & Multisite Violence Prevention Project [MVPP], 2004 for details on intervention and study design) to reduce aggression and violence among sixth grade students (see MVPP, 2004 for details). Data collection for MVPP began in 2001, and data were collected from two successive cohorts of youth. At the beginning of sixth grade, 44% of families reported a household income below the calculated poverty threshold for their family (calculated based on national census data). Sixty percent of families reported an adult male present in the household. The sample was predominantly African American (70%). Fifteen percent of the sample was Hispanic and 15% was White. See Table 1 for a summary of demographic characteristics of this sample. This study used data from Wave 1 (W-1; baseline; fall of sixth grade) and Wave 6 (W-6; spring of eighth grade). Eighty-four percent (n = 1,033) of students completed W-6 surveys.

Procedure

A total of 37 schools were selected to participate in this study. Schools were located across four study sites: Durham, NC (n = 8 schools), Athens, GA (n = 9 schools), Chicago, IL (n =

12 schools), and Richmond, VA (n = 8 schools). Within site, schools were randomly assigned to one of four conditions: universal school-wide implementation of Guiding Responsibility and Expectations for Adolescents for Today and Tomorrow (GREAT; MVPP, 2004), a targeted intervention of the GREAT program, a combined universal and targeted intervention, and a treatment as usual control condition.

Two samples were drawn: a general population sample and a high-risk sample. Here we report on the high-risk sample because parental reports of family functioning were only gathered for the high-risk students. Adolescents were selected for the high-risk sample and the selective intervention based on teacher's nominations on two criteria: (1) a history of aggressive and disruptive behavior in the classroom and (2) the student's relative level of influence on other students. Computerized surveys were administered to all adolescents in the targeted condition and to a random sample of adolescents outside of the targeted population. Parents of adolescents in the targeted population also completed interviews.

Measures

Aggressive behavior—Aggressive behavior was measured at W-1 and W-6 using the *Problem Behavior Frequency Scale* (PBFS; Farrell, Kung, White, & Valois, 2000), a 47-item scale assessing aggression, victimization, drug use, and delinquency within the past 30 days. In this study, we used the physical aggression scale, which includes 7 items measuring violent behaviors (e.g., "been in a fight in which someone was hit" and "shoved or pushed another kid"). Responses were rated on a scale of 1 (*never*) to 6 (*20 times or more*). The aggressive behavior subscale demonstrates good reliability with urban populations (α = .80; Miller-Johnson, Sullivan, Simon, & MVPP, 2004). W-6 aggressive behavior was positively skewed and was transformed using a $\log_{10}$ transformation.

Family cohesion—Family cohesion was measured at W-1 and W-6 using the *Family Relationships Scale* (FRS; Tolan et al., 1997), a 35-item measure assessing family structure, beliefs, and cohesion. For this project, we used the family cohesion subscale, comprised of 12 items (e.g., "Family members feel very close to one another" and "We can easily think of things to do together as a family"). Scores were reported on a 4-point Likert scale indicating the degree to which each participant believed the item was true for his or her family. Mean parent and adolescent composite scores were used for this analysis (Tolan et al., 1997). Higher scores indicate higher levels of family cohesion. The family cohesion scale demonstrates good reliability with our sample (α = .76; Miller-Johnson et al., 2004). Family cohesion at W-1 was positively correlated with family cohesion at W-6 (r = 0.38, p < .001).

Parental monitoring—Parental monitoring was measured at W-1 and W-6 using adolescent and parental report on questions from the *Pittsburgh Youth Survey* (PYS; Thornberry, Huizinga, & Loeber, 1995). Factor analysis revealed two latent constructs: discipline and monitoring/involvement (Gorman-Smith et al., 1996). The monitoring construct has been extensively linked to aggression and was used in the current study (see Gorman-Smith et al., 1996). Adolescents and parents responded to 12 items indicating their perceptions of monitoring (e.g., "How often does a parent talk to you about what you had actually done during the day?" and "In the past 30 days, how often did a parent have time to

listen to you when you wanted to talk with one of them?"). Higher scores indicate higher levels of monitoring. The monitoring scale shows good reliability in our sample (α = .85). Parental monitoring at W-1 was positively correlated with parental monitoring at W-6 (r = 0.41, $p < .001$).

Ethnicity—Ethnicity was measured at W-1. Two dummy codes were created that compared White adolescents (1) and Hispanic adolescents (1) to African American adolescents (0).

Poverty—Poverty was measured at W-1 by asking parents to report their household income and the size of their family. For each participant, the national census was used to create a poverty threshold. A binary variable was computed indicating whether the participant's family fell below their poverty threshold (1) or above their poverty threshold (0).

Household composition—Household composition was measured at W-1 using a binary indicator of whether an adult male lived in the home (1).

Covariates—Since we are not interested in the effects of the intervention in this study, intervention condition is included as a covariate. Three dummy codes are included that compare each intervention condition to the comparison group (0). Study site is also included as a covariate. Three dummy codes are included for the four study locations.

Analytic Procedure

Three adolescents were dropped from analyses because they had missing values for the school indicator. Sixteen percent of adolescents (n = 202) had missing data on at least one of the variables included in this study. Missing data were handled using multiple (five) imputations in SAS PROC MI (Schafer, 1997; Schafer & Graham, 2002). Coefficients were pooled using PROC MIANALYZE. The final analysis sample consisted of 1,232 adolescents in 37 schools.

To answer our first research question, we examined mean levels of family cohesion and parental monitoring by ethnicity. We used one-way analysis of variance (ANOVA) models to test for statistical differences in mean scores. To answer our second research question, we estimated a series of multilevel models (Raudenbush & Bryk, 2002) using SAS PROC MIXED (Singer, 1998). Students are nested within schools, so all analyses are clustered by school (level 2) with a random intercept at the school level. First, we ran an unconditional means model (intercept only). There was significant variability in the school means and in the individual means within schools. Less than 5% of the variance in physical aggression occurred between schools (Raudenbush & Bryk, 2002). We next ran a model including fixed effects for study site and intervention condition (level 2 fixed effects). Due to the large proportion of the variance in school-level physical aggression accounted for by the six fixed effects, we did not allow level 1 (individual level) predictors to vary across schools.

Results

Table 1 summarizes the means, distribution characteristics, and correlations among the predictors and outcome used in this study. Table 2 summarizes the distributions of demographic characteristics, family functioning, and physical aggression by African American, Hispanic, and White ethnicity. There was a significant difference in the proportion of participants' families reporting low SES, with fewer White families reporting low SES (30%) compared to African American (47%) and Hispanic (46%) families (χ^2 = 14.40, *df* = 2, $p < .001$). There was also a significant difference in the proportion of participants' families reporting an adult male present in the household, with fewer African American families reporting an adult male present (56%) compared to Hispanic (77%) and White (75%) families (χ^2 = 45.17, *df* = 2, $p < .001$). Hispanic youth reported significantly higher levels of physical aggression (*M* = 1.91, *SD* = 0.94) than White youth (*M* = 1.67, *SD* = 0.82) at W-6 (*F* [2, 1229] = 3.97, $p < .05$). There were no significant differences in mean levels of family cohesion and parental monitoring at W-1 or W-6 by ethnicity. There were also no significant differences in W-1 physical aggression by ethnicity.

Table 3 summarizes the results from the hierarchical linear regression analyses predicting physical aggression at W-6. After controlling for study site, intervention condition, SES, having an adult male present in the home, and baseline levels of physical aggression, family cohesion was significantly negatively related to aggression (*B* = −0.04, $p < .01$). The main effect for parental monitoring did not significantly predict aggression at W-6. In the final model, the interactions between monitoring and Hispanic ethnicity (*B* = 0.11, $p < .01$) and between cohesion and Hispanic ethnicity (*B* = −0.08, $p < .05$) were both associated with aggression in adolescence. The interactions between monitoring and White ethnicity and between cohesion and White ethnicity did not significantly predict aggression at W-6.

Following Preacher, Curran, and Bauer (2006), we plotted each significant interaction effect to facilitate interpretation. Figure 1 displays the results for the interaction between Hispanic ethnicity and parental monitoring. There is no significant relationship between parental monitoring and physical aggression for Hispanic adolescents (*B* = 0.01, $p > .05$), but there is a significant negative relationship between parental monitoring and physical aggression for African American adolescents (*B* = −0.04, $p < .01$). Figure 2 displays the results for the interaction between Hispanic ethnicity and family cohesion. Family cohesion is more strongly negatively related to physical aggression for Hispanic adolescents (*B* = −0.11, $p < .001$), compared to African American adolescents (*B* = −0.04, $p < .01$).

Discussion

This study examined ethnic variations in family cohesion, parental monitoring, and adolescents' aggressive behavior in middle school. The link between family cohesion and aggression and the link between parental monitoring and aggression are well established (Crouter & Head, 2002; Dishion & McMahon, 1998; Gorman-Smith & Tolan, 1998; Lindahl, 1998). However, few studies examine ethnic variations in these relationships (Kumpfer & Alvarado, 2003; Rowe et al., 1994). This limitation in prior research hinders the development and implementation of culturally sensitive prevention programs (Hill,

2006; Kumpfer et al., 2002). Minority parents and adolescents face unique challenges, and culture plays an important role in family functioning and adolescent development (Coll et al., 1996; Coll & Pachter, 2002; Harwood et al., 2002; Hill, 2006; McAdoo, 2002). In this study, we found that mean levels of family cohesion and parental monitoring did not differ between African American, Hispanic, and White families. The relationship between parental monitoring and physical aggression was moderated by ethnicity, such that there was no significant relationship between parental monitoring and physical aggression for Hispanic adolescents, but there was a significant negative relationship between parental monitoring and physical aggression for African American adolescents. The relationship between family cohesion and physical aggression was also moderated by ethnicity, such that family cohesion was more strongly negatively related to physical aggression for Hispanic adolescents than for African American adolescents.

The significant relationship between family cohesion and physical aggression is consistent with a number of previous studies indicating the protective role of family cohesion (Andreas & Watson, 2009; Gorman-Smith et al., 1996; Gorman-Smith et al., 2000; Lucia & Breslau, 2006; Tolan et al., 1997). In our study, the negative association was stronger for Hispanic adolescents than African American adolescents. This finding is consistent with prior research indicating the importance of family in the lives of Hispanic adolescents (Fuligni, 1998; Fuligni et al., 1999; Harwood et al., 2002). Family cohesion may be particularly important for Hispanic adolescents due to the maintenance of cultural norms across generations (Fisher, Jackson, & Villarruel, 1998; Phinney, Ong, & Madden, 2000): there is a strong norm for Hispanic adolescents to have a belief system that is family oriented, valuing loyalty, solidarity, and “oneness” with family (Cauce & Rodriguez, 2000; Cortes, 1995). This family orientation is highly consistent with family cohesion (Moos & Moos, 1976). Hispanic adolescents in the U.S. also face specific acculturation challenges (see Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005 for a review). Home and family life may be particularly important for Hispanic adolescents’ development because cultural values and beliefs are shared among family members, but Hispanic adolescents may face a number of cultural differences when interacting with peers at school (LaFromboise, Coleman, & Gerton, 1993). Importantly, while the relationship between family cohesion and aggression did vary by subgroup, mean levels of family cohesion did not differ across subgroups, giving us more confidence that our findings are actually attributable to ethnic differences in the relationship between family cohesion and the development of adolescents’ physical aggression.

Our findings of ethnic variation in the relationship between family cohesion and physical aggression are in contrast to two prior studies reporting no ethnic variation (Andreas & Watson, 2009; Gorman-Smith et al., 1996). Gorman-Smith and colleagues used data from the Chicago Youth Development Study (CYDS), which oversampled for aggression and was exclusively composed of Latino and African American adolescent boys residing in inner-city (high poverty, high-crime) communities. Thus, it is possible that, among adolescents residing in the highest-risk communities, ethnic group differences in the relationship between family processes and physical aggression are not significant (Tolan et al., 2004). However, the CYDS sample was considerably smaller than the present sample, perhaps reducing the power to detect ethnic group differences.

Parental monitoring has been extensively linked to lower levels of aggression in a number of studies (Crouter & Head, 2002; Dishion & McMahon, 1998; Fulkerson et al., 2008; Jacobson & Crockett, 2010; Laird et al., 2003; Patterson et al., 1998). In our study, we found that parental monitoring played a protective role in the development of aggressive behavior for African American adolescents. This finding is consistent with the results from Lansford and colleagues (2004), who reported that mothers' report of physical discipline protected against the development of externalizing behaviors in African American adolescents, but was related to higher levels of externalizing behaviors for European American adolescents. Deater-Deckard and Dodge (1997) theorized that cultural context plays an important role in the meaning and interpretation of disciplinary practices, which is consistent with Coll's Integrative Theory (Coll et al., 1996). If parental monitoring occurs in a normative context where the meaning is consistent with caring and accompanied by parental warmth, it may be interpreted as more positive by adolescents (Deater-Deckard & Dodge, 1997) and may ultimately lead to lower levels of aggressive behavior. This is consistent with research reporting that African American parents are more likely to be authoritarian in parenting style (Baumrind, 1972; Hill et al., 2005).

Our analyses controlled for SES and household composition, providing further confidence that our results are due to ethnic variations, rather than SES or household composition variations. However, it is important to note that a larger proportion of Hispanic families than African American families reported having an adult male present in the home. It may be that family cohesion is particularly important for adolescents from dual parent households. For example, perhaps the felt sense of low cohesion is more negative when households are intact because the negative experience may be more salient with parental arguments and/or fighting (Amato, 2001). Additionally, parental monitoring may be particularly important for adolescents being raised by a single caretaker because adolescents may spend more time participating in unsupervised activities with peers, which may be particularly risky (Dishion, Andrews, & Crosby, 1995; Henneberger, Durkee, Truong, Atkins, & Tolan, 2013). When direct supervision is not possible, parental monitoring may become particularly important to reduce adolescents' risk for aggressive behaviors (Demuth & Brown, 2004; Jacobson & Crockett, 2000). Further research is needed in order to disentangle the effects of ethnicity and living in a single parent household on the relationship between family processes and the development of aggressive behavior in adolescence (see Blum, Beuhring, Shew, Bearinger, Sieving, & Resnick, 2000).

Parenting and adolescents' development occur simultaneously and mutually influence one another (Bell, 1979; Boeninger, Masyn, & Conger, 2013; Ge, Conger, Cadoret, Neiderhiser, Yates, Troughton, & Stewart, 1996; Laird et al., 2003; Pettit & Laird, 2002; Riina & McHale, 2013). When adolescents are aggressive, parenting and family processes are disrupted, which leads to "child effects" on parents and family (Lytton, 1990; Sampson & Laub, 1994; West & Farrington, 1973). It follows that family cohesion and parental monitoring may change as a result of adolescents' aggressive behavior, rather than vice versa. We ran post hoc analyses in order to be more confident in the direction of the relationships reported in this study. Post hoc analyses indicated that initial levels of adolescents' physical aggression did not significantly predict change in levels of family

cohesion ($B = -0.02$, $p > .05$) or parental monitoring ($B = -0.04$, $p > .05$) from W-1 to W-6. These results give us confidence in the direction of the relationships reported.

The findings from this study should be interpreted in light of the following limitations. First, our sample was predominantly African American (70%). Thus, our power to detect group differences between African American, Hispanic, and White adolescents may have been limited. This may be particularly relevant for the findings on moderation of the effects of parental monitoring. Multicollinearity is likely not a factor due to our large sample size, but multicollinearity can arise when testing for group differences with uneven group sizes. In this study, we tested four interaction effects. It is possible that some interactions could be significant purely by chance. After applying a Bonferonni correction for four interaction effects, the significance level that would indicate a significant relationship would be $p < 0.0125$ (0.05/4 interaction effects). The interaction between parental monitoring and Hispanic ethnicity meets that criterion, whereas the interaction between family cohesion and Hispanic ethnicity does not. Our findings are consistent with the theoretical literature identifying the unique challenges that minority families face in the United States (Coll & Pachter, 2002) and pointing to the interrelation of culture, ethnicity, family functioning, and adolescent development (Coll et al., 1996; Hill, 2006). Therefore, we believe these findings to be substantively meaningful. Second, our study is nested within a larger randomized controlled trial of the effectiveness of an intervention, with random assignment occurring at the level of the school. We included six fixed-effect variables, accounting for intervention condition and study site. Inclusion of the fixed effects reduced the variability in mean physical aggression between schools to be nonsignificant, making us more confident in our results at the individual level within schools. Third, there were significant differences between African American, Hispanic, and White families in SES and household composition. Notably, our moderation findings are for African American and Hispanic adolescents, and the proportion of families reporting low SES was similar for these two ethnic subgroups, which strengthens our ability to draw conclusions about the effects of ethnicity (Hill, 2006). However, a greater proportion of African American families reported living without a male in the household, which limits our ability to disentangle the effects of household composition and ethnicity on the relationship between family functioning and aggression.

Our findings have a number of implications for the prevention of physical aggression among middle school adolescents. Specifically, our findings indicate the importance of developing and implementing culturally sensitive programs (Hill, 2006; Kumpfer et al., 2002). Family cohesion is an important target for prevention programs across subgroups, but especially for Hispanic adolescents. Therefore, family cohesion should be targeted in universal prevention and intervention programs and should be an integral focus in programs targeted towards Hispanic adolescents. Parental monitoring appears to be an important target for prevention programs specifically for African American adolescents. Notably, there was no detrimental effect of parental monitoring for White or Hispanic adolescents. Thus, parental monitoring may also be appropriate for universal prevention programming. However, it may be more cost effective to target parental monitoring to prevent physical aggression specifically in African American communities.

Conclusion

This study reported on ethnic subgroup differences in the relationship between family functioning and physical aggression in middle school adolescents. We found that family cohesion served an overall protective effect, but was particularly strong for Hispanic adolescents. We also found that parental monitoring served a protective effect, specifically for African American adolescents. Coll's Integrative Theory for the Study of Minority Children points to the impact of minority culture on family dynamics, which in turn has effects on adolescents' development. Our findings provide further evidence for the interrelation of culture, ethnicity, family functioning, and adolescent development (Coll et al., 1996; Coll & Pachter, 2002; Hill, 2006). Overall, this study points to the importance of targeting family relationships and parenting practices for specific ethnic subgroups to prevent physical aggression in middle school (Dishion & McMahon, 1998; Kumpfer et al., 2002).

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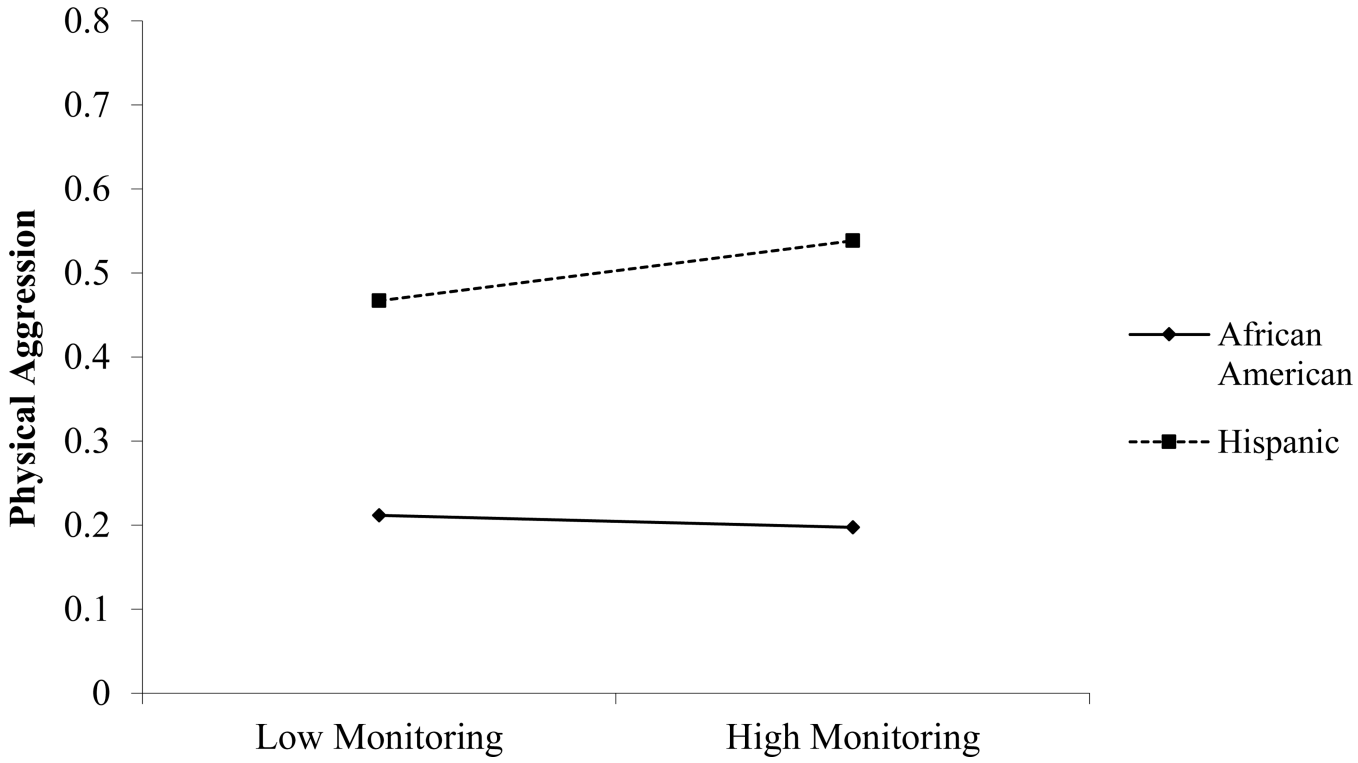

Figure 1.

Interaction Between Ethnicity and Monitoring Predicting Physical Aggression in Adolescence

Notes. There is no significant relationship between parental monitoring and physical aggression for Hispanic adolescents ($B = 0.01$, $p > .05$), whereas there is a significant negative relationship between parental monitoring and physical aggression for African American adolescents ($B = -0.04$, $p < .01$). Monitoring is measured at W-1 using combined parental and adolescent-report on the *Pittsburgh Youth Survey* (PYS; Thornberry et al., 1995). Aggression is measured at W-6 using adolescent-report on the *Problem Behavior Frequency Scale* (PBFS; Farrell et al., 2000).

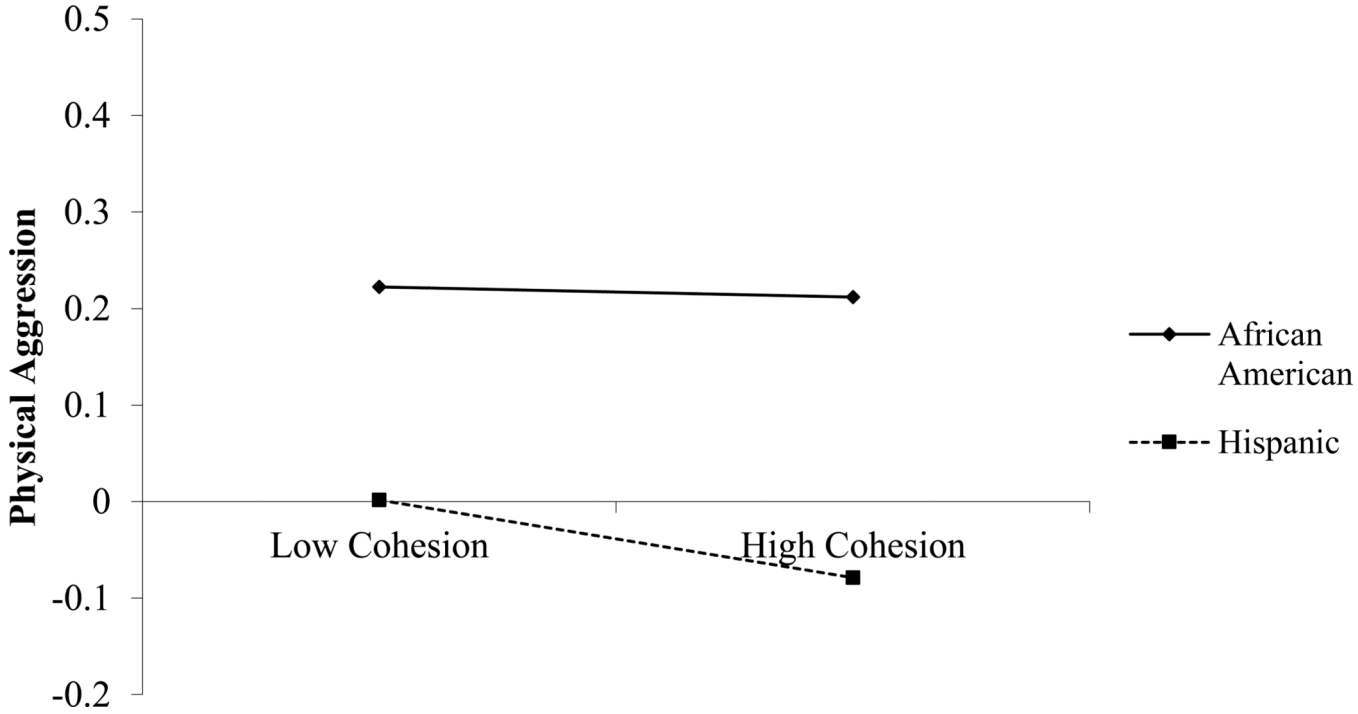

Figure 2.

Interaction Between Ethnicity and Cohesion Predicting Physical Aggression in Adolescence

Notes. Family cohesion is more strongly negatively related to physical aggression for Hispanic adolescents ($B = -0.11$, $p < .001$), when compared to African American adolescents ($B = -0.04$, $p < .01$). Cohesion is measured at W-1 using combined parental and adolescent-report on the *Family Relationships Scale* (FRS; Tolan et al., 1997). Aggression is measured at W-6 using adolescent-report on the *Problem Behavior Frequency Scale* (PBFS; Farrell et al., 2000).

Table 1

Descriptive Statistics and Correlations for Demographics, Family Functioning, and Physical Aggression

	N **(%)**	***M*** **(*SD*)**	**1.**	**2.**	**3.**	**4.**
Demographics						
Low SES	543 (44)					
African American	862 (70)					
Hispanic	184 (15)					
White	186 (15)					
Adult Male Present	736 (60)					
Family Functioning						
1. Cohesion		3.12 (.43)	.			
2. Monitoring		3.02 (.43)	.49***	.		
Physical Aggression						
3. Aggression W-1		1.81 (.84)	−.19***	−.18***	.	
4. Aggression W-6		1.83 (.95)	−.10***	−.07*	.31***	.

Notes. W-1 = Wave 1; baseline; fall of sixth grade. W-6 = Wave 6; spring of eighth grade. Low SES indicates that the individual's family is below the poverty line. Cohesion is measured at W-1 using combined parental and adolescent-report on the *Family Relationships Scale* (FRS; Tolan et al., 1997). Monitoring is measured at W-1 using combined parental and adolescent-report on the *Pittsburgh Youth Survey* (PYS; Thornberry et al., 1995). Aggression at W-1 and W-6 is measured using adolescent-report on the *Problem Behavior Frequency Scale* (PBFS; Farrell et al., 2000).

* $p < .05$;

*** $p < .001$.

Table 2

Descriptive Statistics for Demographics, Family Functioning, and Physical Aggression by Ethnicity

	African American	**Hispanic**	**White**
	***N* = 862 (70%)**	***N* = 184 (15%)**	***N* = 186 (15%)**
Demographics	*N* (%)	*N* (%)	*N* (%)
Low SES	403 (47)[a]	85 (46)[b]	55 (30)[ab]
Adult Male Present	479 (56)[ab]	141 (77)[a]	139 (75)[b]
Family Functioning	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
W-1 Cohesion	3.13 (0.44)	3.10 (0.44)	3.09 (0.45)
W-1 Monitoring	3.02 (0.44)	3.00 (0.43)	3.00 (0.43)
W-6 Cohesion	2.98 (0.48)	2.96 (0.45)	2.95 (0.47)
W-6 Monitoring	2.91 (0.54)	2.89 (0.48)	2.96 (0.46)
Physical Aggression	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
W-1	1.81 (0.84)	1.86 (0.84)	1.76 (0.86)
W-6	1.85 (0.96)	1.91 (0.94)[a]	1.67 (0.82)[a]

Notes. Superscripts indicate significant differences between ethnic groups. Low SES indicates participant's family is below the poverty line. W-1 = Wave 1; baseline; fall of sixth grade. W-6 = Wave 6; spring of eighth grade. Cohesion is measured using combined parental and adolescent-report on the *Family Relationships Scale* (FRS; Tolan et al., 1997). Monitoring is measured using combined parental and adolescent-report on the *Pittsburgh Youth Survey* (PYS; Thornberry et al., 1995). Physical aggression is measured using adolescent-report on the *Problem Behavior Frequency Scale* (PBFS; Farrell et al., 2000).

Table 3

Prediction of Physical Aggression in Adolescence (W-6) by Demographics and Family Functioning

	***B (SE)* Enter**	***B (SE)* Final**
Hispanic	−0.00 (0.02)	−0.00 (0.02)
White	−0.02 (0.02)	−0.02 (0.02)
Low SES	−0.02 (0.01)	−0.02 (0.01)
Adult Male Present	−0.01 (0.01)	−0.01 (0.01)
Family Cohesion	−0.04 (0.01)**	−0.02 (0.02)
Parental Monitoring	−0.01 (0.01)	−0.01 (0.02)
W-1 Physical Aggression	0.07 (0.01)***	0.07 (0.01)***
Cohesion × Hispanic		−0.08 (0.04)*
Cohesion × White		0.04 (0.04)
Monitoring × Hispanic		0.11 (0.04)**
Monitoring × White		0.02 (0.04)

Notes. Analyses controlled for study site using 3 dummy variables (4 study sites) and controlled for treatment condition using 3 dummy codes (4 treatment conditions). Hispanic and White ethnicity are dummy coded in comparison to African American ethnicity. Low SES is dummy coded such that (1) indicates participant's family is below the poverty line. Adult male in the household is coded such that presence of an adult male = 1. Cohesion is measured at W-1 using combined parental and adolescent-report on the *Family Relationships Scale* (FRS; Tolan et al., 1997). Monitoring is measured at W-1 using combined parental and adolescent-report on the *Pittsburgh Youth Survey* (PYS; Thornberry et al., 1995). Aggression at W-1 and W-6 is measured using adolescent-report on the *Problem Behavior Frequency Scale* (PBFS; Farrell et al., 2000). W-1 = Wave 1; baseline; fall of sixth grade. W-6 = Wave 6; spring of eighth grade.

* $p < .05$;

** $p < .01$;

*** $p < .001$.