

EXPERIENCES WITH CHILDHOOD TRAUMA AMONG FIRST-TIME ADOLESCENT AND YOUNG ADULT MOTHERS: RISK FACTOR FOR SUBSEQUENT PREGNANCY WITHIN TWELVE MONTHS

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ABSTRACT

The current study had two objectives: (1) to document the rates of rapid subsequent pregnancy among first-time adolescent and young adult mothers and (2) to assess how experiences with childhood trauma may be associated with rapid subsequent pregnancy. First-time adolescent and young adult mothers ($N=118$) were interviewed during the prenatal period and when their baby was 6 and 12 months of age via home visits. Overall, 18% of the first-time adolescent and young adult mothers experienced a subsequent pregnancy within 12 months. Mothers who had a rapid subsequent pregnancy were more likely to have experienced childhood trauma than mothers who did not have a rapid subsequent pregnancy. These findings suggest the prenatal period offers a critical opportunity for health care providers to identify individual mental health needs of pregnant women and initiate appropriate supports.

INTRODUCTION

Becoming a young mother often significantly alters the woman's life trajectory and presents many societal concerns (CDC 2011; Federal Interagency Forum on Child and Family Statistics 2011). In the United States, three in ten adolescent females become pregnant at least once by the age of 20, with one in five teen births occurring among adolescents who already have a child (National Campaign to Prevent Teen and Unplanned Pregnancy 2011). Experiencing a short interpregnancy interval has been shown to increase risk for adverse maternal and perinatal outcomes, including preterm delivery and low-birth weight (Bratt and Scheepers 2006; Conde-Agudelo, Rosas-Bermudez, and Kafury-Goeta 2006). Meade and Ickovics (2005) reported in a recent meta-analysis that approximately 19% of teen mothers experience a subsequent pregnancy within 12 months and 38% of teen mothers experience a subsequent pregnancy within 24 months. Considerable research has been conducted on age, ethnicity, and income status as risk factors for a short interpregnancy interval among adolescent mothers, indicating rates of short interpregnancy intervals are often greater for younger, African American adolescent mothers from lower economic backgrounds (c.f., Boardman et al. 2006; Coard, Nitz, and Felice 2000; Pfitzner, Hoff, and McElligott 2003; Pulley et al. 2002). Few longitudinal studies, however, have explored how maternal history of trauma exposure may be related to short interpregnancy intervals. To address this gap in the literature, we examined how maternal history of childhood trauma experience relates to rapid subsequent pregnancies (defined as 12 months or less) within a sample of first-time adolescent and young adult mothers from economically impoverished backgrounds.

Maternal history of trauma exposure is hypothesized to be an important risk factor in short-interval pregnancies based on extant literature (cf. Jacoby, Gorenflo, Black, Wunderlich and Eyler, 1999; Raneri and Wiemann 2007) and our previous research (Patchen, Caruso, and Lanzi

2009). Childhood trauma is a major societal issue that is widespread across the United States, affecting approximately six million children annually (US DHHS, 2010). Childhood trauma, as indexed by physical, medical, emotional, educational and/or sexual maltreatment, has been shown to be related to a host of developmental consequences including increased rates of teen and unplanned pregnancies, drug use, dropping out of school, delinquency, and future poor parenting (Bert, Guner, and Lanzi 2009; Langsford et al. 2007; Kelley, Thornberry, and Smith 1997; Runyan et al. 2002).

In a previous study, we assessed differences in mental health indicators and trauma experiences during pregnancy in relation to interpregnancy intervals less than 24 months among a sample of adolescent mothers participating in a program for pregnant adolescent and young adult mothers (Patchen, Caruso, and Lanzi 2009). We found that adolescent mothers who experienced a subsequent pregnancy within 24 months reported more indicators of poor mental health and trauma experiences during the pre-natal and postpartum periods than did mothers who did not experience a subsequent pregnancy within two years. It is noteworthy that reports of physical abuse were greater for mothers who experienced a subsequent pregnancy within 24 months than those who did not experience a subsequent pregnancy with 24 months.

Although research has repeatedly provided evidence of the multiple risk conditions surrounding short interpregnancy intervals among adolescent mothers, little is known about the role of childhood trauma exposure. Documenting rates of rapid subsequent pregnancy among teen mothers and studying how experiences with childhood trauma relates to rates of rapid subsequent pregnancy is the overall objective of the current study.

METHODS

Participants

Participants were drawn from the *Parenting for the First Time Study*, a NIH 4-site (Birmingham, Alabama;

Kansas City; Missouri/Kansas; South Bend, Indiana; and Washington, D.C.) prospective study of the early predictors and precursors of neglect in the first three years of life among children born to first-time mothers (Centers for the Prevention of Child Neglect 2002). This study was the product of close collaboration with prenatal healthcare providers to identify and recruit mothers for the study; participation of multiple disciplines represented in the leadership of this project (i.e., nursing, public health, psychology, sociology, child development, and special education); and a partnership among four universities with diverse communities in the research design and implementation. Participants were eligible to be enrolled if they were pregnant and had no previous live births. During pregnancy, we recruited a sample of teen mothers ($N=396$; ages 14-19) and two adult comparison groups: an adult lower education sample of first-time mothers ($N=169$, ages 22-35, matched to the teen mother sample for ethnicity/race and educational level); and an adult higher education sample of first-time mothers ($N=117$, ages 22-35, with at least two years post-secondary education, also matched to the teen mothers for ethnicity/race).

The current analyses focus solely on adolescents and young adult mothers matched in terms of ethnicity/race and education (ages 15-24) to examine the adolescent/young adult development continuum, a time when the evolution of critical thinking and decision making skills coincides with the period when many developmental and societal consequences of their decisions may be altered. Analyses included those with full data on prenatal variables of interest, outcome data, and with data at the 6-month and 12-month follow-up assessments. The final analytic sample included 118 respondents with complete data for subsequent pregnancy, childhood trauma exposure, and 12-month outcome data.

Design and Procedures

Data were obtained during the prenatal period and continued throughout the first 12 months after the birth of her first child. Initial in-person interviews were conducted during the mothers' last trimester of pregnancy. Data also were collected during home visits when the baby was 6- and 12-months of age.

Measures

Maternal exposure to childhood trauma. At 6-months postpartum, mothers were administered the *Childhood Trauma Questionnaire* (CTQ; Bernstein et al. 1994), a retrospective measure of childhood abuse and neglect. It consists of 28 questions that begin with the phrase, "When I was growing up..." and then end with a query about different types of abuse and neglect. Each item is rated for frequency on a 5-point Likert scale (responses range from never true to very often true). The instrument yields five different factors: physical and emotional abuse, emotional neglect, sexual abuse, and physical neglect. The instrument has been found by Bernstein and colleagues (1994) to have a high test-retest reliability over

a period of months (intraclass correlation=0.88). Good convergent validity was demonstrated through a high correlation with an alternate measure of childhood trauma (Childhood Trauma Interview) and non-significant correlations with measures of vocabulary and social desirability. This questionnaire is a valuable research tool as it is quick and easy to administer, highly reliable and valid, and allows for distinctions between different types of abuse and neglect (Bernstein et al. 1994). Clinical measures of trauma exposure on a scale of "none-mild" and "moderate-severe" were utilized as well. Cut off scores were based on the scoring criteria described in the CTQ manual.

Rapid subsequent pregnancy. The outcome variable of interest was whether the respondent experienced a subsequent pregnancy within 12 months of their first delivery. This was determined by a self-report of subsequent pregnancy at either the 6-month or 12-month assessment. Mothers were asked whether she had had another baby since her first baby was born, whether she is currently pregnant, or had been pregnant at all since the birth of her first baby at each data collection point. These questions allowed for consistency checks across reports. Pregnancy was coded as "yes" or "no" if the mother reported a pregnancy at either 6-months or 12-months after the birth of her first child.

RESULTS

Statistical Analyses

Descriptive analyses were conducted to assess study participant race/ethnicity characteristics, history of trauma exposure, and 12-month subsequent pregnancy rates. Second, chi-square analyses and *t*-tests were conducted to examine the associations between predictor variables and 12-month subsequent pregnancy. Lastly, *t*-tests were run to examine mean differences on specific CTQ items as a function of rapid subsequent pregnancy.

Descriptive Findings

Characteristics of the sample ($n=118$) are provided in Table 1. The mean age of mothers was 18.19 ($SD=2.20$) years. More specifically, participants represented two groups of teens, a middle adolescent group aged 14-16 years (12.2%) and a late adolescent group aged 17-19 years (54.5%), as well as a group of young adults aged 22-24 years (33.2%). In terms of race/ethnicity, the sample was comprised of 20.7% White/non-Hispanic mothers, 70.3% African American mothers, and 4.8% Hispanic/Latino mothers.

Approximately 20% of the sample reported excessive exposure to trauma during their childhoods. Emotional neglect ($M=9.64$, $SD=4.41$) and emotional abuse ($M=8.40$, $SD=4.02$) constituted the most frequent type of exposure to trauma, followed by physical abuse ($M=7.31$, $SD=3.26$), physical neglect ($M=6.91$, $SD=2.83$), and sexual abuse ($M=5.94$, $SD=3.04$). At twelve month postpartum, 17.8% ($n=21$) of the sample reported a repeat pregnancy. Of those mothers reporting a repeat pregnancy, 4.2% were

Table 1. Descriptive Characteristics of the Sample (N=118).

Characteristic	Percent	Mean (SD)
Age		20.50 (4.43)
Race/Ethnicity		
White	20.7	
Black	70.3	
Hispanic	4.8	
Exposure to Childhood Trauma ^a		38.17 (11.96)
Emotional Abuse		8.40 (4.02)
Physical Abuse		7.31 (3.26)
Sexual Abuse		5.94 (3.04)
Emotional Neglect		9.64 (4.41)
Physical Neglect		6.91 (2.83)
Clinical Exposure to Childhood Trauma	20.3	
Rapid Subsequent Pregnancy by 12 months	17.8	13.39 (8.77)

^a Childhood Trauma Questionnaire.

Table 2. Associations among Predictor Variables and Rapid Subsequent Pregnancy (N= 118).

Characteristic	Subsequent pregnancy at 12 months (n = 21)	No subsequent pregnancy at 12 months (n = 97)	Test statistic [#]
	% or M SD	% or M SD	
Race/Ethnicity			2.47
White	26.1	19.7	
Black	65.2	71.3	
Hispanic	8.7	4.1	
Exposure to Childhood Trauma	M=43.64 SD=12.97	M=37.18 SD=11.56	(4.34)*
Emotional Abuse	M=9.18 SD=4.25	M=8.27 SD=3.98	0.74
Physical Abuse	M=7.72 SD=3.86	M=7.23 SD=3.17	0.34
Sexual Abuse	M=6.22 SD=3.00	M=5.89 SD=3.06	0.18
Emotional Neglect	M=11.50 SD=4.54	M=9.30 SD=4.32	(3.90)*
Physical Neglect	M=8.22 SD=2.71	M=6.67 SD=2.80	(4.76)*
Clinical Exposure to Childhood Trauma			(7.29)**
None-Mild	70.6%	87.2	
Moderate-Severe	29.4%	12.8	

Note: ** $p < 0.01$. * $p < 0.05$. † $p < 0.10$. #Test statistic t -test for mean group differences and χ^2 for percentage group differences.

aged 14-16 years, 45.5% were aged 17-19 years, and the remaining 50% were young adult mothers aged 22-24 years.

Significant Associations among Predictor Variables and Rapid Subsequent Pregnancy

The second research objective was to examine possible relationships among predictor variables and subsequent pregnancy 12-months after the birth of a participant's first child (see Table 2). Significant differences were documented for mean Childhood Trauma Questionnaire (CTQ) total scores, emotional neglect, and physical neglect scores. Mothers reporting a subsequent pregnancy had higher overall exposure to trauma ($M=43.64$, $SD=12.97$ vs. $M=37.18$, $SD=11.56$), emotional neglect ($M=11.50$, $SD=4.54$ vs. $M=9.30$, $SD=4.32$), and physical neglect ($M=8.22$, $SD=2.71$ vs. $M=6.67$, $SD=2.80$) than mothers who did not report a subsequent pregnancy. Of particular concern, mothers

reporting a subsequent pregnancy by 12-months postpartum were significantly more likely to have clinical CTQ scores in the "moderate-severe" range (29.4%) than those who had not experienced a rapid repeat pregnancy (12.8%; $\chi^2 = 7.29$, $p < 0.01$).

Significant Associations among Specific Childhood Trauma Questionnaire Items and Rapid Subsequent Pregnancy

A final research objective was to conduct an in-depth exploration of specific childhood trauma experiences among first-time mothers who reported a rapid subsequent pregnancy compared to those who did not experience a rapid subsequent pregnancy. Mothers were asked specific questions concerning their exposure to childhood trauma. For four of the questions, there were significant mean group differences between those who reported subsequent pregnancy within 12 months of their first birth and those who did not. These specific questions

were: “I felt loved,” “People in my family felt close together,” “I knew there was someone to take care of me and protect me,” and “My parents were too drunk or high to take care of me.” To assess the percentages of mothers who indicated these statements were true for them during their childhood as a function of rapid subsequent pregnancy, we conducted chi-square analyses (see Figure 1).

Seventeen percent of mothers with a rapid subsequent pregnancy reported feeling not loved during childhood, however, only 4% of mothers without a rapid subsequent pregnancy feeling not loved ($\chi^2 = 8.28, p < 0.01$). Similarly, 17% of mothers with a rapid subsequent pregnancy reported feeling not taken care of during pregnancy but only 6% of mothers without a rapid subsequent pregnancy reported feeling not taken care of during childhood ($\chi^2 = 8.26, p < 0.01$). Significant differences also were documented for the items “People in my family felt close to each other” ($\chi^2 = 4.64, p < 0.05$) and “My parents were too drunk or high to take care of the family” ($\chi^2 = 2.59, p < 0.05$). More than one out of five (22%) of the mothers who had a rapid subsequent pregnancy said that people in their family did not feel close together during childhood; whereas about one out of ten mothers (13.3%) who did not have a subsequent pregnancy indicated that this was true for them. Further, 15.1% who had a subsequent pregnancy said their parents were too drunk or high to take care of them during childhood as opposed to only 7.6% of those who did not have a subsequent pregnancy.

DISCUSSION

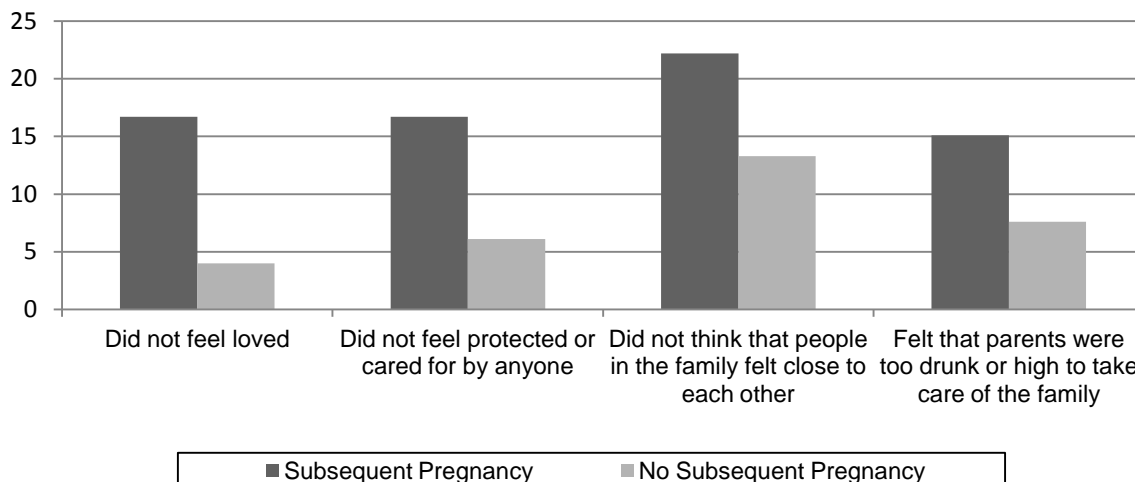
Findings from the present study indicate that approximately 18% of adolescent and young mothers from low economic backgrounds experienced a subsequent pregnancy within 12 months of their first delivery and that experiences with childhood trauma are risk factors for rapid subsequent pregnancy. These subsequent pregnancy rates are consistent with previous research (Meade and Ickovics 2005) and expand upon

our prior analysis that suggested depression and trauma are risk factors for rapid subsequent pregnancies among adolescent and young adult mothers (Patchen, Caruso, and Lanzi 2009). Adolescent and young adult mothers are in a critical transitional of social, emotional, cognitive, and physical development. It is therefore particularly important that adolescent mothers receive support services to adequately negotiate the increased responsibilities associated with parenting as they mature themselves (McNeely and Blanchard 2009; Mulye et al. 2009). The prenatal period offers an excellent window of opportunity to identify individual needs and initiate appropriate supports.

Although the value of prenatal care to achieve optimal birth outcomes has been widely acknowledged, it is not as well-recognized as an opportunity to have a positive impact on the future health and well-being of a mother and her subsequent children. Screening women during the prenatal period for incidences of childhood trauma offers the opportunity to identify women that not only may benefit from support during their pregnancy, but also from interventions to support optimal birth spacing after they deliver. Further, pregnant women who experienced childhood trauma may benefit from intensive contraceptive counseling and follow-up during the first year after delivery. The prenatal period offers an ideal time to initiate discussions regarding birth spacing, number of desired children, and contraceptive options. Obstetrical providers may help women achieve their future reproductive goals by facilitating their efforts to select a family planning method that is compatible with their medical history, ability to tolerate potential secondary effects, and desired birth spacing.

Scheduling contraceptive follow-up every 10-12 weeks allows for periodic evaluation of a woman’s continued satisfaction with her contraceptive method of choice, as well as identification of inconsistent or incorrect method utilization. A standing appointment every 10-12 weeks may encourage women to discuss their concerns about

Figure 1. Percent of mothers with and without a rapid subsequent pregnancy who indicated CTQ were true for them.



contraceptive use as they arise and before they become so dissatisfied that they simply discontinue the method. Regular visits also offer an opportunity to change contraception methods and provide reassurance that secondary effects, such as menstrual changes, are expected (Hatcher 2008). A scheduled follow-up visit also provides an opportunity to review method use and identify any issues with accuracy and consistency of utilization, which may not even be recognized by the individual. If a woman does become pregnant, regularly scheduled follow-up offers the benefit of early pregnancy identification and follow-up. Interventions specific to childhood trauma may be needed in order to support women in their desire to achieve optimal birth spacing. To develop effective programming, it will be important to explore how adolescent and young adult mothers with trauma history make their reproductive health decisions.

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Shooting from the Lip
The Life of Senator Al Simpson
By: Donald Loren Hardy
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An unvarnished account of the American statesman known for his outspokenness, credibility, and willingness to rise above politics

Shortly before Wyoming's Alan K. Simpson was elected majority whip of the United States Senate, he decided to keep a journal. "I am going to make notes when I get home in the evening, as to what happened during each day." Now the senator's longtime chief of staff, Donald Loren Hardy, has drawn extensively on Simpson's personal papers and nineteen-volume diary to write this unvarnished account of a storied life and political career.

Simpson gave full authorial control to Hardy, telling him, "Don, just tell the truth, the whole truth, as you always have. Leave teeth, hair, and eyeballs on the floor, if that results from telling the truth." Taking Simpson at his word, Hardy shows readers a thrill-seeking teenager in Cody and a tireless politician who has thoroughly enjoyed his work. Full of entertaining tales and moments of historical significance, *Shooting from the Lip* offers a privileged and revealing backstage view of late-twentieth-century American politics.

Hardy's richly anecdotal account reveals the roles Simpson played during such critical events as the Iran-Contra scandal and Clarence Thomas's confirmation hearings. It divulges the senator's candid views of seven American presidents and scores of other national and world luminaries. Simpson is a politician unfettered by partisanship. Among President George H.W. Bush's closest compatriots, he was also a close friend and admirer of Senator Ted Kennedy and was never afraid to publicly challenge the positions or tactics of fellow lawmakers, Democratic and Republican alike.

Simpson's ability to use truth and humor as both "sword and shield," combined with his years of experience and issue mastery, has led to an impressive post-Senate career. In 2010, for example, he co-chaired President Barack Obama's Commission on Fiscal Responsibility and Reform. *Shooting from the Lip* portrays a statesman punching sacred cows, challenging the media, and grappling with some of the nation's most difficult challenges.

