Prevention in Action

Depression and Repeat Pregnancy in Teen Mothers

Perspective

Risk factors are not predictive factors because of the presence of protective factors. This truism should be the mantra of preventive mental health.

Depression in adolescent girls has been linked to an increase in high-risk sex behavior and, consequently, pregnancy. Yet, not all girls with depression engage in high-risk sex and become pregnant.

Much attention has been focused on determining whether depression leads to an increased risk of high-risk sex and pregnancy among adolescents or whether it is a consequence of such outcomes. But the more practical research question in terms of designing an effective teen pregnancy-prevention intervention should be this: "What protective factors are keeping the nonpregnant adolescent girls who are depressed from getting pregnant?"

BY CARL C. BELL

The answer, I suspect, will be the same protective factors that foster resilience in some trauma-exposed teens, and the same ones that keep some low-income, underprivileged nonwhite teens out of trouble: a strong social fabric, self-esteem, self-efficacy, a sense of belonging, and access to community resources.

Interventions designed to optimize these factors will likely have the most benefit across outcomes. The Cradle to Classroom initiative is a perfect example. Developed as a tool to keep pregnant teens in school through high school graduation, the program not only is associated with reduced dropout rates among participants. It also has been linked to increased personal growth and development in terms of college enrollment, improved parent/child interactions, and the prevention of rapid subsequent pregnancies. It succeeds by fortifying the protective factors necessary to keeping these kids on track.

In contrast, interventions designed to educate depressed teen mothers about how not to be depressed or how not to get pregnant again don't work. The fact that there are still academics who believe that education alone can change behavior is laughable. Of course, it is easier to throw education at a problem than it is to design a comprehensive and thorough intervention. But easier isn't better; in most cases, it's not nearly enough.

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Depression in adolescent mothers is linked to an increased risk of rapid subsequent pregnancy, and these findings should come as no surprise.

In a secondary analysis of data drawn from two consecutive longitudinal risk reduction interventions, Dr. Beth Barnet and her colleagues in the department of family and community medicine at the University of Maryland, Baltimore, discovered that depressive symptoms were associated with a 44% increase in risk of subsequent pregnancy among 269 predominantly African American and low income teens.

The study included 297 pregnant adolescents aged 12-18 who received prenatal care at one of five community-based prenatal sites. At enrollment, the teens underwent a baseline structured interview and were randomly assigned to a subsequent pregnancy prevention intervention or to a usual-care control. Research staff administered structured follow-up questionnaires at 1 and 2 years post partum.

Of the 269 teens who completed at least one of the follow-up questionnaires, 46% had depressive symptoms at baseline, the authors reported in the March issue of the Archives of Pediatric and Adolescent Medicine. Of the 245 teens who completed 2 years of follow-up, 120 experienced a subsequent pregnancy within 2 years of childbirth. Of the 24 who were followed for only 1 year, 9 had a subsequent pregnancy during that time, they wrote (Arch. Pediatr. Adolesc. Med. 2008;162:246-52).

"The hazard ratio of subsequent pregnancy was significantly greater among the 112 teens with baseline depressive symptoms," the authors wrote, noting that the increased risk remained significant even after adjustment for possible confounders, including age, education, Medicaid status, exposure to violence, substance use, and relationship with the baby's father.

This study is the first to demonstrate with longitudinal data that depressive symptoms precede subsequent pregnancy in adolescent mothers and might be a determinant of this. However, in context of the following data on depression and adolescent mothers, the results could have been predicted:

► Depression is a well-known nonsexual antecedent of teen pregnancy. In a recent national study using longitudinal data from more than 4,000 middle school and high school students, depressive symptoms in boys and girls were predictive of subsequent sexual risk behavior, including condom nonuse at last sex, birth control nonuse at last sex, and multiple sexual partners (Pediatrics July 2006;118:189-200).

► Depression is common among adolescents. According to the 2001 Youth Risk Behavior Survey of more than 13,000 students, 28% of U.S. high school students reported severe depressive feelings (MMWR 2002;51[SS04]:1-64). In a 2005 report of the results from the Office of Applied Studies' National Survey on Drug Use and Health, the lifetime prevalence of depression among adolescents was estimated to be 14% (http://www.oas.samhsa.gov/p0000016.htm#2k4).

► Rates of postpartum depression in adolescent mothers are significantly higher than those seen in adult mothers. According to the results of a recent integrative review of the literature on postpartum depression in adolescent mothers by pediatric nurse practitioner Vanessa Reid of New London, Conn., the prevalence of postpartum depression among women of all ages is estimated to be between 20% and 28% during the immediate postpartum period, compared with rates between 53% and 56% among adolescents (J. Pediatr. Health Care 2007;21:289-98).

► Rates of postpartum depression among African American adolescents are nearly twice as high as those observed in white adolescents, according to the result of a 1998 report on the National Maternal and Infant Health Survey (Am. J. Public Health 1998;88:266-70).

Of the 2,000 teens who had babies in 2002 and participated in the Cradle to Classroom program, five had a repeat pregnancy while still in school.

Without a doubt, the odds are clearly stacked against adolescent mothers and, by default, their offspring. Multiple studies examining the impact of maternal depressive symptoms on offspring have shown that depression can interfere with a mother's ability to provide emotional and psychological support and attachment, as well as proper and adequate nutrition and physical care, for her infant, according to Ms. Reid.

"The results of studies that examined the relationship between maternal depressive symptoms and child outcomes revealed negative feeding interactions, negative or less positive interaction behaviors, child problem behaviors in preschool, and general pediatric complications, including lower weight, shorter length, and smaller head circumference," Ms. Reid said.

In addition, "repeat adolescent pregnancy and birth are associated with poorer pregnancy outcomes, less educational attainment, lower future income, and greater dependence on public assistance," wrote Dr. Barnet and her colleagues. "Children born into families with short interpregnancy intervals are exposed to increased parenting stress and negative parenting behaviors."

Numerous interventions have attempted to reduce rapid subsequent pregnancy in adolescents, but "none that I am aware of have specifically targeted depression," Dr. Barnet said. Instead, many such efforts have focused on such factors as access to contraceptives, education, and social support. The outcomes have been disappointing, she said.

For example, the subsequent pregnancy risk reduction interventions from which Dr. Barnet and her colleagues drew data for their secondary analysis comprised weekly or monthly home visits beginning during the index pregnancy and continuing for two years. The interventions were facilitated by trained paraprofessionals who provided parenting instruction, case management, and motivational interviewing. Neither of the consecutive interventions achieved their primary intervention goal, nor were maternal depressive symptoms affected, she said.

In contrast, research has shown that treating depression in mothers can improve mother and child outcomes. Findings from the Sequenced Treatment Alternatives to Relieve Depression (STAR*D) trial showed that remission of maternal depression has a significant positive effect on the health and well-being of both mothers and children (JAMA 2006;295:1389-98).

Although it is not known whether treating depression in adolescent mothers will decrease the risk of rapid subsequent pregnancies, "our findings suggest that depression may be an important malleable risk factor," Dr. Barnet said. As such, she noted, depression in this group needs to be identified and treated, and doing so requires the implementation of a model of health care in which multidisciplinary primary care teams provide care coordination across clinic and community settings.

Schools might be an important frontline resource in this regard. For example, although it was not developed to prevent subsequent teen pregnancies or to address maternal depression, the Cradle to Classroom program, piloted successfully in the Chicago Public Schools, might affect both. The comprehensive program, designed to develop parenting skills in adolescent parents, help them finish high school, and promote healthy outcomes for the teens and their offspring, includes extensive in-school academic, social, and health supports for young mothers and an intensive home visiting program for the adolescent parents and their babies.

Of the 2,000 or so teens from 54 Chicago schools who had babies in 2002 and who participated in the program, only five had a repeat pregnancy while still in school. Also, all 495 seniors in the program graduated, and more than 75% went on to 2- or 4-year colleges (JAMA 2003;290:586).

Improving outcomes for teen mothers and their children requires this type of comprehensive strategy, according to Dr. Barnet. She and her colleagues stress the need for protocols that incorporate systematic practice changes and collaborative care teams. ■

By Diana Mahoney, New England Bureau. Share your thoughts and suggestions at cpnews@elsevier.com.