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REPEAT PREGNANCY AMONG URBAN ADOLESCENTS: SOCIODEMOGRAPHIC, FAMILY, AND HEALTH FACTORS

**Stephanie Irby Coard, Katherine Nitz,
and Marianne E. Felice**

ABSTRACT

First-time adolescent mothers are at high risk for a repeat pregnancy. The present investigation, part of an ongoing longitudinal study, examined sociodemographic, family, and health factors associated with repeat pregnancy in a clinic sample of urban, first-time adolescent mothers (ages 13 to 17 years). They were predominantly African-American and from low-income households. Repeat pregnancy within one year and between one and two years postpartum was determined from medical records. Summary statistics, point biserial correlations, and chi-square statistics were used to analyze the data. Results indicated that postpartum contraceptive method was associated with repeat pregnancy at Year 1; contraceptive use, maternal age, history of miscarriages, and postpartum contraceptive method were associated with repeat pregnancy at Year 2. It was concluded that efforts to prevent repeat pregnancies among first-time adolescent mothers should include the continuous monitoring of contraceptive use, as well as the promotion of long-acting contraceptives (e.g., medroxyprogesterone or progesterone implants). Further, counseling should be offered to adolescent mothers with a history of miscarriages.

Adolescent pregnancy and childbearing continue to be common. The issues surrounding adolescent pregnancy and childbearing are politically controversial and emotionally charged. However, there is agreement regarding the serious repercussions for society.

The incidence of adolescent pregnancy and childbearing has been well-documented. Recently, there has been a downward trend in the adolescent birthrate. In 1995, the birthrate for females aged 15-19 in the United States was 56.9 per 1,000 (Moore, Romano, & Oakes, 1996); in 1996, it was 54.7 (Guyer, Martine, MacDorman, Anderson, & Strobino, 1997). Furthermore, between 1991 and 1995, the birthrate for African-American adolescents dropped 17%. Notable, however, is that

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approximately 30% to 35% of adolescent mothers have a repeat pregnancy within one year of the birth of the first child, and 40% to 50% have a repeat pregnancy within two years (National Research Council, 1987; Stevens-Simon & White, 1991). In 1996, 22% of all births to 15- to 19-year-olds were repeat births (National Center for Health Statistics, 1997).

The consequences of adolescent pregnancy and childbearing have also been well-documented (Furstenberg, 1976; Hofferth & Hayes, 1987; Maynard, 1996). For example, adolescent mothers are less likely to receive child support from biological fathers, less likely to complete their education or to work, and less likely to be able to provide for themselves and their children without outside assistance (Card & Wise, 1978; Furstenberg, 1976; Furstenberg, Brooks-Gunn, & Morgan, 1987; Maynard, 1996; Mott & Marsiglio, 1985).

While numerous interventions have been developed (e.g., abstinence education, clinic-based assistance, peer counseling programs), most are aimed at preventing pregnancy among adolescents who are not yet parents. Less attention has been focused on pregnancies among adolescents who are already mothers. Yet, data indicate that adolescents who become pregnant within two years of the birth of their first child may differ from those who do not. For example, adolescent mothers who experience a repeat pregnancy within two years often report that the pregnancy was a "planned affair" rather than an "accident" (Matsushashi, Felice, Shragg, & Hollingsworth, 1989).

An ecological framework is useful for understanding factors associated with repeat pregnancy among young mothers. Ecological theory (Bronfenbrenner, 1979) emphasizes the interaction of individual characteristics and social systems. For instance, research indicates that factors prior to the first birth (e.g., adolescent mothers' race/ethnicity and their parents' education level) and those at the time of the first birth (e.g., years of education and whether the first birth was planned) are associated with the rapidity of the second birth (Kalmuss & Namerow, 1994). Additionally, young mothers who continue their education following the first birth are less likely to have a closely spaced second birth, but those who marry are more likely to have a rapid second birth.

While first-time adolescent mothers are at high risk for repeat pregnancies, researchers have primarily focused on those occurring within the first year (Berenson & Wiemann, 1997). The purpose of the present study was to examine the relationship of sociodemographic, family, and health factors to the occurrence of repeat pregnancy by 12 and 24 months postpartum in a clinic sample of urban adolescent mothers. It was hypothesized that sociodemographic characteristics, such as education and maternal age, would be negatively associated with repeat

pregnancy. In addition, it was hypothesized that more negative family characteristics (e.g., less perceived support) and poorer use of birth control (e.g., less consistent use of long-acting contraception) would be positively associated with repeat pregnancy.

METHOD

Participants

Eighty first-time adolescent mothers were recruited between 1 and 16 weeks postpartum ($M = 7.8$ weeks, $SD = 1.03$) from a clinic at a university-based medical center over a four-year period (February, 1993, through August, 1997). The clinic was established to provide comprehensive health care to both adolescent mothers (age 17 or under) and their infants. An interdisciplinary health care team sought to promote the physical, emotional, and social growth of the infants, while the adolescent mothers received services designed to promote effective contraceptive use, increase positive parenting, and facilitate the completion of their education. Participation in the study was voluntary and did not affect the provision of services.

Seventy-four of the participants were African-American (92.5%) and 6 were Caucasian (7.5%). They ranged in age from 13 to 17 years ($M = 15.96$, $SD = 1.05$) and had an average of 9.15 years of education ($SD = 1.37$). Eighty percent were currently enrolled in school, and 40% had repeated a grade. Seventy percent were receiving medical assistance at the time of the initial interview. They reported an average of 5.19 persons per household ($SD = 2.10$). Participants did not differ on major demographic variables (including age, race, and years of education) from clinic patients who did not take part in the study.

Procedure

As part of an ongoing longitudinal investigation, adolescent mothers were interviewed and administered a 50-item questionnaire to obtain sociodemographic, family, and health information. The questionnaire was an abbreviated version of the one used in a previous study on adolescent pregnancy and parenting (East & Felice, 1996). It included items on reproductive health, such as use of contraceptives and number of abortions and miscarriages, as well as items assessing family support for the first pregnancy carried to term. Repeat pregnancy by 12 and 24 months was determined from medical records.

Data Analysis

Data were available for 80 mothers at 12 months postpartum and 66 mothers at 24 months postpartum. Summary statistics, point biserial

correlation coefficients, and chi-squares were calculated in order to analyze the relationships between sociodemographic, family, and health variables and repeat pregnancy at the two time periods.

RESULTS

Bivariate analyses (see Table 1) were conducted to determine the associations between sociodemographic, health, and family characteristics and repeat pregnancy within 12 months postpartum (Year 1) and between 12 and 24 months postpartum (Year 2). Results indicated that, at Year 1, current contraceptive method was associated with repeat pregnancy ($\chi^2 = 12.66, p < .05$). Other variables were not significantly associated with repeat pregnancy during the first postpartum year. At Year 2, contraceptive method ($\chi^2 = 7.79, p < .05$), contraceptive use ($\chi^2 = 7.81, p < .05$), age ($r = .26, p < .05$), and history of miscarriages ($r = .26, p < .05$) were associated with repeat pregnancy. Family characteristics were not associated with repeat pregnancy.

Thirty-four percent of the adolescent mothers who were 16 or older at the time of first birth had a repeat pregnancy in Year 2. With respect to reproductive health variables, 76% of the adolescent mothers who reported using contraception consistently in the early postpartum period (1 to 16 weeks) did not have a repeat pregnancy in Year 2. Adolescent mothers who used either medroxyprogesterone or progesterone implants (long-acting contraception) in the early postpartum period had a repeat pregnancy rate of 4.9% in Year 1, as compared with 25% (oral contraceptives) and 46% (condoms). Although adolescent mothers using medroxyprogesterone or progesterone implants in the early postpartum period accounted for 60% of those who successfully avoided a repeat pregnancy in Year 2, the repeat pregnancy rate increased from 17.5% to 34.8% during Year 2. The pregnancy rate among oral contraceptive users remained constant at 25%, while the rate among condom users increased from 46% to 67% in Year 2. Finally, 21% of the adolescent mothers who had one or more miscarriages had a repeat pregnancy during the second postpartum year.

DISCUSSION

The purpose of this study was to examine the association of sociodemographic, family, and health characteristics to repeat pregnancy among a sample of urban adolescent mothers. Results indicated that, during the first postpartum year, use of medroxyprogesterone or progesterone implants was associated with lower rate of repeat preg-

Table 1

Associations Between Repeat Pregnancy and Teen Mother Variables

Characteristics of the Adolescent Mothers	Postpartum Period	
	Year 1 (n=80)	Year 2 (n=66)
Sociodemographic		
Age	.080	.258*
Educational level	.183	.136
School status ^a (in school or dropout)	.809	3.75
Number in household	-.041	-.006
Educational level of adolescent's mother	.035	.058
Family		
Reaction of adolescent's mother to pregnancy ^a (supportive or not supportive)	2.17	.181
Reaction of baby's father to pregnancy ^a (supportive or not supportive)	.167	1.70
Primary caretaker for baby ^a (self or shared)	.421	.000
Health		
Current contraceptive use ^a (no/sometimes or always)	2.55	7.81*
Current contraceptive method ^a (pill, condom, Depo-provera/Norplant)	12.66*	7.79*
Number of lifetime abortions	.195	.082
Number of lifetime miscarriages	.043	.258*

* Chi-square

* $p < .05$

nancy. During the second postpartum year, maternal age at the time of the interview, consistent use of contraception in the early postpartum period (1 to 16 weeks), use of medroxyprogesterone or progesterone implants in the early postpartum period, and number of lifetime miscarriages were associated with repeat pregnancy.

As expected, the findings indicated that use of medroxyprogesterone and progesterone implants is important in preventing repeat pregnancy among adolescent mothers. The effectiveness of these methods in pregnancy prevention has been well-documented. However, it should be noted that although 50% of the adolescent mothers in the present study were utilizing these methods of contraception, the re-

maining mothers were using oral contraception, condoms, or no method at all. Previous research indicates that adolescents who are least likely to use hormonal methods of contraception are those who have expressed concern about their side effects and who lack motivation to postpone childbearing (Stevens-Simon, Kelly, Singer, & Nelligan, 1998). In addition, research indicates that while consistent use of contraception can reduce the risk of pregnancy, other psychosocial and community factors are also important in the prevention of pregnancy among young mothers (Kirby, 1997).

It was found that the more miscarriages an adolescent mother experienced, the more likely she was to have had a repeat pregnancy during the second postpartum year. In another study, adolescent mothers who reported that they wanted their first child were more likely to experience a rapid repeat pregnancy (Matsuhashi, Felice, Shragg, & Hollingsworth, 1989). It appears that some adolescents do not mind the idea of being a parent. Further, it may be that adolescent mothers who have had a miscarriage, often accompanied by a sense of loss and grief, have a heightened desire to become pregnant. Thus, intervention efforts should target adolescent mothers who have a history of miscarriage as a subgroup at increased risk for repeat pregnancy.

Research indicates that adolescents under age 17 who give birth are more likely to bear a second child within the next two years than are older adolescents or women in their twenties (Moh, 1986). Although the present study found that it was the older adolescents who were more likely to have a repeat pregnancy, it should be noted that all were relatively young when they gave birth to their first child.

This study did not find significant relationships among other sociodemographic variables, such as education level (of the adolescent or her mother), school status, or number of persons in household. It should be noted that there was relatively little variability in school status. Approximately 80% of the adolescent mothers were in school at the time of the initial postpartum assessment.

In addition, there were no significant correlations between repeat pregnancy and family characteristics. Seventy-five percent of the adolescent mothers perceived their own mother as supportive of the initial pregnancy, and approximately 73% viewed the baby's father as supportive. Sixty-five percent of the adolescent mothers reported that they were the primary caretaker for the baby.

This study investigated a clinic-based sample of low socioeconomic status, urban adolescent mothers, and findings may not be generalizable to other groups of adolescent mothers. The majority of the mothers were African-American. A number of studies have indicated that urban African-American adolescents come of age in a society where, for many,

family structures are in a state of flux; moreover, their educational and employment opportunities are often dismal (Burton, 1990; McA-doo, 1981; Williams, 1991). Future research should explore how the societal context influences adolescents' perceptions of their role as adults and how such factors are associated with repeat pregnancy.

RECOMMENDATIONS

Adolescent mothers and their children are at risk for many educational, economic, and social problems. Therefore, the prevention of repeat pregnancies among adolescents should be a major goal. Despite well-founded concern for adolescent mothers younger than 15 years of age, it also is important to be especially vigilant with those 15 to 17.

It is imperative that first-time adolescent mothers receive contraceptive services in the early postpartum period. In addition, they should be continuously monitored for contraceptive use during the first 24 months postpartum. This may be particularly important in the second year for those using long-acting methods (e.g., medroxyprogesterone or progesterone implants). Finally, first-time adolescent mothers with a history of miscarriages should be offered counseling (focusing on issues related to loss and grief) as a preventive measure for repeat pregnancy.

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