

Cigarette Smoking among African American Youth from Single Mother Homes: Examining the Roles of Maternal Smoking and Positive Parenting within an Extended Family Framework

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Abstract

The current study examined the main and interactive effects of three family context variables, maternal smoking, positive parenting behavior, and the quality of the mother's relationship with another adult or family member who assists with parenting (i.e., coparent), and adolescent smoking among African American youth from single mother homes. The pattern of findings revealed maternal warmth buffered the association between maternal smoking and adolescent smoking, but only in families characterized by high levels of mother-coparent conflict. Results suggest the protective role of maternal warmth may be overlooked in studies that fail to consider the broader family network within which maternal behaviors occur in many African American single mother families. Findings are discussed with regard to their implications for smoking prevention programs aimed at African American youth.

Keywords: Positive Parenting, smoking, protective factors, adolescents, African Americans.

Cigarette smoking is the single largest cause of preventable disease, chronic disability, and premature death in the United States (Centers for Disease Control and Prevention [CDC], 2000). The vast majority of adult smokers initiate smoking during adolescence (CDC, 2001), with the transition from middle to high school representing a particularly vulnerable period (Brynin, 1999). Although smoking rates among adolescents have declined, 28% of all high school students report smoking in the past 30 days, with even higher rates among those in the 12th grade (Johnston, O'Malley, & Bachman, 2000). Accordingly, identifying correlates of cigarette use during this risky developmental transition is critical for the advancement of successful smoking prevention efforts.

Given that estimates of smoking rates in high school are lower among African American than White youth (CDC, 2001), relatively few psychosocial studies have examined correlates of smoking among African American adolescents. This relative inattention to African American youth is problematic, however, given a literature suggesting that African American youth may be more likely than White youth to underreport smoking (e.g., Bauman & Ennett, 1994), including reporting never smoking at follow-up in longitudinal studies in which they reported smoking at the baseline assessment (e.g., Shillington & Clapp, 2000). In addition, smoking has been shown to have more deleterious health consequences for African Americans than for Whites, including higher rates of lung cancer among African American than White smokers (e.g., Stewart, 2001; U.S. Department of Health and Human Services, 1998). In an effort to address the relative lack of attention to the psychosocial correlates of smoking among African American youth, the current study examined risk and protective factors within one important context for youth health and well-being, the family.

Although peer smoking has been identified as a robust correlate of adolescent cigarette use (see Hoffman, Sussman, Unger, & Valente, 2006, for a review), a growing literature highlights the important role of two family context variables as well, parental smoking and parenting behavior (e.g., Galambos, Barker, & Almeida, 2003). Parents who smoke are more likely to have adolescents who initiate cigarette smoking (e.g., O'Byrne, Haddock, Poston, & Mid-American Heart Institute, 2002) and who are less likely

to quit or decrease their use of cigarettes once they start (Chassin, Presson, Rose, Sherman, & Prost, 2002; Fleming, Kim, Harachi, & Catalano, 2002).

Of course, not all adolescents whose parents smoke or have a history of smoking will use cigarettes themselves (O'Byrne et al., 2002), suggesting that other family context variables may moderate adolescent risk. Consistent with this notion, parenting style, particularly a positive parenting style characterized by parental warmth, support, and involvement, has been examined as a moderator of parental smoking (e.g., Andrews, Hops, & Duncan, 1997; Doherty & Allen, 1994; Foster et al., in press). Although some inconsistencies exist in the results of this work (see Andrews et al., 1997; Foshee & Bauman, 1992), most likely due to varying methodology, growing evidence suggests that parental warmth is associated with lower levels of smoking among youth (e.g., Foster et al., in press) and may provide a buffer against the risks associated with parental smoking (e.g., Doherty & Allen, 1994).

Consistent with the broader literature on adolescent smoking, however, studies of parental smoking, parental warmth, and adolescent smoking in particular have focused exclusively on White youth (e.g., Andrews et al., 1997; Doherty & Allen, 1994; Foster et al., in press) or examined differences between African American and White youth (e.g., Bauman, Carver, & Gleiter, 2001; Griesler & Kandel, 1998; Hu, Davies, & Kandel, 2006). Between-group studies suggest that the family context may be a less robust correlate of smoking among African American than White youth (e.g., Bauman et al., 2001; Griesler & Kandel, 1998; Hu et al., 2006); however, the narrow definition of "family" in between-group studies may lead to an underestimate of familial influences on smoking among African American youth, suggesting the merit of within-group research.

Importantly, the majority of studies of adolescent smoking define "family" with a traditional focus on maternal and paternal cigarette use and/or parenting behavior (e.g., Bauman et al., 2001; Griesler & Kandel, 1998; Hu et al., 2006), with a relative lack of attention to the broader extended family context that is characteristic of many African American families (see Jones, Zalot, Foster, Sterrett, & Chester, in press for a review). Extended family members are even more instrumentally involved in the lives of African American youth being raised by single mothers, a growing (56%) percentage of the African American community (U.S. Census Bureau, 2005). Although research has shown that extended family members assist African American single mothers with parenting and that the quality of the coparenting relationship between these two adults has a significant impact on adolescent adjustment (Jones et al., in press), the quality of the mother-coparent relationship has yet to be considered as a correlate of smoking among the growing number of African American youth from single mother homes. Given that marital conflict between two traditional coparents, as well as family conflict more broadly, has been shown to increase the risk of adolescent smoking among White and ethnically diverse youth (e.g., Conwell, O'Callaghan, Andersen, Bor, Najman, & Williams, 2003; Hill, Hawkins, Catalano, Abbott, & Guo, 2005; Vicary & Lerner, 1986), the link between mother-coparent relationship quality and smoking among African American youth is an important research direction.

The current study examined a culturally-relevant model of smoking among African American youth from single mother homes by examining well-established maternal risk factors, maternal smoking and maternal warmth, as well as the quality of the mother's relationship with her nontraditional extended family coparent. Guided by Bronfenbrenner's (1979) ecological systems model, which posits that multiple factors within the family interact to shape youth adjustment, main and interactive effects of maternal smoking, maternal warmth, and mother-coparent relationship quality were predicted. Building upon the findings of the aforementioned research, it was predicted that each of the family context variables would be associated with adolescent smoking, such that maternal smoking and greater exposure to conflict between the mother and her coparent would be associated with an increased likelihood of smoking among youth in the sample. In contrast, it was predicted that maternal warmth would decrease the likelihood that youth would smoke and, further, that maternal warmth would buffer the association between maternal smoking and youth smoking. Consistent with the stress buffering hypothesis, which

suggests that the protective value of social relationships is most pronounced during stressful circumstances (Cohen & Wills, 1985), we expected that the interaction of maternal smoking and maternal warmth would be most pronounced for youth who reported exposure to greater levels of mother-coparent conflict.

Method

Overview

Data for the current study were drawn from the first assessment of the African American Families and Children Together (AAFACT) Project, an ongoing, longitudinal study designed to examine the role of extended family members in the health and well-being of African American youth from single mother homes. African American single mother-headed families with an 11- to 16-year-old adolescent were recruited from counties across central North Carolina. Recruitment was conducted through community agencies (e.g., health departments, YMCAs, churches), public events (e.g., health fairs), local advertisements (e.g., university-wide informational emails, bus displays, brochures), and word-of-mouth (e.g., participants telling other families about the project).

Participants

One hundred ninety-three African American mother-child dyads participated in the first assessment phase of the AAFACT Project, which was completed in November 2006. Demographic information for these families is presented in Table 1. Adolescents were 13 years old on average ($SD = 1.59$; range = 11-17 years), with gender fairly evenly split (55% girls). On average, mothers were 38 years old ($SD = 6.67$; range = 26-64 years) and most (86%) had completed at least some college or vocational education. The majority (82.4%) of mothers were employed, and annual household incomes averaged \$30,038 ($SD = \$17,102$).

Table 1

Summary of Demographic Variables and Bivariate Associations with Adolescent Lifetime Smoking (N = 193)

Variable <i>M (SD) F</i>	%	Adolescent Lifetime Smoking, <i>N (%)</i>		
		χ^2	No	Yes
Adolescent Age (years)				
13.39 (1.59)	30.62**			
Adolescent Gender		4.45*		
Female	54.9		81 (76.4)	25
(23.6)				
Male	45.1		53 (62.3)	32
(37.6)				
Mother Age (years)				
38.08 (6.67)	.01			
Mother Marital Status		.11		

(30.9)	Never Married	50.8		67 (69.1)	30
(28.7)	Formerly Married	49.2		67 (71.3)	27
	Mother Education Level		8.77		
	< HS Diploma	5.7		8 (72.7)	3 (27.3)
	HS Diploma or GED	8.3		10 (62.5)	6 (37.5)
(36.1)	Some College	51.3		62 (63.9)	35
	College Degree	20.2		32 (82.0)	7 (17.9)
	Some Grad/Professional	6.2		9 (75.0)	3 (25.0)
	Grad/Professional Degree	8.3		13 (81.2)	3 (18.7)
	Mother Employment Status		2.25		
(27.2)	Employed Full Time	71.5		99 (72.8)	37
	Employed Part Time	10.9		12 (57.1)	9 (42.8)
(32.3)	Unemployed	17.6		23 (67.6)	11
	Annual Household Income				
	30037.89	.52			
	(17101.65)				

* $p < .05$. ** $p < .001$.

Procedure

Assessments were conducted either at a conveniently-located community site or in the family's place of residence, depending upon the individual needs of each family. Research assistants provided child care as needed. Informed consent and assent were obtained from each mother and adolescent prior to beginning interviews. In order to maximize confidentiality, reduce the potential for biased responding, and address potential respondent illiteracy, each participant responded to interview questions using a laptop computer equipped with Audio Computer-Assisted Self-Interviewing (ACASI) software. Mothers and adolescents listened to pre-recorded interview questions through earphones and recorded their answers using the computer mouse and keyboard. Interviews took approximately 60 to 90 minutes to complete. Each mother-adolescent dyad was compensated \$25 for their participation.

Measures

Demographic variables and covariates. Mothers and adolescents were asked a series of demographic questions. Each mother reported her age, marital status, education level, employment status, and annual household income. Each adolescent reported his or her age and gender. Adolescents also were asked whether their best friends had smoked within the past 90 days (0 = no; 1 = yes).

Adolescent cigarette smoking. Adolescents were asked whether they had ever smoked a cigarette (0 = no; 1 = yes) and whether they had smoked within the past 30 days (0 = no; 1 = yes).

Maternal cigarette smoking. Mothers were asked whether they had ever smoked regularly (0 = no; 1 = yes) and whether they had smoked within the past 30 days (0 = no; 1 = yes).

Maternal warmth. Adolescent-report on the short form of the Interaction Behavior Questionnaire (IBQ; Prinz, Foster, Kent, & O'Leary, 1979) was used to assess warmth and support in the mother-child relationship. This form consists of the 20 items that have the highest phi coefficients and the highest item-to-total correlations with the 75 items in the original IBQ. The short form correlates .96 with the longer

version. Sample items, which may be endorsed as *True* or *False*, include, “You enjoy spending time with your mother,” and “You think your mother and you get along very well.” Prinz and colleagues (1979) and Robin and Weiss (1980) have reported adequate internal consistency and discriminant validity. Scores can range from 0 to 20, with higher scores indicating greater warmth and support in the mother-child relationship. The alpha coefficient for the current sample was .90.

Mother-coparent conflict. Each mother was asked to identify the most important adult who assists her with parenting the participating adolescent. If mothers identified multiple adults, they were asked to indicate the individual most involved in daily parenting responsibilities. Mothers identified the following individuals as coparents: a) mother’s mother (41%), b) mother’s friend (25%), c) mother’s sibling (16%), d) other relatives (13%), and e) biological father (5%). Adolescents reported the degree to which they had witnessed conflict between the mother and her identified coparent using the O’Leary Porter Scale (OPS; Porter & O’Leary, 1980). Although one item assesses the amount of physical aggression witnessed, the primary purpose of the scale is to measure the amount of verbal hostility observed by the child (e.g., quarrels, sarcasm; O’Leary & Porter, 1987). Items are rated on a five-point Likert-type scale ranging from 0 = *Never* to 4 = *Very Often*. Sample items include, “How often have your mother and her coparent disagreed over disciplining you in front of you?” and “How often have your mother and her coparent verbally fought in front of you?” The OPS has demonstrated moderately high concurrent validity (Emery & O’Leary, 1982) and has an internal consistency of .86 and test-retest reliability of .96 (Porter & O’Leary, 1980) when used with married couples. For the current sample of nontraditional coparents, the alpha coefficient was .81. One item assessing display of affection was omitted due to very low item loading. Thus, possible scores on the 9-item scale range from 0 to 36, with higher scores indicating more observable conflict between the mother and coparent.

Results

Preliminary analyses

Lifetime and current smoking rates were obtained for both adolescents and mothers. Overall, 29.8% of adolescents reported having smoked at least once during their lifetimes, with boys reporting higher rates than girls (boys = 37.6%; girls = 23.6%). The 30-day prevalence rate of adolescent smoking was 7.9%, with boys again reporting higher smoking rates than girls (boys = 12.9%; girls = 3.8%). Given the relatively low rates of smoking in the past 30 days reported by adolescents in the sample, lifetime smoking (*never* vs. *ever*) was examined as the outcome of interest in all study analyses. Among mothers, 31.4% reported they had been regular smokers at some point in their lifetimes, and 24.2% reported having smoked within the past 30 days. Finally, 13.8% of adolescents reported their best friends had smoked within the past three months.

Bivariate associations between each demographic variable and adolescent self-reported lifetime smoking were examined. As shown in Table 2, adolescent age [$F(6, 192) = 30.62, p < .001$] and adolescent gender [$\chi^2(1, 192) = 4.45, p < .05$] were significantly associated with adolescent lifetime smoking such that older adolescents and boys were more likely to have tried smoking. Associations between major study variables and adolescent lifetime smoking are shown in Table 3. Adolescents were more likely to have smoked if they believed their best friends had smoked in the past three months [$\chi^2(1, 192) = 39.6, p < .001$] or if their mothers had engaged in recent smoking [$\chi^2(1, 192) = 6.78, p < .01$] or lifetime regular smoking [$\chi^2(1, 192) = 4.04, p < .05$]. Higher levels of maternal warmth [$F(34, 192) = 4.78, p < .05$] and mother-coparent conflict [$F(25, 192) = 8.13, p < .01$] each were associated with adolescent lifetime smoking in the bivariate analyses.

Table 2 Summary of Major Study Variables and Bivariate Associations with Adolescent Lifetime Smoking (n = 193)

Variable (%)	M (SD)	F	%	Adolescent Lifetime Smoking, N		
				χ^2	No	Yes
Adolescent Has Tried Cigarettes in Lifetime			29.8			
Females			23.6			
Males			37.6			
Adolescent Has Smoked in Past 30 Days		7.9				
Females			3.8			
Males			12.9			
Best Friend Smoking in Past 90 Days				39.6***		
No			86.2		128 (79.5)	33
Yes			13.8		5 (19.2)	21 (80.8)
Maternal Regular Smoking in Lifetime				4.04*		
No			68.6		96 (74.4)	33
Yes			31.4		36 (60.0)	24
Maternal Smoking in Past 30 Days				6.78**		
No			75.8		106 (74.6)	36
Yes			24.2		25 (54.3)	21
Mother-Coparent Conflict	3.93 (4.61)	8.13**				
Maternal Warmth	16.17 (4.51)	4.78*				

*p < .05. ** p < .01. ***p < .001.

Table 3

Summary of Logistic Regression Analysis Predicting Adolescent Smoking from Maternal Smoking, Maternal Warmth, and Mother-Coparent Conflict (n = 184)

Variable	Model χ^2	-2 Log Likelihood	95% Confidence		
			Odds Ratio	Interval	β

Block 1: Demographic Controls
51.15*** 171.58

Adolescent Age (increasing)	1.63	1.24 – 2.12	
0.49***			
Adolescent Gender			
Male	1.86	0.87 – 3.99	
0.62			
Female ^a	1.00		
Best Friend Smoking			
Yes	10.97	3.65 – 32.39	
2.39***			
No ^a	1.00		
Block 2: Major Study Variables			
58.58***	164.15		
Maternal Smoking			
Yes	2.01	0.82 – 4.91	
0.70			
No ^a	1.00		
Maternal Warmth (increasing)	0.98	0.90 – 1.07	-0.02
Mother-Coparent Conflict (increasing)	1.09	1.01 – 1.18	0.09*
Block 3: Two-Way Interactions			
61.55***	161.18		
Maternal Smoking x Maternal Warmth	1.05	0.84 – 1.30	0.05
Maternal Smoking x Mother-Coparent Conflict	1.16	0.93 – 1.46	0.15
Maternal Warmth x Mother-Coparent Conflict	1.00	0.99 – 1.02	0.00
Block 4: Three-Way Interaction			
68.84***	153.88		
Maternal Smoking x Maternal Warmth x Mother-Coparent Conflict	0.91	0.84 – 0.98	
-0.10*			

* $p < .05$. ** $p < .01$. *** $p < .001$. ^aIndicates referent group

Primary analyses

Study hypotheses were examined using logistic regression analysis. Adolescent age, adolescent gender, and adolescent report of best friends' smoking were entered in Block 1 of the regression. The main effects of maternal recent smoking, maternal warmth, and mother-coparent conflict were entered in Block 2. Maternal recent smoking was selected over maternal lifetime history of regular smoking due to its stronger bivariate association with adolescent lifetime smoking. The two-way interactions of maternal smoking x maternal warmth, maternal smoking x mother-coparent conflict, and maternal warmth x mother-coparent conflict were entered in Block 3. The three-way interaction of maternal smoking x maternal warmth x mother-coparent conflict was entered in Block 4. Variables within each block were entered simultaneously. Continuous variables were centered prior to creating interaction terms in order to reduce multicollinearity (Baron & Kenny, 1986).

Logistic regression results are shown in Table 3. Consistent with the bivariate analyses, adolescent report of best friend's smoking emerged as a significant variable. Adolescents were over 10

times more likely to have smoked if they believed their best friends had smoked within the past three months [odds ratio (OR) = 10.97, confidence interval (CI) = 3.65-32.39, $p < .001$]. Consistent with bivariate analyses, older adolescents also were more likely to have smoked (OR = 1.63, CI = 1.24-2.12, $p < .001$). In addition, adolescents who had witnessed more conflict between their mothers and coparents were also slightly more likely to have smoked (OR = 1.09, CI = 1.01-1.18, $p < .05$). No significant effects were found for either maternal smoking (OR = 2.01, CI = .82-4.91, *n.s.*) or maternal warmth (OR = .98, CI = .90-1.07, *n.s.*).

Although none of the 2-way interactions emerged as statistically significant, the aforementioned results should be interpreted cautiously given that a significant 3-way interaction of maternal smoking x maternal warmth x mother-coparent conflict emerged as significant (OR = .91, CI = .84-.98, $p < .05$). Explication of this 3-way interaction was performed in accordance with the recommendations of Aiken and West (1991) and Jaccard (2001) and is depicted in Figure 1. As shown in the top panel of Figure 1, the slope of neither regression line is significantly different from zero under conditions of low mother-coparent conflict (low maternal warmth, $\beta = .06$, *n.s.*; high maternal warmth, $\beta = 1.17$, *n.s.*), suggesting maternal warmth does not moderate the link between maternal smoking and adolescent smoking among adolescents exposed to lower levels of mother-coparent conflict. As shown in the bottom panel of Figure 1, however, maternal warmth does moderate the link between maternal smoking and adolescent smoking among adolescents exposed to higher levels of mother-coparent conflict. Among adolescents exposed to higher mother-coparent conflict, the association between maternal smoking and adolescent smoking was significant in the context of lower ($\beta = 1.44$, $p < .05$), but not higher ($\beta = .98$, *n.s.*), levels of maternal warmth. Thus, greater maternal warmth appeared to buffer the link between mother and adolescent smoking among those adolescents exposed to greater mother-coparent conflict.

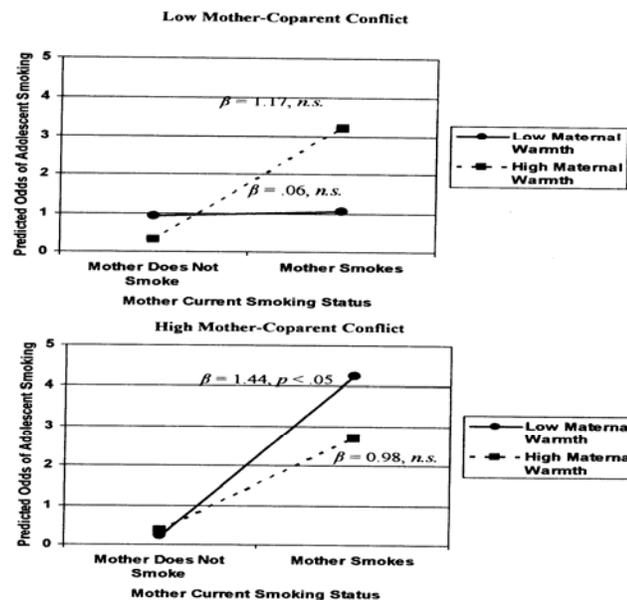


Figure 1. Predicted odds of adolescent lifetime smoking as a function of mother-coparent conflict, maternal warmth, and maternal smoking.

Discussion

The current study examined three family context variables (maternal smoking, maternal warmth, mother's conflict with a an adult who assists with childrearing) hypothesized to be associated with cigarette smoking among African American youth from single mother homes, a significant segment of the African American community. Importantly, the associations between each of the family context variables and adolescent smoking were qualified by the 3-way interaction of maternal smoking x maternal parenting behavior x mother-coparent conflict. Explication of the interaction revealed maternal warmth buffered the link between maternal smoking and adolescent smoking, but only in families in which the mother-coparent relationship was characterized by a high degree of conflict.

Although not the focus of the current study, the role of peer smoking merits consideration. Consistent with prior literature on correlates of youth smoking more generally (e.g., Hoffman et al., 2006), peer smoking was a robust correlate of adolescent smoking in the current study. However, building upon a growing body of theoretical and empirical work (e.g., Galambos et al., 2003), we found that family variables were significant correlates of smoking behavior among the youth in our sample as well. This finding is particularly important given the prior findings of between-group studies suggesting family context may be a less robust predictor of smoking among African American youth than among White youth (Bauman et al., 2001; Griesler & Kandel, 1998; Hu et al., 2006).

Parental smoking is a well-established risk factor for adolescent smoking (e.g., O'Byrne et al., 2002). In the current study, maternal smoking was associated with adolescent smoking in the bivariate analyses, but this association was not maintained in the multivariate analyses after controlling for sociodemographic variables and adolescent-report of peer smoking. Similarly, adolescent-reported maternal warmth, a previously established correlate of adolescent smoking in predominately White samples (e.g., Adamczyk-Robinette, Fletcher, & Wright, 2002; Foster et al., in press), was associated with adolescent smoking in the current sample in the bivariate, but not multivariate, analyses. Taken alone, interpretation of the main effects of maternal smoking and maternal warmth may be used as evidence to support the notion that family context is a less robust predictor of smoking among African American than White youth (Bauman et al., 2001; Griesler & Kandel, 1998; Hu et al., 2006). However, the obtained 3-way interaction suggests the role of each of these family context variables may be underestimated in studies that do not consider the broader family context that is characteristic of many African American single mother families.

As previously noted, a significant 3-way interaction emerged among maternal smoking x maternal parenting x mother-coparent conflict. Explication of this interaction revealed a significant 2-way interaction between maternal smoking and maternal warmth for adolescents who were reportedly exposed to higher levels of conflict between their mothers and coparents. Adolescents who reported greater mother-coparent conflict were less likely to report smoking in the context of maternal smoking if they perceived their mothers' parenting behavior to be characterized by higher, rather than lower, levels of warmth. In other words, it appears the protective effect of maternal warmth, which prior studies have shown to be a particularly important protective factor for African American youth (see Masten & Coatsworth, 1998 for a review), seems most pronounced in homes with greater risk factors, including maternal smoking and mother-coparent conflict. Notably, this pattern of findings is consistent with the stress buffering hypothesis which posits that the protective effects of social relationships depend on the level of stress to which individuals are exposed, with positive relationships serving an increasingly protective function as individuals in the relationship are exposed to increasing levels of stress (Cohen & Wills, 1985). A robust literature documents the association between mother-child relationship quality and child adjustment (e.g., Brennan, Le Brocque, & Hammen, 2003; Lamborn, Dornbusch, & Steinberg,

1996; Pittman & Chase-Lansdale, 2001). Mothers who engage in more warm and supportive parenting behaviors have children who evidence fewer adjustment difficulties, including fewer internalizing and externalizing difficulties (e.g., Armistead, Forehand, Brody, & Maguen, 2002; Dodge, Pettit, & Bates, 1994; Vandewater & Lansford, 2005). Moreover, a warm and supportive mother-child relationship has been shown to buffer children from a range of psychosocial stressors (see Armistead, Klein, & Forehand, 1995; Korneluk & Lee, 1998 for reviews). The findings of the current study extend this work by suggesting maternal warmth may protect African American youth from smoking in the context of two risks: maternal smoking and mother-coparent conflict.

Of course, the current findings must be considered in light of the study's limitations. First, the current study was cross-sectional, precluding any determination about the causal role of the family context variables examined. For example, it could also be the case that an awareness of adolescent smoking causes more conflict between the mother and coparent regarding childrearing issues. It will be important for future studies of smoking among African American adolescents from single mother homes to include multiple assessments so the direction of associations can be determined. Second, the relatively low rates of current smoking for adolescents necessitated using a dichotomous measure of lifetime use, precluding the opportunity to examine finer distinctions in adolescent smoking behavior, such as frequency and amount of use. Although some work suggests that African American youth may be more likely to underreport their rates of smoking relative to White youth (e.g., Bauman & Ennett, 1994), we were interested in the family context variables associated with adolescents' report of use within an African American sample.

Third, the present study was exclusively questionnaire-based and did not include biochemical verification of mother or adolescent reports of their respective smoking behavior, assessment of adolescents' prenatal exposure to tobacco, or consideration of the potential neurocognitive effects of prenatal exposure. Replication and extension of this research should include such biochemical and neurocognitive assessments, as well as observational measures of maternal parenting behavior and mother-coparent relationship quality, in order to strengthen the confidence in our findings. Similarly, this study examined adolescent-report, rather than peer-report, of peer smoking; however, some work suggests adolescent-report of peer smoking may be the stronger correlate of adolescent smoking (Bauman & Fisher, 1986). The current analyses also did not include current or lifetime smoking of the coparent. Although approximately half of the families had a coparent participate in the study, the power afforded by the smaller sample ($n = 98$) was not adequate to examine the proposed main and interactive associations. Accordingly, future studies also should examine the main and interactive effects of coparent smoking on adolescent smoking in African American single mother families. Finally, given the growing number of African American youth being raised in single mother homes, we do not view our focus on variability within this group as a study limitation. However, caution is warranted in generalizing the findings to African American youth more broadly.

Several strengths of the study merit attention. As previously noted, a growing number of African American youth are currently being raised in single mother homes, yet they are the focus of relatively little empirical attention in the child and family literatures. Importantly, we expanded more traditional family frameworks to include the involvement of nontraditional coparents, other adults and family members who typically assist African American single mothers with parenting, yet who are rarely included in family studies. Our findings suggest prior studies of smoking that conclude the family context may be less important for African American youth than for White youth may actually underestimate the impact of the family by focusing on a traditional rather than an extended family framework (Bauman et al., 2001; Griesler & Kandel, 1998; Hu et al., 2006). This study also examines a more representative group of African American single mother families than is traditionally examined in the literature. Of those studies which have examined African American single mother families, most focus on very low-income rural and urban mother-child dyads, with far less attention to families characterized by greater education,

income, and access to resources (Jones et al., in press). Finally, although this study relied entirely on self-report, multiple reporters (i.e., mother-report of maternal smoking, adolescent-report of family context and own smoking) strengthen our confidence in the findings.

In conclusion, the current findings suggest that the family is an important context for studying smoking among African American youth, specifically those from single mother homes. However, the protective role of positive parenting, defined as maternal warmth, may have been overlooked if it was not examined within the broader extended family context characteristic of many African American single mother families. Our findings suggest that smoking prevention programs may have more robust effects with African American youth if they decrease maternal smoking behavior and increase maternal warmth in the parent-child relationship, particularly in homes in which the youth is exposed to greater mother-coparent conflict.

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