

Young Adulthood Multiple Partnerships: The Long-Term Consequences of Maternal Parenting Style for Young Women's Risky Behavior

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Overview

In the United States, unintended pregnancies (those that are unwanted or mistimed) account for 49% of all pregnancies and 44% of pregnancies resulting in a live birth,⁶ and many of these unintended pregnancies are attributable to young adults.¹⁹ Unintended fertility amongst teenagers and young adults is associated with negative maternal and child health outcomes,^{8,11,16,17} a decreased likelihood of initiating early prenatal care,¹⁰ and an increased chance of subsequent unintended pregnancies.¹² Research suggests that young women's exposure to unintended pregnancy results from sexual risk-taking and that sexual risk-taking may be linked to parenting practices. This study used Waves I, II, and III of the National Longitudinal Survey of Adolescent Health to examine the direct and indirect associations between maternal parenting style (based on measures of Wave I warmth and control) and young women's sexual risk-taking (measured by multiple past year partnerships). Results indicate that authoritarian and neglectful parenting were associated with higher numbers of past year partners, and that neglectful parenting may have a direct effect on young women's subsequent sexual risk-taking in young adulthood.

Conceptual Framework

It is believed that children develop the ability to control their own activities and interact effectively with others when they experience appropriate parenting, also known as "parenting style."³ Classified by the two dimensions of warmth and control,¹ four parenting styles have been identified: 1) authoritative: high warmth, high control (this group is often associated with the best psychosocial outcomes); 2) authoritarian: low warmth, high control; 3) permissive: high warmth, low control, and 4) neglectful: low warmth, low control. Authoritative parents "monitor and impart clear standards for their children's conduct. They are assertive, but not intrusive or restrictive, and their disciplinary methods are supportive, rather than punitive" (Baumrind, 1991, p. 62).² This style of parenting is thought to lead to lower levels of deviant behavior and higher levels of self-efficacy. Authoritarian parents are "obedience- and status-oriented, and expect their orders to be obeyed without explanation" (p. 62). Permissive parents are "nontraditional and lenient, do not require mature behavior, allow considerable self-regulation, and avoid confrontation" (p. 62). Finally, neglectful parents are low in both their control and their responsiveness; they are often seen as rejecting of their children. Based on previous research, it is hypothesized that authoritative parenting will lead to higher sexual self-efficacy and lower sexual risk-taking behaviors in adolescence, which, in turn, will result in lower levels of sexual risk-taking in young adulthood. Parenting styles other than authoritative are expected to lead to lower sexual self-efficacy and higher risk-taking behaviors, thus leading to greater sexual risk-taking.

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Background

Parenting style has been identified as a predictor of children's and adolescents' psychosocial functioning, self-regulation, social and instrumental competence,^{2,5,13,15,20} yet few studies have examined the relationship between parenting style and sexual risk behaviors – and none, to the authors' knowledge, have examined the effects of parenting style on adulthood sexual risk outcomes. Moreover, those that have examined associations between parenting style and sexual risk-taking (in adolescence) have yielded differing results. For example, one study found that parenting style had an effect on low-income, black adolescent females' age of sexual initiation and subsequent sexual activity.¹⁸ Yet, another study found that parenting style did not significantly affect sexual risk behaviors, such as multiple partnerships and condom use, among rural middle and high school students.⁷ Though there have been mixed findings when examining the effect of parenting style on sexual risk taking, numerous studies have found that, independently, both dimensions of parenting style (warmth and control) are associated with sexual risk behaviors. Namely, prior studies have found significant associations – both positive and negative – between parental warmth and control and multiple sex partnerships.⁴ In particular, it has been found that mothers play a particularly significant role in young women's sexual risk-taking.¹⁴ As such, it is important that the effects of maternal warmth and maternal control be further explored in tandem (as classified by the four types of parenting style) because, together, these qualities may act as important mechanisms in associations between mother-daughter relationships and sexual risk behaviors.

In the current study, it was hypothesized that negative parenting styles – that is, parenting styles during adolescence that are low in control and/or low in warmth – would lead to poor psychosocial functioning in later adolescence (as measured by low sexual self-efficacy and high risk-taking behaviors), which would in turn lead to engaging in multiple past year partnerships in young adulthood. Thus, this study examined both the direct and indirect effects of maternal parenting style during adolescence on multiple partnerships in young adulthood. By examining longitudinal associations between mother-daughter relationships and sexual risk outcomes, it may be possible to identify at-risk groups and to create and implement sexual risk intervention programs.

Methods

Sample

To explore the relationship between maternal parenting style in adolescence and young women's multiple past year sex partnership, we used nationally-representative, longitudinal data from Waves I (1994-95, adolescence), II (1995-96, later adolescence), and III (2001-02, young adulthood) of the National Longitudinal Study of Adolescent Health (Add Health) (N = 20,774). Only respondents who responded to all three waves and who had valid Wave III weight, cluster, and strata values were included in the sample (n = 10,828). Additionally, because this study focused on young adult women, boys were omitted from the sample (n = 5,728). Similarly, because this study examined mother-daughter relationships (not father-daughter relationships), only individuals whose mothers completed the parent survey were included (n = 4,725). Further, because some questions regarding sexual risk taking at Wave I were only asked of those 15 years and older, only those who were 15 years old or older at Wave I were included in the analytic sample (n = 2,983), and only those who had initiated vaginal sex at Wave II were included in the analyses (n = 1,682). Finally, only those who had non-missing values on key independent variables were used (n = 1,564).

Measures

Dependent Variable. Wave III multiple sex partnerships were assessed with the question: *With how many different partners have you had vaginal intercourse in the past 12 months?* Responses were continuous. To correct for the skewness of these responses and to make them more normally distributed, analyses used the natural log of these numbers, plus one.

Independent Variable. Respondents were categorized as having authoritarian (low warmth, high control), permissive (high warmth, low control), or neglectful (low warmth, low control) mothers, *versus* authoritative mothers, the reference group (high warmth, high control). Maternal warmth was based on three Wave I items: —*How close do you feel toward your mother? Most of the time, your mother is warm and loving toward you. Overall, you are satisfied with your relationship with your mother.* Valid responses were summed and averaged. Using a cut-off score of the median, respondents were dichotomously coded as having low warmth (0) or high warmth (1). Maternal control was determined from responses to seven Wave I items: *Do your parents let you make your own decisions about the time you must be home on weekend nights? The people you hang around with? What you wear? How much television you watch? Which television programs you watch? What time you go to bed on week nights? What you eat?* Respondents answered either no or yes to each question. Valid responses were reverse-coded, summed and averaged. Using a cut-off score of the median, respondents were dichotomously coded as either having low control (0) or high control (1).

Mediators. Two psychosocial mediators were included: sexual self-efficacy and risk-taking behaviors. Low sexual self-efficacy was based on three Wave II questions: *If you wanted to use birth control, how sure are you that you could stop yourself and use birth control once you were highly aroused or turned on? How sure are you that you could plan ahead to have some form of birth control available? How sure are you that you could resist sexual intercourse if your partner did not want to use some form of birth control?* Valid responses were reverse-coded, summed, and averaged; high scores represented low sexual self-efficacy, low scores represented low sexual self-efficacy. High risk-taking behavior was based on eight Wave II questions: *In the past 12 months, how often did you lie to your parents or guardians about where you had been or whom you were with? Take something from a store without paying for it? Run away from home? Drive a car without its owner's permission? Steal something worth more than \$50? Go into a house or building to steal something? Steal something worth less than \$50? Act loud, rowdy, or unruly in a public place?* Individuals who reported engaging in each activity at least once were given scores of 1 on that question; those who had not were given scores of 0. Valid scores were summed; high scores indicated high levels of risk-taking behaviors and low scores indicated low levels.

Covariates. It has been established that the following represent predictors of sexual risk and, thus, were included as covariates in the current study: age, race/ethnicity, maternal education, poverty, religiosity, family structure, age of sexual initiation, and sexual health knowledge.⁹ Further, to control for peer effects and for other measures of mother-daughter relationships that have been shown to affect sexual risk-taking behaviors, controls were added for Wave I peer substance use, peer approval of sex, and maternal frequency and comfort with communication about sex. Finally, controls were added for Wave I sexual self-efficacy and risk-taking behaviors in order to assess the longitudinal effects of the Wave I independent variables on the hypothesized Wave II mediators.

Analytic Methods

Using logistic regression, unadjusted and adjusted associations (controlling for Wave I covariates) between Wave I maternal parenting style and Wave III multiple past year partnerships were examined (Models 1 and 2). To determine if parenting style had both direct and indirect effects on young adult multiple partnerships, ordinal regression was used to assess the relationship between parenting style and the mediators (Wave II low sexual self-efficacy and high risk-taking behaviors) (Model 3). Logistic regression was then used to estimate associations between the mediators and the dependent variable (Model 4). Finally, the mediators were added to the original model, and logistic regressions were used to estimate adjusted ORs and 95% CIs for the association between maternal parenting style and young adult multiple partnerships (Model 5). Analyses were weighted to account for the complex survey design, yielding nationally-representative estimates. Approval for this study was obtained from the University of Maryland IRB.

Results

Of the analytic sample, about a quarter (27%) were aged 15 at Wave I, more than a third (36%) were aged 16, about a quarter (28%) were aged 17, and less than 10% were aged 18 or older (not shown). The majority of the girls in this sample were white (69%), followed by black (21%) and Hispanic (8%). Asian/Pacific Islander and those of other race/ethnicities accounted for 2% and 1% of the sample, respectively. Nearly half of this sample had a mother who attained more than a high school education (48%), more than a third (35%) had a mother with only a high school education, and 17% had a mother with less than a high school education. Half of the girls in this sample were living in a household with two biological or adoptive parents at Wave I (50%), 11% were living with a stepparent, a third (34%) were living with a single parent, and 5% were not living with any parent. A quarter of this sample (25%) was living in poverty at Wave I.

Model 1. Compared to authoritative parenting (the reference group), both authoritarian parenting and neglectful parenting at Wave I were associated with having a significantly higher number of past year partners (authoritarian odds ratio (OR): 1.63; neglectful OR: 2.51) (Table 1).

Model 2. In adjusted analyses (controlling for covariates) the effect of authoritarian parenting on multiple partnerships lost significance. Neglectful parenting, however, remained associated with a significantly increased number of past year partnerships (adjusted OR (AOR): 2.40) (Table 1).

Model 3. Controlling for covariates, authoritarian parenting style was significantly associated with low sexual self-efficacy at Wave II, compared to authoritative parenting (AOR: 0.67) (Table 2). Permissive and neglectful parenting also seemed to be associated with a lower likelihood of exhibiting low sexual self-efficacy, though these associations were not significant at the $p < 0.05$ level (neglectful parenting was associated with decreased likelihood of having low sexual self-efficacy at the $p < 0.10$ level). Adjusted analyses also revealed that, compared to authoritative parenting, authoritarian parenting was associated with a decreased likelihood of exhibiting high risk-taking behaviors at Wave II (AOR: 0.69). Permissive and neglectful parenting styles were not significantly associated with high risk-taking behaviors.

Model 4. Controlling for covariates, high risk taking behavior at Wave II was associated with having a significantly higher number of lifetime partnerships at Wave III (AOR: 2.24) (Table 1). Low sexual self-efficacy was not associated with having a higher number of lifetime partnerships.

Model 5. In the full model, neglectful parenting at Wave I remained significantly associated with having a higher number of past year partnerships at Wave III (AOR: 2.37) (Table 1). Of the hypothesized mediators, high risk-taking behavior was associated with having a higher number of past year partnerships (AOR: 3.26). However, despite the fact that parenting style was associated with past year partnerships and high risk-taking was also associated with past year partnerships, high risk-taking behavior did not mediate the former relationship. The addition of the hypothesized mediators did not weaken the association between parenting style and number of past year partnerships because authoritarian and neglectful parenting were associated with lower rather than higher risk taking behavior. As such, it appears that neglectful parenting at Wave I has a direct effect on number of past year partnerships at Wave III or is mediated by variables not included in the model. In this model, being Black and exhibiting high risk-taking behaviors at Wave I were both associated with having a higher number of past year partnerships. Initiating sex at a later age was associated with having a decreased number of past year partnerships.

Conclusions

The results of this study indicate that a neglectful maternal parenting style in adolescence is associated with having multiple partnerships in young adulthood. Unadjusted analyses indicated that both authoritarian and neglectful parenting styles were associated with a higher number of past year partnerships. However, only the association between neglectful parenting and past year partnerships remained after controlling for covariates in the full model. Moreover, it appears that the effect of parenting style on adulthood multiple partnerships is a direct effect, rather than an indirect one, as hypothesized. Although authoritarian and neglectful parenting were associated with a greater number of partnerships, they were not associated with increasing risk behaviors in adolescence; thus risk behaviors in adolescence did not mediate the association between parenting and multiple partnerships. It is possible that the effects of poor parenting does not become evident until children are no longer under parental control; authoritarian parenting may work well to reduce risk when children are at home but may not result in the internalized controls needed for young adults to monitor their own behavior once they are on their own.

Although having high risk-taking behaviors was associated with having higher levels of past year partnerships (which may be indicative of the fact that the individuals who engage in risky or delinquent behaviors in adolescence are more likely to engage in these behaviors in adulthood – and having multiple sex partnerships is a clear risk behavior), low sexual self-efficacy was not associated with this outcome. Additionally, even though parenting style was associated with these hypothesized mediators, and even though risk-taking was associated with past year partnerships, mediation was not indicated, since 1) the associations between parenting style and mediators were in the unexpected direction and 2) the association between parenting style and past year partnerships did not weaken when these variables were added to the model.

These findings, together, imply that neglectful parenting may be more predictive of multiple sex partnerships in young adulthood than authoritative parenting. It may be that the girls who were raised by neglectful mothers in adolescence may turn towards romantic or sexual partnerships to fill a void left by their rejecting, neglectful mothers. Given that girls with neglectful mothers appear to be the

group most at risk for having high numbers of past year sexual partners, perhaps due to their desire to fill a socioemotional void left by the disengaged, rejecting, neglectful parenting they received earlier in their lives, this study points to the potential success of adolescent and young adult sexual health programs that encourage mother-daughter relationships that are both warm and controlling. By implementing prevention and intervention programs in adolescence that involve parents, it may be possible to prevent or reduce the risk of STIs and unintended pregnancy into young adulthood.

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Table 1. Associations^a Between Maternal Parenting Style (Wave I) and Young Adult Past Year Partnerships^b (Wave III)^c

	Model 2, Parenting Style and Past Year Partnerships			
	Model 1 Parenting Style and Past Year Partnerships	Adjusted	Model 4, Mediators and Past Year Partnerships	Model 5, Full Model
Maternal Parenting Style (Wave I)				
Authoritative	Referent	Referent		Referent
Authoritarian	1.63 (1.17-2.27) **	1.43 (0.98-2.08)		1.39 (0.96-2.03)
Permissive	1.13 (0.77-1.66)	1.27(0.87-1.87)		1.30 (0.88-1.91)
Neglectful	2.51 (1.66-3.77) **	2.40 (1.62-3.56) **		2.44 (1.66-3.59) **
Socioemotional Risk (Wave II)				
Low Sexual Self-Efficacy			1.13 (0.92-1.39)	1.11 (0.90-1.36)
High Risk-Taking Behavior			3.17 (1.49-6.75) **	3.26 (1.53-6.92) **
Covariates (Wave I)				
<i>Age</i>				
Age 16		1.06 (0.74-1.51)	1.12 (0.79-1.57)	1.07 (0.76-1.52)
Age 17		0.77 (0.54-1.09)	0.89 (0.61-1.29)	0.80 (0.55-1.16)
Age 18+		0.59 (0.35-1.02)	0.70 (0.42-1.17)	0.65 (0.38-1.11)
<i>Race/Ethnicity</i>				
Black		2.16 (1.53-3.04) **	2.17 (1.54-3.06) **	2.12 (1.49-3.02) **
Hispanic		0.91 (0.57-1.45)	0.88 (0.54-1.44)	0.85 (0.53-1.39)
Asian/Pacific Islander		0.64 (0.30-1.37)	0.59 (0.27-1.28)	0.60 (0.28-1.28)
Other		0.78 (0.34-1.77)	0.76 (0.34-1.71)	0.76 (0.33-1.73)
<i>Maternal Education</i>				
High School		1.10 (0.72-1.67)	1.11 (0.71-1.72)	1.12 (0.73-1.73)
More than High School		0.78 (0.34-1.77)	1.32 (0.91-1.91)	1.30 (0.90-1.88)
<i>Poverty</i>				
Yes		1.07 (0.75-1.52)	1.11 (0.76-1.61)	1.06 (0.74-1.52)
<i>Religiosity</i>				
Somewhat Religious		0.89 (0.57-1.39)	0.88 (0.56-1.39)	0.91 (0.58-1.44)
Very Religious		0.92 (0.58-1.46)	0.85 (0.53-1.38)	0.94 (0.58-1.51)
<i>Household Structure</i>				
Stepparents		0.88 (0.58-1.31)	0.89 (0.59-1.34)	0.87 (0.59-1.30)
Single Parent		0.79 (0.60-1.05)	0.83 (0.63-1.09)	0.81 (0.61-1.06)
No Parents		1.25 (0.70-2.24)	1.22 (0.70-2.14)	1.20 (0.73-2.30)

Table 1. Continued

<i>Risky Peers</i>				
Peer Substance Use	1.16 (0.83-1.62)	1.15 (0.84-1.58)	1.14 (0.83-1.57)	
Peer Acceptance of Sex	1.08 (0.81-1.42)	1.04 (0.79-1.37)	1.04 (0.79-1.37)	
<i>Sexual Health Knowledge</i>				
Low Sexual Health Knowledge	1.23 (0.47-3.19)	1.12 (0.42-3.00)	1.22 (0.46-3.24)	
High Perceived Barriers to Contraception	1.05 (0.83-1.33)	1.07 (0.85-1.34)	1.05 (0.83-1.33)	
<i>Adolescent Sexual Risk</i>				
Age at First Sex	0.89 (0.81-0.99)	* 0.89 (0.80-0.98)	* 0.89 (0.81-0.99)	*
<i>Socio-emotional Risk (Wave I)</i>				
Low Sexual Self-Efficacy	1.04 (0.88-1.23)	1.01 (0.84-1.21)	0.98 (0.83-1.17)	
High Risk-Taking Behavior	1.98 (1.06-3.69)	* 1.33 (0.66-2.67)	1.10 (0.55-2.21)	

^a Odds Ratios and 95% Confidence Intervals

^b Natural log of number of partners in the past year, plus 1

^c N=1,546 females aged 15-20 (Wave I) in the United States

** p<0.01, *p<0.05

Table 2. Model 3: Associations between Maternal Parenting Style (Wave I) and Adolescent Socioemotional Risk (Wave II)^b

Maternal Parenting Style	Low Sexual Self-Efficacy		High Risk-Taking Behaviors
	Reference	Reference	Reference
Authoritative	0.67 (0.49, 0.90)	**	0.69 (0.51, 0.93) *
Authoritarian	0.70 (0.44, 1.11)		1.35 (0.90, 2.03)
Permissive	0.66 (0.43, 1.01)		0.82 (0.50, 1.36)

^a Adjusted Odds Ratios (ORs) and 95% Confidence Intervals (CIs), controlling for Wave I age, race/ethnicity, maternal education, poverty, religiosity, household structure, peer substance use, and peer acceptance of sex

^b n=1,564 females aged 15-20 (Wave I) in the United States

** p<0.01, *p <0.05