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Educational Attainment in Young Adulthood, Depressive Symptoms, and Race-ethnicity: The Long-reach of Parenting Styles in Adolescence

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Utilizing four parenting styles (authoritative, authoritarian, uninvolved, and permissive) and two types of educational achievement (years of education completed and completion of a college degree), we investigated whether mental health (i.e., depressive symptoms) mediates the relationship between parenting styles in adolescence and the educational attainment of young adults. We further assessed whether the relationships among parenting styles and educational attainment vary by race and ethnicity for African Americans, Hispanics, and whites. Compared to youth with authoritative parenting, those who experienced uninvolved or authoritarian parenting were more likely to experience depressive affect, and these symptoms of depression partially mediated the relationship between parenting and educational attainment. In terms of racial and ethnic differences, African Americans and Hispanics with authoritarian or uninvolved parents earn more years of education than whites. Authoritarian parenting made it much less likely for whites to complete college compared to their African American and Hispanic counterparts.

Key words: educational attainment, parenting styles, depressive symptoms, race and ethnicity

High quality parent-child interactions are important to the educational progress of children (Israel, Beaulieu, & Hartless, 2001). Parenting styles or strategies that include warmth and emotional support have been shown to boost educational goals and achievement among youth (Davis-Kean, 2005; Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Steinberg, Elmen, & Mounts, 1989). However, less is known about the specific social psychological mechanisms that connect parenting styles to educational outcomes. On the one hand, quality parenting may directly impact educational achievement by encouraging the internalization of positive goal orientation and resilience in the face of educational difficulty (Davis-Kean, 2005). On the other hand, parent-child relationships may shape educational outcomes indirectly. For example, uninvolved parenting—characterized by little communication, indifference, and neglect—may leave a child feeling distressed and may lead to mental health problems (Radziszewska, Richardson, Dent, & Flay, 1996; Widom, DuMont, & Czaja, 2007). In turn, poor psychological adjustment or mental health may impede the ability of the individual to achieve educationally.

In this research, we consider whether the impact of parenting during middle and late adolescence is directly connected to educational attainment in young adulthood or whether the influence of parenting is better understood as indirectly affecting educational progress through mental health—specifically, depressive symptomatology. This investigation adds to the research literature in two important ways. First, with the use of nationally representative, longitudinal data, we are able to trace the direct and indirect (through depressive symptoms) impact of adolescent parenting styles on educational attainment in young adulthood. We utilize data spanning nine years to allow for a careful evaluation of whether parenting styles during adolescence reach into young adulthood and to assess the relationship between parenting styles and educational outcomes for three racial groups: African Americans, Hispanics, and whites.

Second, we focus on depressive symptoms as a potential intervening mechanism between adolescent parenting and the educational achievement of young adults. This assessment adds specificity to the research literature seeking to understand the multiple pathways through which the parent-child relationship shapes youth's immediate and future outcomes. In the period of

study—adolescence into early adulthood—under consideration here, the incidence of depressive symptoms dramatically increases (Arnett, 2007). The result is that young adulthood can be one of the most stressful periods in the life course, with likely implications for all types of achievement, including educational attainment (Aquilino, 1999; Aquilino & Supple, 2001; Arnett, 2000, 2007). Nevertheless, few studies have explored the extent to which parenting styles in adolescence increase or decrease depressive symptomatology and whether these symptoms impact educational progress.

Literature Review

Theoretical Framework

Family social capital theory guides this study. Coleman (1990) defined family social capital as the relationships among social actors that "inhere in family relations and in community organization and that are useful for the cognitive and social development of [youth]" (p. 300). Social capital facilitates interaction among individuals within networks, such as families, as well as the exchange of informal resources such as knowledge, social support, and obligations (Coleman, 1988, 1990). In the research literature, family social capital is typically operationalized as the strength of ties between family members and the quality of the relationship between parent(s) and children (Parcel & Dufur, 2001).

Family social capital creates parent-child bonds that allow parents to effectively convey appropriate social norms to their children. In turn, children internalize the appropriate social norms and behaviors, which lead to more positive outcomes (Christie-Mizell, 2004; Christie-Mizell, Keil, Laske, & Stewart, 2011). Furthermore, family social capital has been most associated with authoritative parenting—i.e., a style that includes warmth, responsiveness, bidirectional communication, and firm control (Sandefur, Meier, & Campbell, 2006; Spera, 2005; see also Yang & McLoyd, 2015). This investment in the well-being of youth pays immediate returns (e.g., fewer behavior problems), but also includes later dividends as youth mature—including fewer depressive symptoms and greater academic success

(Christie-Mizell, 2004; Garber, Robinson, & Valentiner, 1997; Parcel & Menaghan, 1994).

Coleman (1988, 1990) outlined two additional forms of capital—financial and human capital—that are necessary for the development and deployment of family social capital. Financial capital encompasses economic resources such as income and wealth, while human capital is represented by parents' education and cognitive ability. These two forms of capital allow parents to build social capital within the family (Brooks-Gunn & Duncan, 1997; Teachman, Paasch, & Carver, 1997). For example, parents who are well educated tend to have more stable incomes and experience fewer stressors in life, allowing them the opportunity to spend time with their children to build social capital. Children of parents with low financial and human capital have limited access to resources like health care, housing, and the provision of cognitively stimulating materials and experiences (Bradley & Corwyn, 2002). In turn, these parents are less likely to be able to invest in building social capital within the family (Bradley & Corwyn, 2002; Coleman, 1988, 1990).

Parenting Styles and Family Social Capital

Authoritative parenting. The four parenting styles considered in this research are authoritative, uninvolved, permissive, and authoritarian. Authoritative parenting includes setting clear limits, engaging children in reasoning, and being responsive to their emotional needs (Baumrind, 1991; Maccoby & Martin, 1983; Spera, 2005). This type of parenting is thought to best encourage and engage family social capital to the extent that it creates positive parent-child interactions (Coleman, 1988, 1990; Parcel & Menaghan, 1993, 1994). In fact, a number of research studies have found a positive relationship between authoritative parenting styles and higher student achievement (e.g., Gonzalez, Doan Holbein, & Quilter, 2002). Moreover, parental practices in line with authoritative parenting reduce the risk of depressive symptoms among youth by curbing involvement in non-normative behavior (Bolkan, Sano, De Costa, Acock, & Day, 2010; Bulanda & Majumdar, 2009; Milevsky, Schlechter, Netter, & Keehn, 2007). Consequently, the absence of depressive affect may increase adolescents' educational achievement (see e.g., McLeod & Fettes, 2007).

Uninvolved parenting. Uninvolved parenting (or indulgent parenting) is characterized by a lack of responsiveness to a child's needs and emotional distance (Maccoby & Martin, 1983). Whereas authoritative parents will engage in conversations with their children regarding rules and expectations, uninvolved parents do not impose rules and expectations on their children (Baumrind, 1991; Maccoby & Martin, 1983). As a result of lax supervision and expectations, parents who are uninvolved create less family social capital. In turn, children of uninvolved parents respond to their parents' lack of warmth and attention with depressed affect and may become defiant in an attempt to elicit parental attention and involvement (Ge, Best, Conger, & Simons, 1996). These issues can intensify over time, leading to even poorer mental health and lower academic achievement.

Permissive parenting. Unlike authoritative parents, permissive parents are less likely to interact with their children, and when they do communicate with their children, they are more likely to allow their child to dominate the interaction (Baumrind, 1989, 1991). Because of a lack of demands and expectations for the child, this style of parenting leads to a poor parent-child social ties and creation of lower levels of family social capital. Although permissive parents provide emotional support, they are less likely to impose strict rules, preferring instead to promote independent decision-making and self-regulation of emotions, with avoidance of confrontation and discipline (Baumrind, 1991). Permissive parenting has been associated with higher depressive symptoms tied to lower self-regulation among youth (Maccoby, 1992; Radziszewska et al., 1996). Further, children of permissive parents often reject outside authority, which can lead to poor performance in school (Dornbusch et al., 1987).

Authoritarian parenting. Baumrind (1989) described authoritarian parents as neither warm nor responsive to their children. Authoritarian parents are strict, demanding, and tend to communicate demands and expectations through rules and orders (Baumrind, 1991). The lack of negotiation and explanations of rationale for rules may lead to fear and decreased family social capital (see Bolkan et al., 2010). Ozer and colleagues (2013) found that the strict control of authoritarian parents is related to higher levels of depressive symptoms. Moreover, the harsh parenting and control associated with an authoritarian style may harm academic achievement by building resentment and

inhibiting youth from taking ownership in school work (Baumrind, 1991; Ozer, Flores, Tschann, & Pasch, 2013).

Racial variations. Despite a fairly large body of literature reporting the advantages of authoritative parenting compared to other styles of parenting, these impacts have not been found to be uniform across race-ethnicity. For instance, some research shows that authoritarian parenting may not be as harmful to minority children compared to their white counterparts (Dornbusch et al., 1987; Jarrett, 1995; Radziszewska et al., 1996). The contexts in which racial and ethnic minorities are reared vary greatly compared to whites. Minorities are more likely to rear children in environments where single parenting is more common, housing is more likely to be in dangerous or higher crime areas, the family is more likely to face discrimination, and economic resources are lower (Christie-Mizell, Pryor, & Grossman, 2008; McLeod & Shanahan, 1993; Quillian, 2012, 2014; Sampson, Sharkey, & Raudenbush, 2008; Wight, Chau, & Aratani, 2011). These contexts and stressors may shape the impact of parenting styles. Minority children, especially those who are economically disadvantaged, may require more direction and firmness to keep them safe (Lareau, 2002; McLoyd, 1990). Therefore, the current research will add to the growing body of literature seeking to show how parent-child relationships vary in impact on outcomes by race-ethnicity.

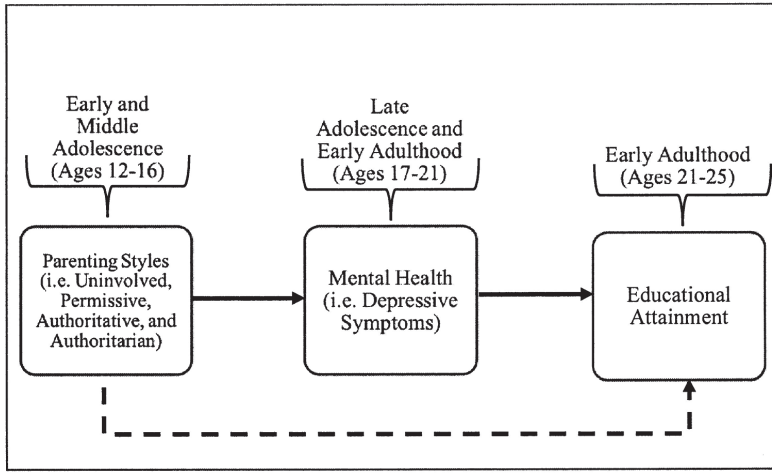
Other important factors. Beyond race-ethnicity, the extant literature around parenting, depressive symptoms, and educational attainment identify several other relevant factors, including gender, family structure, region of residence, and religion. Females are more likely to experience psychological distress. Indeed, studies have found that, beginning in puberty, symptoms of depression, major depressive disorder, and dysthymia are twice as common in women as men (e.g., Leibenluft, 1999).

Family structure, such as family size and living arrangements, may also have an impact on children's well-being. Increased family size has been shown to have a negative impact on children's educational attainment, due to the depletion of resources within the family unit (Downey, 1995). Resources within the family are spread thin when there are more children in the family, which may lead to weaker ties and increased depressive symptoms. Single parents are more likely to have fewer resources to share with their children, which may lead

to negative outcomes for children, such as poor mental health and decreased educational attainment (Amato, 1994; McLanahan, 1997; McLanahan & Sandefur, 2009). Although children may struggle when adjusting to a stepparent, there are benefits to having two parents in the home, such as financial and social resources (McLanahan & Sandefur, 2009).

Religiosity and one's geographic region of residence have been shown to impact depressive symptoms for youth (Christie-Mizell et al., 2008; Petts & Jolliff, 2008) and educational attainment (Muller & Ellison, 2001; Parcel & Dufur, 2009). Religious settings may offer social support and a resource for coping for youth and their parents, leading to decreased levels of depression (Kosmin, 2011). People that live in the South attend church more frequently than people in other regions of the country (Kosmin, 2011). Finally, regional and religious differences could affect the incentive to invest in education (Muller, 2001; Sander, 1992).

Figure 1: Hypothesized relationships between central variables



Summary and Hypotheses

In this paper, we considered the relationships among parenting styles, depressive symptoms, and educational attainment as youth age from adolescence into young adulthood. Figure 1 further illustrates the relationships tested here. There were three objectives for this study. The first objective was to determine the relationship between parenting styles and depressive symptoms. The second objective was to establish whether parenting styles and depressive symptoms are related to educational attainment for young adults. Finally, the third objective was to investigate whether race moderates the relationship between the parenting styles and educational attainment. These objectives resulted in the development of the following hypotheses:

> Hypothesis 1a-c: Compared to authoritative parenting, there is a positive relationship between (a) uninvolved, (b) permissive, and (c) authoritarian parenting and depressive symptoms.
>
> Hypothesis 2a-c: Compared to authoritative parenting, there is a negative relationship between (a) uninvolved, (b) permissive, and (c) authoritarian parenting and educational attainment.
>
> Hypothesis 3a-c: Depressive symptoms mediate the relationship between (a) uninvolved, (b) permissive, and (c) authoritarian parenting and educational attainment (with authoritative parenting as the comparison group).

The purpose of these hypotheses is to examine whether mental health—depressive symptoms, in this case—is one mechanism that links earlier parenting styles to educational attainment in young adulthood. To test these hypotheses, we assess both years of educational attainment as well as whether the respondent has earned a college degree.

Our fourth hypothesis is:

> Hypothesis 4a-b: Authoritarian parenting is less harmful to the educational attainment of a) African American and b) Hispanic youth, compared to whites.

In this hypothesis, we focus on authoritative versus authoritarian parenting and whether the impact of these two styles

varies by race-ethnicity. Existing research (see e.g., Christie-Mizell et al., 2008) suggests that African American and Hispanic parents may be more likely to take the stricter stances associated with authoritarian parenting. Therefore, with respect to educational attainment, we examine whether authoritarian parenting may not be as harmful for African Americans and Hispanics, compared to whites.

Data and Methods

Data

Data for this investigation were drawn from the National Longitudinal Survey of Youth 1997 Cohort (NLSY97), a longitudinal study of the educational and labor market experiences of youth in the United States. The youth sampled were born between 1980 and 1984 and ranged in age from 12 to 16 by December 31, 1996. Data collection began in 1997 and the most recent round of interviews for the NLSY97 was done in 2013. The full NLSY97 sample consists of a nationally representative group of youth that have been interviewed annually since 1997, with over-sampling for poor and minority youth.

Measures

Measures for this study were taken from the first (1997, baseline), sixth (2002), and tenth (2006) waves of the data. This pattern allows for our mediator (depressive symptoms, 2002) to occur subsequent to the independent variable (adolescent parenting style, 1997), but prior to the dependent variables (educational attainment, 2006). Over these three waves of data (i.e., 1997 to 2006) collection, 317 respondents were missing on one or more of our study variables. In supplementary analyses, we utilized multiple imputation to recapture these respondents. The findings using multiple imputation did not differ significantly from a complete cases analysis. Therefore, we present the complete cases analyses in the models below. Our final sample consists of 4,078 young adults, who were 21 to 25 years old in the tenth wave. Table 1 displays the descriptive statistics for all study variables in the total sample. All analyses were weighted to correct for the oversampling of poor and minority youth.

Table 1. Weighted Means, Percentages, and Standard Deviations for All Study

Variables	Mean /Proportions	SD
Dependent variables		
Education (years)	13.65	2.55
Earned College Degree (1=yes)	.26	-
Depressive Symptoms: 1 (low) to 5 (high)	1.97	.64
Parenting Styles		
Authoritative	.42	-
Uninvolved	.10	-
Permissive	.36	-
Authoritarian	.12	-
Race-ethnicity, sex, age, and post high school		
Black (1=yes)	.12	-
Hispanic (1=yes)	.11	-
Female (1=yes)	.49	-
Age	13.95	1.28
5 or fewer years post high school (1=yes)	.42	-
SES, family characteristics, region, and religion		
Family income ($10,000s)	5.81	4.85
Parents' education (1=college degree)	.20	-
Reared in traditional two-parent home (1=yes)	.63	-
Number of siblings (count)	2.35	1.28
Grew up in the South (1=yes)	.32	-
Never attended church (1=yes)	.16	-

Educational attainment. The main dependent variable was years of educational attainment and was measured in 2006. The mean of education for the sample is 13.65 years. Each respondent's education was also measured as a categorical variable splitting the sample between those who had earned a college degree (1 = yes), compared to those who did not. By the time of the final wave (2006) utilized in this study, 26% of the sample had earned a college degree.

Depressive symptoms, parenting styles, and race-ethnicity. Depressive symptoms, measured in 2002, is both a main dependent variable and mediator in the analyses below. It is measured as a five-item version of the mental health inventory (MHI-5). The questions included how often, within the last month, the

respondent felt: (1) "nervous"; (2) "calm or peaceful"; (3) "downhearted or blue"; (4) "happy"; and (5) "so down in the dumps that nothing could cheer you up." Each item ranged from 1 (none of the time) to 4 (all of the time). The mean for depressive symptoms was 1.97, with a Cronbach's alpha of .77.

Our measures of parenting styles and all control variables were captured in the baseline year (1997), when the adolescent respondents (ages 12-16) were interviewed to assess their parents' level of supportiveness and responsiveness. Researchers at Child Trends, an organization involved in the NLSY97 questionnaire design process, then combined the responses to produce a parenting style variable (Moore et al., 1999). More specifically, and in line with the relevant parenting literature, Child Trends researchers developed two items—one measuring parental supportiveness (i.e., responsiveness) and the other measuring parental strictness or permissiveness (i.e., demandingness). At baseline, when the respondents were 12 to 17 years old, they were asked how supportive each parent was on a 3-point scale, ranging from 1 (very supportive) to 3 (not very supportive). Then, with appropriate description, each respondent was asked to categorize each parent as either (1) strict or (2) permissive. The two-level variables were then combined to yield: *uninvolved* (permissive and not very or somewhat supportive), *permissive* (permissive and very supportive), *authoritative* (strict and very supportive), and *authoritarian* (strict and not very or somewhat supportive). This measure of parenting has been validated elsewhere and utilized widely in the parenting literature (Baumrind, 1991; Maccoby & Martin, 1983). In this research, we utilize maternal parenting styles, which were available for the vast majority of respondents. Of the 4,078 total respondents, 404 (10%) had uninvolved parenting, 1,488 (36%) had permissive parenting, 1,710 (42%) had authoritative parenting, and 476 (12%) had authoritarian parenting. We utilized authoritative parenting as the reference group in all analyses below.

Race-ethnicity was a major independent variable. We created dummy variables to distinguish among African Americans (1 = yes), Hispanics (1 = yes), and whites (1 = yes). Whites comprised 78% of the sample and were the omitted category for the analyses. Blacks were 12% of the sample and Hispanics were 11% of the sample.

Control variables. In the analyses below, we compared females to males (the omitted category). Household income was measured in dollars and the mean was $58,100. For this study, we coded income in quartiles to account for skewness in the original measure. We then compared the highest quartile to the three lower quartiles. Preliminary sensitivity analyses supported this decision. Further, parent's education was included as a dummy variable to capture whether one or both parents had a college degree. If one parent was missing on this variable, then only the other parent's education was used. Of the total sample, 20% reported that their parents have a college degree.

At baseline, the average age for the total sample was 13.95 years. To aid in our estimation of educational attainment, we also divided age using dummy variables to compare those that were five or fewer years post high school during our final wave in 2006. Relying on auxiliary analyses (available upon request), this scheme was devised to account for respondents who had an adequate amount of time to complete college. That is, because we assessed the completion of a bachelor's degree as one outcome, it was important to account for differences that would make this milestone more probable for some respondents compared to others. In 2006, 42% of the total sample was five or fewer years post high school.

The number of dependent children per household was assessed at baseline. The average number of dependent children for the entire sample was 2.35. Utilizing census designations at baseline, region of residence was reported as South (32%), North Central (30%), Northeast (17%), or West (21%). In our analyses, we compare those who live in the South to all others.

At baseline, respondents were asked how often they attended church in the past twelve months and the responses ranged from 1 (never) to 8 (everyday). We compare those who reported never attending (16%) to all others. We further compared individuals who reported being reared in a traditional two-parent home to other family structures (e.g., single parent home and stepparent household). Sixty-three percent of our respondents reported being raised in a two-parent household.

Analytic Strategy

To test our hypotheses that depressive symptoms mediate the impact of parenting styles on educational attainment, we utilize a series of regression models and proceed in four steps. First, we estimate an ordinary least squares (OLS) regression to establish that parenting styles are associated with depressive symptoms. Second, we estimate whether parenting styles impact both measures of educational attainment—years of education and earned a college degree. Years of education is estimated using an OLS regression and college degree (1 = yes) is calculated with a logistic regression. Third, we added depressive symptoms to the models for educational attainment to determine whether, and the extent to which, the impact of parenting styles is mediated. Finally, we estimated a series of interactions by race-ethnicity and parenting styles to test our contention that authoritarian parenting is less harmful to the educational attainment of African Americans and Hispanics, compared to whites.

Multivariate Findings

Table 2, Model 1 represent the regression model for depressive symptoms. Both uninvolved parenting and authoritarian parenting were positively associated with depressive symptoms compared to authoritative parenting. Additionally, women were more likely to report higher levels of depressive symptoms, while those reared in two-parent homes reported lower symptoms of depression.

Models 2–3 of Table 2 are the findings for years of educational attainment. Compared to authoritative parenting, uninvolved, permissive, and authoritarian parenting resulted in fewer years of education (Table 2, Model 2). Also, African American and Hispanic youth reported fewer years of education, compared to whites. Women in our sample reported more education. Further, those respondents who are five or fewer years post-high school reported fewer years of education. Conversely, those in the top quarter of high family income, those whose parents finished college, and those who grew up in a traditional two-parent home completed more education. Finally, respondents from a large sibling group,

Table 2. Depressive Symptoms, Education (years), Earned College Degree (1=yes) Regressed on Selected Variables. NLSY97—1997 to 2006 (N = 4,078).

	Depressive Symptoms		Education (years)				Earned College Degree (1=yes)			
	Model 1		Model 2		Model 3		Model 4		Model 5	
Variables	b	se	b	se	b	se	logit	odds	logit	odds
Parenting styles[a]										
Uninvolved (1=yes)	.13***	.03	-.91***	.12	-.87***	.12	-.92***	.40	-.89***	.41
Permissive (1=yes)	-.02	.02	-.38***	.07	-.39***	.07	-.27***	.77	-.26*	.77
Authoritarian (1=yes)	.11***	.03	-.47***	.11	-.44***	.11	-.56***	.57	-.54**	.58
Race-ethnicity[b]*, sex, age, and post high school*										
Black (1=yes)	-.01	.02	-.28**	.11	-.28**	.11	-.40**	.67	-.40**	.67
Hispanic (1=yes)	.03	.02	-.49***	.11	-.48***	.11	-.66***	.52	-.65***	.52
Female (1=yes)	.12***	.01	.60***	.07	.64***	.07	.67***	1.95	.70***	2.01
Age (years)	.00	.01	.02	.05	.03	.05	.13*	1.13	.13*	1.14
5 or fewer years post high school (1=yes)	--	--	-.38**	.13	-.38**	.13	-.64***	.53	-.64**	.53
SES and family characteristics										
Top quarter in family income (1=yes)	.00	.02	.79***	.08	.79***	.08	.70***	2.02	.71***	2.03
Parent's education (1=college degree)	-.00	.02	1.42***	.0	1.42***	.09	1.20***	3.35	1.21***	3.36
Reared in traditional two-parent home (1=yes)	-.05**	.02	.83***	.07	.82***	.07	.82***	2.27	.81***	2.25
Number of siblings (count)	-.00	.01	-.14***	.03	-.14***	.03	-.12***	.89	-.12*	.89
Region, religion, and depressive symptoms										
Grew up in the South (1=yes)	-.01	.02	-.21**	.07	-.21**	.07	-.04	.96	-.04	.96
No Church Attendance (1=yes)	.03	.02	-.63***	.09	-.62***	.09	-.52***	.59	-.52***	.60
Depressive Symptoms: 1 (low) to 5 (high)	--	--	--	--	-.35***	.07	--	--	-.25*	.78
Intercept or Chi-square	1.87***		13.01***		13.64***		539.99***		542.93***	
R-Square or Pseudo R-square	.04		.23		.24		.17	.18		

[a] Reference group is authoritative parenting.
[b] Reference group for race-ethnicity is white.
Note: Models 1-3 represent ordinary least square regressions, while Models 4-5 are logistic regressions; *p<.05; ** p<.01; *** p<.001 (two-tailed tests).

those who grew up in the South, and individuals who never attended church attained fewer years of education.

In Table 2, Model 3, we added depressive symptoms to our estimation of years of education and found that depressive symptoms in late adolescence and early adulthood were inversely related to educational achievement. Recall that one of the goals of this research was to test for mediation. The impact of uninvolved parenting (*Sobel t-test*: -3.27, $p < .001$) and authoritarian parenting (*Sobel t-test*: -2.96, $p < .001$) on years of educational attainment of youth was partially mediated by depressive symptoms. Mediation for permissive parenting was not possible because there was no association between permissive parenting and depressive symptoms (Table 2, Model 1).

Models 4–5 of Table 2 show the results of the logistic regression analyses for the probability of earning a bachelor's degree. In Model 4, compared to authoritative parenting, uninvolved, permissive, and authoritarian parenting were associated with lower odds of having completed a bachelor's degree. Further, African Americans and Hispanics, compared to whites, reported lower odds of earning a college degree. The young women in our sample reported higher odds of completing a bachelor degree. Age was positively associated with higher odds of earning a bachelor's degree, while five or fewer years post-high school was associated with lower odds of obtaining a college degree. Moreover, those from high income backgrounds, those with parents who have college degrees, and those who grew up in traditional two-parent homes had higher odds of attaining a college degree. Respondents who reported many siblings and those who never attended church had lower odds of completing a bachelor's degree.

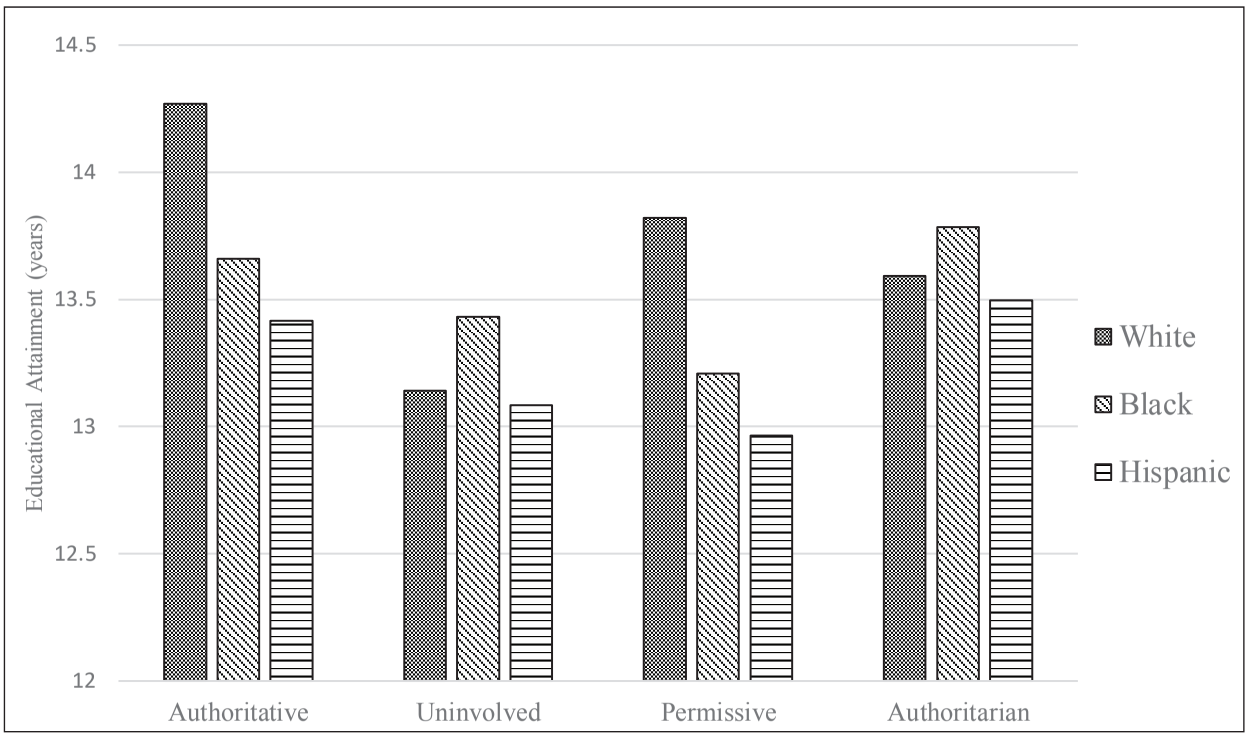
In Table 2, Model 5, we added depressive symptoms to our estimation of probability of earning a college degree. In late adolescence and young adulthood, depressive symptoms resulted in lower odds of earning a bachelor's degree. Moreover, depressive symptoms partially mediated the impact of uninvolved (*Sobel t-test*: -2.34, $p < .05$) and authoritarian (*Sobel t-test*: -2.21, $p < .05$) parenting on the probability of earning a college degree. Mediation for permissive parenting was not possible because there was no association between permissive parenting and depressive symptoms (Table 2, Model 1).

Table 3. Education (years) and Earned College Degree (1=yes) Regressed on Selected Variables. NLSY97—1997 to 2006 (N = 4,078).

	Education (years)		Earned College Degree (1=yes)	
	Model 1		Model 2	
Variables	b	se	logit	odds
Parenting styles[a]				
Uninvolved (1=yes)	-1.05***	.13	-1.06***	.35
Permissive (1=yes)	-.43***	.08	-.23*	.79
Authoritarian (1=yes)	-.61***	.13	-.75**	.47
Race-ethnicity[b]*, sex, age, and post high school*				
African American (1=yes)	-.50**	.15	-.51**	.60
Hispanic (1=yes)	-.69***	.17	-.75***	.47
Female (1=yes)	.64***	.07	.70***	2.01
Age (years)	.03	.05	.13*	1.14
5 or fewer years post high school (1=yes)	-.38**	.13	-.64**	.53
SES and family characteristics				
Top quarter in family income (1=yes)	.79***	.08	.71***	2.03
Parent's education (1=college degree)	1.41***	.09	1.21***	3.35
Reared in traditional two-parent home (1=yes)	.81***	.07	.12**	.89
Number of siblings (count)	-.14***	.03	-.81***	2.25
Region, religion, and depressive symptoms				
Grew up in the South (1=yes)	-.21**	.07	-.04	.96
No Church Attendance (1=yes)	-.61***	.09	-.51***	.60
Depressive Symptoms: 1 (low) to 5 (high)	-.35***	.07	-.25*	.78
Interaction Terms				
African American × Uninvolved	.87*	.39	.90	2.47
Hispanic × Uninvolved	.80*	.34	.95	2.58
African American × Permissive	.18	.23	-.33	.72
Hispanic x Permissive	.10	.24	-.20	.82
African American ×Authoritarian	.68*	.31	1.11**	3.04
Hispanic × Authoritarian	.74*	.36	0.91*	2.48
Intercept or Chi-square	13.68***		549.47***	
R-Square or Pseudo R-square	.25		.18	

[a] Reference group is authoritative parenting.
[b] Reference group for race-ethnicity is white.
Note: Model 1 is an ordinary least squares regression and Model 2 is a logistic regression; *p<.05; ** p<.01; *** p<.001 (two-tailed tests).

Figure 2: The joint influence of race-ethnicity and adolescent parenting styles on years of educational attainment



In Table 3, we explored whether the association between parenting styles and educational attainment varies by race-ethnicity. We were especially interested in whether authoritarian parenting was as harmful to the educational attainment of minority youth, compared to their white counterparts. Model 1 of Table 3 shows that the association between parenting and years of education was moderated by race-ethnicity. Figure 2 graphically displays these interactions. Compared to whites, authoritarian parenting had a positive impact on how many years of education were attained by African Americans and Hispanics. Notice in Figure 2 that the years of education was higher among African Americans and Hispanic youth who were accustomed to authoritarian parenting. For whites, years of education was highest among those with authoritative parenting. Interestingly, and not predicted by us, uninvolved parenting was not as harmful to African Americans and Hispanics as it was for white youth. That is, compared to authoritative parenting, uninvolved parenting lowered years of education more so for whites than for racial minorities in our study. Testing for moderation does not substantively change the other findings in the model. Respondents who were five or fewer years post-high school attained fewer years of education, while women earned more years of education than men. Those with high income, parent's with college degrees, and youth reared in a two-parent home earned more years of education. Finally, more siblings, growing up in the South, no church attendance, and depressive symptoms resulted in fewer years of education.

Model 2 of Table 3 shows that race-ethnicity moderated the relationship between authoritarian parenting and the probability of earning a bachelor's degree. Figure 3 graphically displays these interactions. Authoritarian parenting, compared to the other styles, led to greater odds of earning a bachelor's degree for African American and Hispanic youth. Young African American adults with authoritarian parents were three times more likely than their white counterparts to earn a bachelor's degree. Hispanic young adults with authoritarian parents were about two and a half times more likely than their counterparts to earn a bachelor's degree.

Similar to our prior estimation of the probability of earning a college degree, women and older respondents had higher odds of earning a college degree. Respondents who were five

or fewer years post-high school had lower odds of completing a degree. High family income in adolescence, parents with college degrees, and being reared in a traditional two-parent home led to higher odds of earning a college degree. Growing up with more siblings, the lack of church attendance, and depressive symptoms resulted in lower odds of earning a college degree.

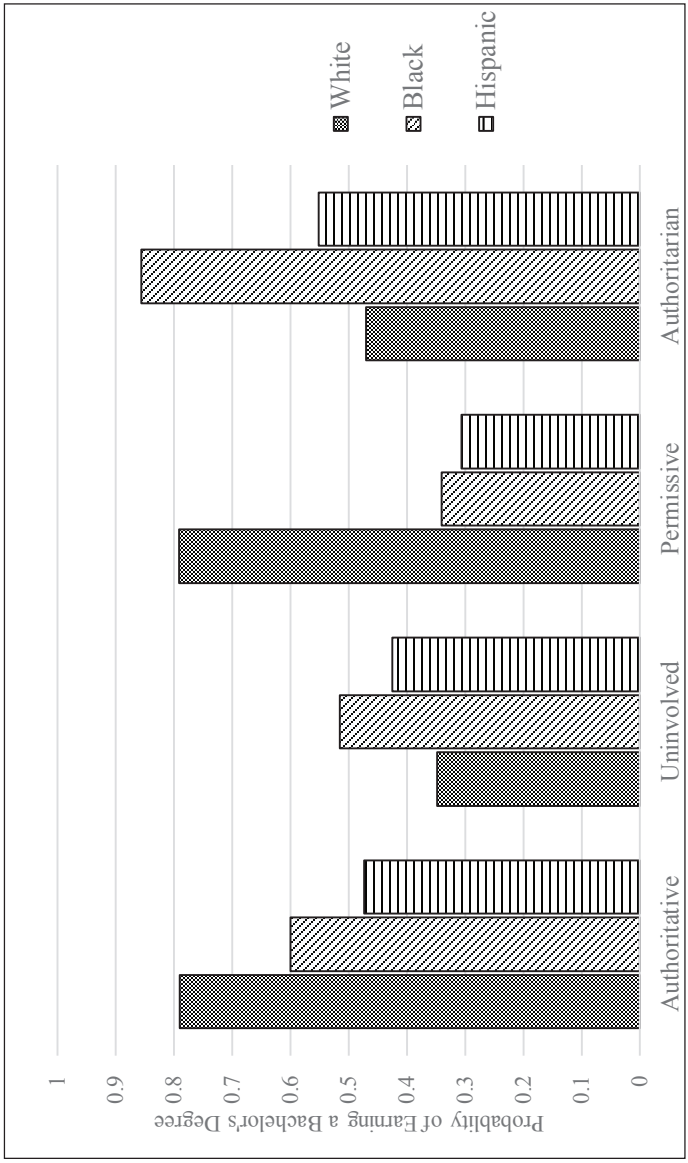


Figure 3: The joint influence of race-ethnicity and adolescent parenting styles on the odds of earning a college degree

Discussion and Conclusion

Using family social capital theory and its reliance on the centrality of parent-child bonds for predicting youth outcomes, we examined how parenting styles impact depressive symptoms and educational attainment for youth. Specifically, and as Figure 1 illustrates, we tested whether depressive symptoms mediated the relationship between parenting styles and educational attainment. Our study employed two measures of educational attainment: years of education and the odds of earning a college degree. Further, we explored whether race-ethnicity moderated the impact of parenting styles on educational attainment. Four hypotheses were developed to accomplish these goals. We found support for hypotheses 1a and 1c—that uninvolved and authoritarian parenting would be positively related to depressive symptoms. However, we did not find support for hypothesis 1b—that permissive parenting would be associated with depressive symptoms.

Although some authors (see e.g., Gelfand & Teti, 1990, or LaFrenière & Dumas, 1992) have speculated that permissive parenting leads to depressive symptomatology in children, that finding is not supported in this research. Consistent with what we found, Lamborn and her colleagues (Lamborn, Mounts, Steinberg, & Dornbusch, 1991) argued that permissive parenting was not associated with depressive symptomatology initially because adolescents value self-reliance and the independent decision-making that is often associated with uninvolved parenting (see also Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994). However, we cannot rule out that over time permissive parenting may be associated with depressive symptoms as a consequence of bad decisions during adolescence and young adulthood. Future research should extend our study further into adulthood to more fully assess the relationship between permissive parenting and depressive symptoms.

Consistent with hypotheses 2a–c, our results indicated that, compared to authoritative parenting, uninvolved, permissive, and authoritarian parenting were negatively related to educational attainment for youth. With respect to years of educational attainment, hypotheses 3a and 3c were supported: depressive symptoms partially mediated the relationship between uninvolved parenting and educational attainment and the

relationship between authoritarian parenting and educational attainment. We did not find support for hypothesis 3b – depressive symptoms did not mediate the relationship between permissive parenting and years of education. In terms of our other measure of educational attainment—i.e., the odds of earning a college degree—we also found support for hypotheses 3a and 3c. Depressive symptoms did mediate the relationship between uninvolved parenting (H3a) and college degree completion, as well as the relationship between authoritarian parenting (H3c) and earning a bachelor's degree.

In our fourth hypothesis, we focused on authoritarian versus authoritative parenting and predicted that authoritarian parenting would be less harmful to the educational attainment of African Americans (H4a) and Hispanics (H4b). With respect to years of education, we found support for both hypotheses. African American and Hispanic youth who experienced authoritarian parenting attained more education than those from authoritative homes. Conversely, whites' education prospects were more harmed by authoritarian parenting, with those who were reared in authoritative homes earning significantly more years of education. One interesting and somewhat surprising finding was that African American and Hispanic youth who experienced uninvolved parenting were less harmed than their white counterparts. That is, whites who were from uninvolved homes achieved fewer years of education than either African Americans or Hispanics.

Hypothesis 4 also received support in our prediction of the odds of completing a college degree. Authoritarian parenting was less harmful to both African Americans (H4a) and Hispanics (H4b). That is, African Americans and Hispanics from authoritarian homes had higher odds of completing a college degree than those from authoritative homes. For whites, the reverse was true. White youth from authoritative homes were more likely to earn a college degree compared to those whites who came from authoritarian families.

The findings in this study indicate that parenting styles have an impact on youth during adolescence and continue to have an impact into young adulthood in two ways. First, parenting styles during adolescence directly affect how much education is attained in young adulthood. Second, parenting styles also exert influence on educational progress through mental

health. That is, excessively strict (i.e., authoritarian) or overly relaxed (i.e., uninvolved) parenting practices are detrimental to the mental health of youth as they progress into their early adult years. In turn, psychological maladjustment—depressive symptoms, in this case—impedes educational attainment. It is noteworthy that this pattern of mediation applies to both educational outcomes (i.e., years of education and odds of earning a college degree) explored in this study.

Further, consistent with research that has considered the impact of parenting by race, authoritarian parenting strategies led to more years of education and a greater probability of completing a college degree for African American and Hispanic youth, compared to their white peers (McLeod & Shanahan, 1993). To be clear, our results do not indicate that an authoritarian parenting style should be the preferred method of parenting for minority children. Instead, the findings here suggest that authoritarian parenting was not as detrimental for African American and Hispanic children as it was for white children, with respect to educational attainment. Similarly, and with respect to the relationship between uninvolved parenting and years of education, the educational achievement of African Americans and Hispanics does not suffer as much as that of whites. These findings suggest that the minority youth in our sample are better able to adapt to, and academically excel with, uninvolved and authoritarian parents, compared to their white peers.

Although scholars have consistently argued that authoritative parenting is a superior form of parenting, the previous research has overlooked how these experiences may vary by race-ethnicity. The structural position (e.g., social class), as well as the day-to-day experience of African Americans and Hispanics, may simply mean that these youth may be more adaptive to varying parenting styles. Other related research has shown that various forms of parenting (e.g., spanking—see e.g., Christie-Mizell et al., 2008) have different effects across the racial and ethnic groups studied here. The typical theoretical reasoning is that because the context of daily life differs for racial minorities (compared to whites), research utilizing largely white, middle class families may simply not apply to African Americans and Hispanics (Christie-Mizell et al., 2008; Lareau, 2002). That is, scholars should develop strategies that avoid imposing expectations developed from studies that focus on white respondents

on racial and ethnic minorities; instead, research should continue to carefully differentiate between the consequences of parenting by race-ethnicity.

This study is not without limitations. First, only the reported parenting styles for mothers were used here. While mother-child data dominates this type of research, other studies also show the importance of considering paternal parenting contributions in conjunction with those of mothers (see e.g., Christie-Mizell et al., 2011). Second, this study may not tell the full story for respondents who may have to take time off from college or those that simply take longer to graduate. Recent research shows that not only are adults taking longer to complete post-secondary degrees, but also that the factors (e.g., family and employment obligations) shaping completion of degrees vary as adults mature (Elman, Wray, & Xi, 2014). Third, this research is not generalizable to other groups beyond African Americans, Hispanics, and whites. It is quite possible the relationships among parenting, mental health, and educational attainment vary for other groups not studied here. For example, Chinese American parents, similar to African Americans, are more likely to employ authoritarian parenting, but their educational outcomes and socioeconomic backgrounds are more similar to whites (Chao, 2001; Kim, Wang, Orozco-Lapray, Shen, & Murtuza, 2013). Therefore, the extent to which the patterns found in this research apply to Chinese Americans—or other groups, for that matter—is unknown.

In conclusion, future research should continue to employ lon gitudinal data to further investigate the mechanisms that link parenting styles early in the life course to outcomes as youth age into adulthood. Such research elucidates how early relationships both directly and indirectly transform educational outcomes. For instance, had we simply studied the relationship between parenting styles and educational attainment, we would have overestimated the direct influence of parenting styles. Instead, a focus on the mechanisms that link parenting styles to educational progress proved fruitful and revealed that, in addition to direct effects, part of the influence of parenting on education flows through mental health. To the extent that the extant literature has shown that parenting styles are linked to a variety of adolescent outcomes (e.g., self-esteem and social competence—see e.g., Gonzales et al., 2002), other research should

continue this pattern of exploring how other potential mediators link the experience of parenting styles in adolescence to educational attainment in young adulthood.

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