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# Developmental Trajectories of African American Adolescents' Family Conflict: Differences in Mental Health Problems in Young Adulthood

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## Abstract

Family conflict is a salient risk factor for African American adolescents' mental health problems. No study we are aware of has estimated trajectories of their family conflict and whether groups differ in internalizing and externalizing problems during the transition to young adulthood, a critical antecedent in adult mental health and psychopathology. As hypothesized, latent class growth analysis approximated four developmental trajectories of family conflict during high school for 681 African American adolescents (49% boys). Trajectory classes differed in anxiety, depressive symptoms, and violent behavior at age 20, supporting expectations that adolescents demonstrating elevated levels and atypical trajectories of family conflict in high school would report greater mental health problems as young adults. Family conflict jeopardizes African American adolescents' transition to young adulthood by contributing to mental health problems.

### Keywords

African American; family conflict; adolescence; young adulthood; internalizing; externalizing

Family conflict is a salient psychosocial stressor in adolescence and young adulthood (Laursen & Collins, 2009). Adolescents from high-conflict families are at risk of experiencing difficulties coping with stress and mental health problems during the transition to young adulthood (Masten et al., 2004). African American (AA) adolescents report more family conflict than their Caucasian peers, suggesting that they are at greater risk for these negative outcomes (Paschall, Ennett, & Flewelling, 1996). No study we are aware of has examined changes in AA adolescents' family conflict over time in relation to their future mental health. In the following, we review transformations in family conflict during adolescence and their effects on internalizing and externalizing problems in young adulthood. We then describe a study that examines trajectories of AA adolescents' family conflict during high school and whether groups differ in internalizing and externalizing problems at age 20.

Key changes in the family system during adolescence center on autonomy support, harmony or connectedness, and conflict (Collins & Steinberg, 2006). Adolescents gradually spend less time with family as they strive for autonomy and renegotiate familial roles and responsibilities in accord with their growing independence (Eccles, Early, Fraser, Belansky,

McCarthy, 1997; Steinberg et al., 2006). Attempts to establish independence often exacerbate family conflict, particularly in early adolescence when desire for autonomy and autonomy seeking behavior increase in conjunction with peer orientation and self-centered thinking (Eccles et al., 1993; Laursen & Collins, 2009). The frequency of parent–adolescent conflict decreases after peaking in early adolescence, whereas the emotional intensity increases up to middle adolescence and then stabilizes (Laursen, Coy, & Collins, 1998). Mother–child conflict peaks during the early and middle adolescent years due largely to disjunctions between parental control and adolescent autonomy (Eccles et al., 1993). Frequent, high-intensity family conflict propagated by the popular belief that adolescence is a time of storm-and-stress only applies to a subset of families and is not normative (Laursen & Collins, 2009); however, arguments with friends and family occur more frequently during adolescence than other developmental phases (Collins & Steinberg, 2006), which may contribute to subsequent mental health problems.

## Family Conflict's Effects on Mental Health Problems in Young Adulthood

Family psychosocial stressors challenge adolescents' successful transition into healthy young adults by contributing to internalizing and externalizing problems (Masten et al., 2004; Steinberg et al., 2006). Although the transition from adolescence to young adulthood is less often studied than others, it is critical to adult mental health and psychopathology due to its pervasive contextual and social roles changes (Schulenberg, Sameroff, & Cicchetti, 2004). This transition in the U.S. is characterized by limited institutional structure and support relative to what most adolescents experience during high school, and although the well-being of young people tends to improve during this time, the incidence of psychopathology actually increases (Schulenberg & Zarrett, 2006; Steinberg et al., 2006). Shifting to less structured and defined social contexts can be stressful for young adults as their success in overcoming challenges is dictated more by their individual characteristics than ever before (Schulenberg & Zarrett, 2006). AA adolescents who experience frequent family conflict likely struggle in adapting to the demands of this pivotal transition, resulting in their greater mental health problems in young adulthood.

Adolescents' perceptions of the quality of their family relationships predict trajectories of their internalizing and externalizing symptoms (Fergus & Zimmerman, 2005; Laursen & Collins, 2009). High levels of family conflict are associated with more anxiety and depressive symptoms during adolescence and young adulthood (Graber & Sontag, 2009), as well as with more violent behavior in AA youth (DuRant, Cadenhead, Pendergrast, Slavens, & Linde, 1994; Paschall et al., 1996). Frequent family conflict may disrupt the provision of parental support that buffers AA adolescents against ecological risk factors for internalizing and externalizing problems, such as poverty, violence exposure, and peer deviancy (Fergus & Zimmerman, 2005); however, little research has examined how distinct patterns of change in family conflict influence AA adolescents' future mental health problems.

## The Current Study

This study's aims were to examine trajectories of family conflict across all of high school and group differences in internalizing and externalizing problems at age 20. We

hypothesized approximating at least four trajectories of family conflict based on youth problem behavior research using the same analytic approach (Nagin & Tremblay, 1999): *persistently-high*, *persistently-low*, *increasing*, and *decreasing* levels of symptoms were expected. We also expected family conflict to decrease across high school for most AA adolescents (Laursen et al., 1998), and those with elevated levels and atypical trajectories of family conflict to have more mental health problems as young adults, as family conflict exacerbates emotional and behavioral problems during adolescence and after (Laursen & Collins, 2009). Gender is associated with variation in family interactions and adolescent problem behavior, such that boys report more violent behavior than girls (DuRant et al., 1994), who in turn report greater family conflict and internalizing problems (Choe & Zimmerman, in press; Daigle, Cullen, & Wright, 2007; Graber & Sontag, 2009). We accounted for gender in analyses examining family conflict trajectories.

## Methods

### Participants

Participants included 681 AA adolescents (49% male) enrolled in four public high schools in an urban city with a homicide rate over twice the national average. Initially, 979 adolescents (80% African American) in 9th grade with a grade point average of 3.0 or below were recruited for a larger longitudinal study of school dropout and substance use (Zimmerman & Schmeelk-Cone, 2003). Students diagnosed as emotionally impaired or developmentally disabled were ineligible. AA adolescents were almost 15-years-old ($M$ = 14.86, $SD$ = .65) in 9th grade.

### Procedure and Measures

Trained interviewers conducted structured hour-long interviews with participants in high school annually during school hours and later at age 20 in a community setting or their homes. Participants who dropped out of school were interviewed in home or community settings. By age 20, 115 participants (17%) reported not completing high school or receiving a GED. Participants were paid for participating and informed that information would be confidential. Table 1 summarizes measures of family conflict and mental health problems.

### Data Analysis Plan

We analyzed sample attrition at each assessment and compared attrition and retention groups. We examined descriptive statistics (see Table 2) and used M*plus* 6 to estimate a unitary longitudinal growth curve (LGC) model of family conflict during high school. We then conducted group-based trajectory analyses to identify family conflict trajectory classes and extracted class assignment data to SPSS 19, which we used to examine group differences in internalizing and externalizing problems at age 20 with multivariate analyses of covariance (MANCOVA) controlling for gender.

# Results

## Attrition Analysis

Of the original 681 participants, 33 adolescents (5%) did not participate in 10th grade. In 11th grade, 54 adolescents (8%) did not participate: more boys left the study than girls (36 boys, 18 girls), $\chi^2(1) = 7.17$, $p = .007$. In 12th grade, 72 adolescents (11%) did not participate: mostly boys left the study (44 boys, 28 girls), $\chi^2(1) = 4.58$, $p = .032$. At age 20, 208 young adults (31%) did not participate: more men than women were in the attrition group (129 men, 79 women), $\chi^2(1) = 19.71$, $p < .001$. We found no other group differences.

## Latent Growth Curve Analysis

The best fitting model of family conflict estimated intercept, slope, and quadratic terms with the quadratic's variance fixed to zero. Significant intercept ($M = 1.80$, $SE = .02$), slope ($M = -.18$, $SE = .02$), and quadratic estimates ($M = .04$, $SE = .01$) indicated that decreases in family conflict after 9th grade slowed through the end of high school, $p$s < .001. Significant variances of the intercept ($\sigma^2 = .13$, $p < .001$) and slope ($\sigma^2 = .03$, $p < .001$) indicated sample heterogeneity for initial levels and growth in family conflict. The intercept and slope were correlated ($r = -.28$, $p < .001$) such that AA adolescents reporting higher initial levels of family conflict experienced a faster decrease in conflict over time. Global fit indices indicated a misfit, suggesting a unitary model of growth was inadequate for all participants: $\chi^2(4) = 55.53$, $p < .001$, comparative fit index = .92, Bayesian Information Criterion (BIC) = 3792.61, estimated root mean square error of approximation = .14 and its 90% confidence interval ranged from .11 to .17, and standardized root mean square residual = .09. Gender significantly predicted the intercept when added as a covariate ($\beta = .13$, $p = .008$): AA adolescent girls reported more family conflict in 9th grade.

## Identification of Trajectory Classes

A semi-parametric, group-based approach—latent class growth analysis (LCGA)—approximated trajectories of AA adolescents' family conflict (Nagin & Tremblay, 1999). Variance and covariance estimates for growth factors were fixed to zero within each class. Following Jung and Wickrama (2008), we evaluated the optimal number of classes by the lowest BIC value, a high entropy value (close to 1.0), no less than 1% of participants in each class, high posterior probabilities for class membership (close to 1.0), a significant Lo, Mendell, and Rubin likelihood ratio test (LMR-LRT), and a significant bootstrap likelihood ratio test (BLRT). Estimating four trajectory classes was optimal: BIC = 3524.07 (a decrease of 83 from three trajectory classes), entropy = .88, 3% to 74% of participants were assigned to each class, posterior probabilities ranged from 84% to 97%, a marginally significant LMR-LRT ($p = .093$), and a significant BLRT ($p < .001$). Estimating five trajectories resulted in a nonconverging solution. Because gender was related to family conflict's intercept in initial LGC modeling, we reanalyzed LCGA membership with gender predicting the four trajectory classes' growth parameters. Results did not change appreciably with gender in the four class LCGA. As hypothesized, we identified four trajectories of AA adolescents' family conflict (see Figure 1).

Class 1 included 19 adolescents (3%) designated the *persistently-high* family conflict group with a significant intercept ($M$ = 2.87, $SE$ = .15, $p$ < .001), positive slope ($M$ = .62, $SE$ = .27, $p$ < .022), and negative quadratic ($M$ = −.22, $SE$ = .08, $p$ = .005). The average posterior probability of membership was 94%. The few AA adolescents in this group reported the highest levels of family conflict throughout high school and demonstrated an initial increase in family conflict, followed by a plateau, and then a decrease.

Class 2 included 77 adolescents (11%) designated the *low-increasing* family conflict group with a significant intercept ($M$ = 1.83, $SE$ = .07, $p$ < .001), positive slope ($M$ = .73, $SE$ = .16, $p$ < .001), and negative quadratic ($M$ = −.18, $SE$ = .05, $p$ < .001). The average posterior probability of membership was 88%. AA adolescents in this group showed low initial levels of family conflict and an increase from 9th to 11th grade, followed by a plateau. Gender predicted membership (b = 1.00, $SE$ = .39, $p$ = .010), such that AA adolescent girls were more likely than boys to be in the low-increasing group.

Class 3 included 71 adolescents (10%) designated the *high-decreasing* family conflict group with a significant intercept ($M$ = 2.52, $SE$ = .13, $p$ < .001), negative slope ($M$ = −.48, $SE$ = .21, $p$ = .020), and nonsignificant quadratic ($M$ = .06, $SE$ = .06, $p$ = .288). The average posterior probability of membership was 86%. AA adolescents in this group demonstrated high initial levels of family conflict that decreased over time. Gender predicted membership (b = .88, $SE$ = .34, $p$ = .009) with AA adolescent girls more likely than boys to be in the high-decreasing group.

Class 4 included 514 adolescents (75%) designated the *persistently-low* family conflict group with a significant intercept ($M$ = 1.65, $SE$ = .05, $p$ < .001), negative slope ($M$ = −.24, $SE$ = .08, $p$ = .003), and positive quadratic ($M$ = .05, $SE$ = .03, $p$ = .036). The average posterior probability of membership was 95%. The majority of AA adolescents were in this group demonstrating the lowest levels of family conflict throughout high school that decreased from 9th to 11th grade and then plateaued, supporting our expectation of a decrease in family conflict for most AA adolescents. Gender predicted membership (b = −.88, $SE$ = .34, $p$ = .009) with AA adolescent boys more likely than girls to be in the persistently-low group.

## Trajectory Class Differences in Mental Health Problems

MANCOVAs tested family conflict trajectory class differences across mental health problems in young adulthood while controlling for gender. The independent variable was family conflict trajectory class, and the three dependent variables were anxiety, depressive symptoms, and violent behavior. Mauchly's Test of Sphericity indicated that the homogeneity assumption was violated, so we used Wilks' Lambda to evaluate significance of overall $F$-tests. We found a significant multivariate test for gender, $F$(3, 461) = 10.89, $p$ < .001, partial $\eta^2$ = .07, and for trajectory class, $F$(9, 1122) = 5.61, $p$ < .001, partial $\eta^2$ = .04, indicating significant differences in age 20 mental health problems across trajectory classes.

As shown in Table 3, we identified significant differences using pairwise comparisons of estimated marginal means with Bonferonni adjustments. We found a significant univariate test of trajectory class for anxiety, $F$(3, 463) = 4.43, $p$ = .004, partial $\eta^2$ = .03. The high-

decreasing family conflict group reported more anxiety at age 20 than the persistently-low group. We found a significant univariate test of trajectory class for depressive symptoms, $F(3, 463) = 10.82$, $p < .001$, partial $\eta^2 = .07$. The high-decreasing and low-increasing family conflict groups reported more depressive symptoms than the persistently-low group. Violent behavior significantly differed by trajectory class, $F(3, 463) = 7.06$, $p < .001$, partial $\eta^2 = .04$. The low-increasing family conflict group reported more violent behavior than the persistently-low group.

## Discussion

Our results support the notion that family relationships influence individual well-being throughout development, particularly during transitions when social support and resources are needed to promote positive adaptation (Masten et al., 2004). Perturbations in the family system, such as frequent family conflict, jeopardize success in overcoming salient developmental challenges adapting to new social roles and contexts. The transition from adolescence to young adulthood is especially challenging and crucial to starting young people on positive trajectories to becoming prosocial, productive, and well-adjusted members of society (Schulenberg et al., 2004). Our findings suggest that family conflict does indeed have lasting effects into young adulthood. In one of the first studies to approximate patterns of change in AA adolescents' family conflict, we identified four developmental trajectories, as hypothesized. Although the majority of AA adolescents reported low levels of family conflict that decreased through most of high school, a quarter of adolescents were spread across three subgroups demonstrating atypical patterns of family conflict. As expected, AA adolescents with atypical levels and trajectories of family conflict reported more internalizing and externalizing problems as young adults, suggesting that frequent family conflict during high school, while limited to a subset of adolescents, increases risk for mental health problems during the transition to young adulthood.

Supporting expectations, 75% of AA adolescents reported low rates of family conflict that decreased from 9th to 11th grade and then plateaued, thus their *persistently-low* designation is a slight misnomer as their conflict decreased over time. These adolescents reported fewer internalizing and externalizing problems as young adults than those who experienced atypical family conflict trajectories. These finding contradict stereotypes that frequent conflict characterizes families with adolescents, particularly urban AA families. Mild family conflict may foster views of it as a normative experience during adolescence, thereby diminishing its mental health consequences. Infrequent family conflict may also characterize harmonious families who are supportive of adolescents' autonomy, a valuable resource during the transition to young adulthood (Masten et al., 2004) as parental support buffers adolescents against ecological risk factors for health-risk behaviors (Fergus & Zimmerman, 2005).

AA adolescent boys were more likely to be in this persistently-low family conflict group, corroborating gender differences in family conflict (Choe & Zimmerman, in press; Daigle et al., 2006). Compared to boys, adolescent girls are more likely to perform household chores, care for younger siblings, and orient toward interpersonal relationships (Galambos, Berenbaum, & McHale, 2009), providing more opportunities to experience family conflict

and greater sensitivity in perceiving its changes. Adolescent boys may report lower levels and fewer changes in family conflict as a result of their lower relational orientation and less time at home. The overrepresentation of AA adolescent boys in the persistently-low family conflict group clarifies their fewer anxiety and depressive symptoms, which are more prevalent in adolescent girls and women (Galambos et al., 2009; Graber & Sontag, 2009). Although AA adolescent boys are at increased risk for externalizing problems (DuRant et al., 1994), those reporting persistently-low levels of family conflict reported less violent behavior at age 20 than adolescents reporting increases in family conflict, suggesting that a harmonious family environment during adolescence reduces young AA men's risk of perpetrating violence.

The second largest trajectory group consisted of 11% of AA adolescents reporting low levels of family conflict that increased from 9th to 11th grade and plateaued at an elevated level. AA adolescents with this low-increasing pattern of family conflict reported more depressive symptoms and violent behavior in young adulthood than the majority of adolescents in the persistently-low family conflict group, supporting links between family psychosocial stressors and psychopathology (Masten et al., 2004; Steinberg et al., 2006). AA adolescents who experienced increases in family conflict during high school proceeded on a negative trajectory into young adulthood with an increased risk for depression and violent behavior. Parents of these adolescents may also have been depressed, as parental depression predicts greater parent–child conflict, and both depression and aggressive behavior in offspring (Compas & Reeslund, 2009).

AA adolescent girls were more likely to be in this low-increasing group, and thus were at risk for adult depression and violent behavior, despite AA men generally being at greater risk of perpetrating violence (Choe & Zimmerman, in press; DuRant et al., 1994). Young AA women's violent behavior was probably exacerbated by their comorbid depressive symptoms, as adolescent girls' depression predicts engagement in violent delinquency (Daigle et al., 2007). Parent–child conflict is a primary mechanism through which parental depression affects psychopathology in offspring; therefore, increases in family conflict during high school may mediate parental depression's effects on young AA adults' depressive symptoms and violent behavior, particularly women who tend to be more vulnerable to interpersonal stress due to their methods of appraising and coping with conflict (see Compas & Reeslund, 2009).

The third largest trajectory group included a similar number of AA adolescents (10%) as the low-increasing group who they did not differ from in mental health problems, despite reporting the opposite pattern of family conflict. The high-decreasing group reported high initial levels of family conflict that decreased through the end of high school, as well as more anxiety and depressive symptoms at age 20 than the persistently-low family conflict group. While their family conflict improved through high school, these AA adolescents were at risk for internalizing problems in young adulthood, suggesting that even decreasing, albeit above average levels of family conflict have enduring effects on adult anxiety and depression. Thus, AA adolescents in the high-decreasing family conflict group, while at less risk for violent behavior than some peers, reported greater internalizing problems than the majority of AA adolescents. AA adolescent girls were more likely to report this pattern of

family conflict than boys, which is consistent with both evidence that anxiety and depression co-occur more often in adolescent girls (Galambos et al., 2009) and the aforementioned vulnerabilities women have to interpersonal conflict.

The smallest trajectory group included 3% of adolescents with the highest levels of family conflict throughout high school. This persistently-high family conflict group reported frequent family conflict in 9th grade followed by an increase, plateau, and decrease in frequencies across 10th to 12th grade. The few participants in this group, however, yielded insufficient statistical power to detect differences with other trajectory classes, despite having the highest mean score for violent behavior and marginally more depressive symptoms than the majority of AA adolescents. A larger investigation of AA adolescents reporting chronic family conflict would be more robust in demonstrating their increased risk for psychopathology. Arguably, this group requires the most study as it includes a minority of at-risk adolescents.

## Caveats and Future Directions

Several concerns warrant future investigation of our research questions. Although adolescents and parents tend to have discrepant views of family relationships (Laursen & Collins, 2009), our results were informed solely by structured interviews with adolescents. Adolescents tend to make rigid appraisals about family relationships, whereas parents are more likely to weigh nuances of specific dyads. Structured interviews, however, are used extensively in adolescent research and considered an optimal method for assessing risks, psychopathology, and antisocial behavior often unknown to parents (Compas & Reeslund, 2009). Despite these strengths, our violent behavior scale's reliability was relatively low. Future research with adolescents *and* parents combining reliable measures (e.g., interviews and observations) would better elucidate trajectories of family conflict and their effects on mental health problems.

Our findings are generalizable to low-income AA adolescents considered at risk for psychopathology due to high levels of violence and crime in their communities. Although attrition was associated with gender, we accounted for systematic missing data and considered gender differences. The effects we observed might have been more robust had the attrition group participated at age 20 and increased variability in mental health problems to detect differences between trajectory classes, particularly the persistently-high family conflict group that included fewer than 20 people. Our findings should be replicated with other AA samples and racial-ethnic groups to evaluate the external validity of four trajectories classes of family conflict.

## Conclusion

Family psychosocial stressors challenge successful adaptation during the transition to young adulthood by contributing to increases in the incidence of mental disorders (Schulenberg & Zarrett, 2006). In our urban sample, atypical levels and trajectories of family conflict during high school contributed to greater anxiety, depressive symptoms, and violent behavior in young AA adults; yet, 75% of our sample was unharmed by normative decreases in mild family conflict. Across cultures, families embodying mutuality, respect for adolescents'

opinions, and scaffolding of maturity are effective in helping adolescents internalize prosocial attitudes and behaviors to guide them through the transition to young adulthood (Laursen & Collins, 2009). Investigating trajectories of family conflict, adolescent psychopathology and health-risk behaviors will inform efforts supporting adolescents' development into healthy young adults.

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## References

Centers for Disease Control and Prevention. Youth risk behavior surveillance—United States, 1995. Morbidity and Mortality Weekly Review. 1996; 45:SS–4. Retrieved from http://www.cdc.gov/mmwr/PDF/ss/ss4504.pdf.

Choe DE, Zimmerman MA. Transactional process of African American adolescents' family conflict and violent behavior. Journal of Research on Adolescence. in press. 10.1111/jora.12056

Collins, WA.; Steinberg, L. Adolescent development in interpersonal context. In: Damon, W.; Lerner, RM.; Eisenberg, N., editors. Handbook of child psychology: Social, emotional, and personality development. 6. Vol. 3. Hoboken, NJ: John Wiley & Sons Inc; 2006. p. 1003-67.

Compas, B.; Reeslund, KL. Processes of risk and resilience during adolescence. In: Lerner, RM.; Steinberg, L., editors. Handbook of adolescent psychology. 3. Vol. 1. Hoboken, NJ: John Wiley & Sons Inc; 2009.

Daigle LE, Cullen FT, Wright JP. Gender differences in the predictors of juvenile delinquency: Assessing the generality-specificity debate. Youth Violence and Juvenile Justice. 2007; 5:254–286.10.1177/1541204007301289

Derogatis, LR. Brief Symptom Inventory: Administration, scoring, and procedures manual. Minneapolis, MN: National Computer Systems, Inc; 1993.

DuRant RH, Cadenhead C, Pendergrast RA, Slavens G, Linder CW. Factors associated with the use of violence among urban black adolescents. American Journal of Public Health. 1994; 84:612–617.10.2105/AJPH.84.4.612 [PubMed: 8154565]

Eccles JS, Early D, Fraser K, Belansky E, McCarthy K. The relation of connection, regulation, and support for autonomy to adolescents' functioning. Journal of Adolescent Research. 1997; 12:263–286.10.1177/0743554897122007

Eccles JS, Midgley C, Wigfield A, Buchanan CM, Reuman D, Flanagan C, Iver DM. Development during adolescence: The impact of state-environment fit on young adolescents' experiences in schools and in families. American Psychologist. 1993; 48:90–101.10.1037/0003-066X.48.2.90 [PubMed: 8442578]

Fergus S, Zimmerman MA. Adolescent resilience: A framework for understanding healthy development in the face of risk. Annual Review of Public Health. 2005; 26:399–419.10.1146/annurev.publhealth.26.021304.144357

Galambos, NL.; Berenbaum, SA.; McHale, SM. Gender development in adolescence. In: Lerner, RM.; Steinberg, L., editors. Handbook of adolescent psychology. 3. Vol. 1. Hoboken, NJ: John Wiley & Sons Inc; 2009.

Graber, JA.; Sontag, LM. Internalizing problems during adolescence. In: Lerner, RM.; Steinberg, L., editors. Handbook of adolescent psychology. 3. Vol. 1. Hoboken, NJ: John Wiley & Sons Inc; 2009.

Jung T, Wickrama KAS. An introduction to latent class growth analysis and growth mixture modeling. Social and Personality Psychology Compass. 2008; 2:302–317.10.1111/j.1751-9004.2007.00054.x

Laursen, B.; Collins, WA. Parent-child relationships during adolescence. In: Lerner, RM.; Steinberg, L., editors. Handbook of adolescent psychology: Contextual influences on adolescent development. 3. Vol. 2. New York: Wiley; 2009. p. 3-42.

Laursen B, Coy KC, Collins WA. Reconsidering changes in parent–child conflict across adolescence: A meta-analysis. Child Development. 1998; 69:817–832.10.1111/j.1467-8624.1998.tb06245.x [PubMed: 9680687]

Masten AS, Burt KB, Roisman GI, Obradović J, Long JD, Tellegen A. Resources and resilience in the transition to adulthood: Continuity and change. Development and Psychopathology. 2004; 16:1071–1094. 10.10170S0954579404040143. [PubMed: 15704828]

Moos, RH.; Moos, DS. Family Environment Scale manual. Palo Alto, CA: Consulting Psychologists; 1981.

Nagin D, Tremblay RE. Trajectories of boys' physical aggression, opposition, and hyperactivity on the path to physically violent and nonviolent juvenile delinquency. Child Development. 1999; 70:1181–1196.10.1111/1467-8624.00086 [PubMed: 10546339]

Paschall MJ, Ennett ST, Flewelling RL. Relationships among family characteristics and violent behavior by Black and White male adolescents. Journal of Youth and Adolescence. 1996; 25:177–197.10.1007/BF01537343

Schulenberg JE, Sameroff AJ, Cicchetti D. The transition to adulthood as a critical juncture in the course of psychopathology and mental health. Development and Psychopathology. 2004; 16:799–806. 10.10170S0954579404040015. [PubMed: 15704815]

Schulenberg, JE.; Zarrett, NR. Mental health during emerging adulthood: Continuity and discontinuity in courses, causes, and functions. In: Arnett, JJ.; Tanner, JL., editors. Emerging adults in America: Coming of age in the 21st century. Washington, DC: American Psychological Association; 2006. p. 135-172.

Steinberg, L.; Dahl, R.; Keating, D.; Kupfer, DJ.; Masten, A.; Pine, DS. The study of developmental psychopathology in adolescence: Integrating affective neuroscience with the study of context. In: Cicchetti, D.; Cohen, DJ., editors. Developmental psychopathology: Developmental neuroscience. 2. Vol. 2. Hoboken, NJ: John Wiley & Sons Inc; 2006. p. 710-741.

Zimmerman MA, Schmeelk-Cone KH. A longitudinal analysis of adolescent substance use and school motivation in African American youth. Journal of Research on Adolescence. 2003; 13:185–210.10.1111/1532-7795.1302003

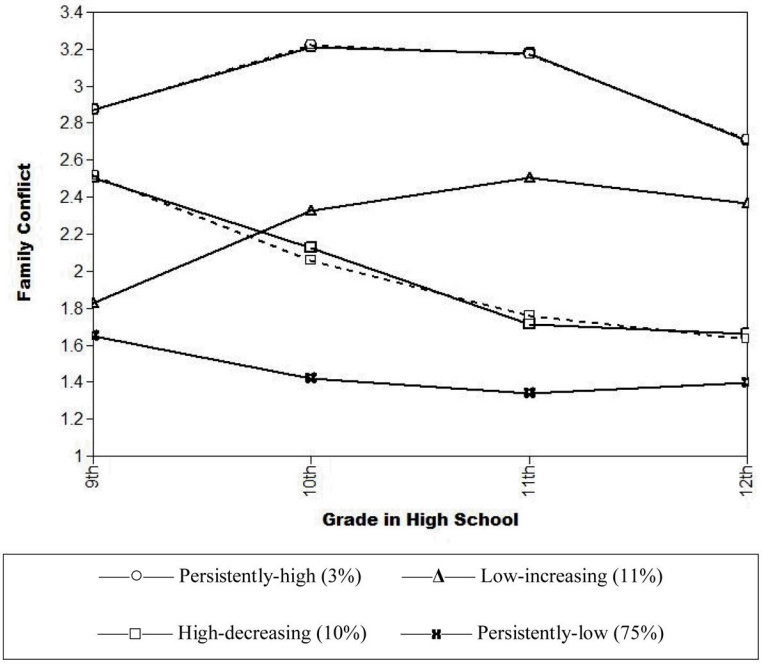


**Figure 1.**

Trajectory classes of African American adolescents' family conflict during high school ($N$ = 681). The *persistently-high* family conflict group included 19 adolescents (3%). The *low-increasing* family conflict group included 77 adolescents (11%). The *high-decreasing* family conflict group included 71 adolescents (10%). The *persistently-low* family conflict group included 514 adolescents (75%). Solids lines are means and dashed lines are estimated curves.

**Table 1**

Study Measures of Family Conflict and Mental Health Problems

| Variables | Number of Items | Item Queries | Response Scales | Alphas | Measures |
|---|---|---|---|---|---|
| 9th to 12th grade family conflict | 5 | family members fight a lot, lose their tempers, throw things when angry, hit each other, and criticize each other | During past 12 months: 1 = *Hardly ever*; 4 = *Often.* | mean α = .79 | Family Environment Scale (Moos & Moos, 1981) |
| Age 20 anxiety | 6 | nervousness or shakiness inside, suddenly scared for no reason, feeling fearful, feeling tense or keyed up, spells of terror or panic, and feeling so restless you couldn't sit still | During past week: 1 = *Never*; 5 = *Very often.* | α = .78 | Brief Symptoms Inventory (Derogatis, 1993) |
| Age 20 depressive symptoms | 6 | thoughts of ending your life, feeling no interest in things, feeling lonely, feeling blue or sad, feeling worthless, and feeling hopeless about the future | During past week: 1 = *Never*; 5 = *Very often.* | α = .83 | Brief Symptoms Inventory (Derogatis, 1993) |
| Age 20 violent behavior | 7 | fighting inside school or work, fighting outside school or work, fighting in a group, hitting a teacher or supervisor, using a weapon, carrying a knife, razor, or gun, and hurting someone badly enough to require medical aid | During past 12 months: 1 = *0 times*; 5 = *4 or more times.* | α = .67 | Center for Disease Control and Prevention (1996) |

**Table 2**

African American Adolescents' Family Conflict and Mental Health Problems: Correlations and Descriptive Statistics (N = 681)

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. Gender (1=Boy, 2=Girl) | – | | | | | | | |
| 2. 9th grade family conflict | .09* | – | | | | | | |
| 3. 10th grade family conflict | .14*** | .45*** | – | | | | | |
| 4. 11th grade family conflict | .06 | .33*** | .55*** | – | | | | |
| 5. 12th grade family conflict | .10* | .26*** | .52*** | .54*** | – | | | |
| 6. Age 20 anxiety | .10* | .12** | .28*** | .13** | .19*** | – | | |
| 7. Age 20 depressive symptoms | .13** | .17*** | .34*** | .18*** | .24*** | .72*** | – | |
| 8. Age 20 violent behavior | −.19*** | .08 | .12** | .14** | .09 | .18*** | .16** | – |
| *M* | – | 1.80 | 1.66 | 1.57 | 1.57 | 1.58 | 1.75 | 1.24 |
| *SD* | – | .45 | .63 | .60 | .60 | .61 | .71 | .42 |

* $p < .05$.

** $p < .01$.

*** $p < .001$.

**Table 3**

Differences in Gender and Mental Health Problems by African American Adolescents' Family Conflict Trajectory Classes (N = 681)

| Family Conflict Trajectory Classes | Subsample Sizes and Gender Ratios | Estimates Marginal Means (Standard Errors) | | | Age 20 Subsample Sizes (minus attrition group) |
|---|---|---|---|---|---|
| | | Age 20 Anxiety | Age 20 Depressive Symptoms | Age 20 Violent Behavior | |
| 1. Persistently- high family conflict group | *n* = 19<br>9 Boys/10 Girls | 1.69 (.20) | 2.23[b] (.23) | 1.53 (.14) | *n* = 9 |
| 2. Low- increasing family conflict group | *n* = 77<br>22 Boys/55 Girls | 1.69 (.08) | 1.98[c] (.09) | 1.44[e] (.06) | *n* = 57 |
| 3. High- decreasing family conflict group | *n* = 71<br>23 Boys/48 Girls | 1.80[a] (.08) | 2.09[d] (.09) | 1.28 (.06) | *n* = 55 |
| 4. Persistently- low family conflict group | *n* = 514<br>281 Boys/233 Girls | 1.52[a] (.03) | 1.64[b,c,d] (.04) | 1.20[e] (.02) | *n* = 347 |

Notes.

[a] Significant difference in means, $p = .007$.

[b] Marginally significant difference in means, $p = .065$.

[c] Significant difference in means, $p = .004$.

[d] Significant difference in means, $p < .001$.

[e] Significant difference in means, $p < .001$.