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Rural–Urban Differences in Awareness and Use of Family Planning Services Among Adolescent Women in California

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A B S T R A C T

Purpose: The purpose of this study was to compare awareness and use of family planning services by rural and urban program site among a sample of adolescent women before participation in the federal Personal Responsibility Education Program in California.
Methods: We conducted a secondary analysis of survey data collected from youth before participation in California's Personal Responsibility Education Program. Bivariate and multivariate analyses were conducted for a sample of 4,614 females ages 14–18 years to compare awareness and use of family planning services between participants at rural and urban program sites, controlling for the program setting and participant demographic, sexual, and reproductive characteristics.
Results: Overall, 61% of participants had heard of a family planning provider in their community, and 24% had visited a family planning provider. Awareness and use of family planning services were lower among rural participants than urban participants. After adjusting for the program setting and participant characteristics, rural participants were less likely to know about a family planning provider in their community (odds ratio, .64; 95% confidence interval, .50–.81) or receive family planning services (odds ratio, .76; 95% confidence interval, .58–.99) than urban participants.
Conclusions: Findings suggest that adolescents in rural areas face greater barriers to accessing family planning services than adolescents in urban areas. Targeted efforts to increase awareness and use of family planning services among adolescents in rural areas and among other underserved populations are needed.

IMPLICATIONS AND CONTRIBUTION

Given evidence of higher adolescent birth rates in rural areas, this study sought to examine rural–urban differences in adolescents' awareness and use of family planning services. Rural participants reported less awareness and lower use of family planning services than those in urban areas.

In the United States, youth in rural areas are more likely to give birth during adolescence than youth in metropolitan areas. In 2010, the adolescent birth rate was 43.3 in rural counties, compared to 32.7 in metropolitan counties [1]. Declines in adolescent birth rates have also been slower in rural areas. Between 1990 and 2010, the birth rate among adolescents living in rural counties declined by 31%, compared to a 50% decline among adolescents in the most urbanized counties [1].

Rural–urban disparities in adolescent childbearing reflect similar disparities in associated sexual and contraceptive behavior. Several studies found that rates of sexual activity were higher among rural adolescents [1–4], which may be driven by a range of factors from community-level poverty to a lack of

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recreational options in rural communities [5]. In addition, an analysis of the 2006–2010 National Survey of Family Growth found that adolescent women in rural areas were less likely to use contraception the first time they had sex than their peers in metropolitan areas, although there were no statistically significant differences in their likelihood of using contraception the most recent time they had sex [1]. However, a study of African-American high school students found that male and female students in rural areas were less likely to report using a condom the most recent time they had sex than students in nonrural areas [2].

Another factor that may contribute to the rural–urban disparity in adolescent childbearing is access to sexual health education. Between 2006–2010 and 2011–2013, declines in receipt of formal sex education were concentrated among adolescents living in nonmetropolitan areas [6]. Although most rural parents express support for the role of schools in sexual health education [7], research has found significant challenges in implementing sexuality education in rural areas, such as opposition from rural churches and lack of buy-in and resources in rural school districts [8,9]. At the time this study was conducted, sexual health education was not legally required in California, and some school districts that offered sexual health education failed to provide evidence-based, medically accurate information [10].

In addition, adolescents in rural areas have less access to sexual and reproductive health services than those in urban areas. Past research found that rural counties have significantly fewer publicly funded clinics that offer contraception than urban counties [1]. People living in rural and remote areas also may be disadvantaged by limited access to sources of health information [11]; thus, rural adolescents may not be aware of family planning service providers located near them. Lack of transportation and excessive distances to clinics pose additional barriers to accessing family planning services for rural youth [12,13]. Concerns about confidentiality and privacy also can be exacerbated in rural communities. Youth in rural areas may avoid seeking family planning services out of fear that a friend, relative, or acquaintance will see them and scrutinize and share their actions [12,14]. Although previous research suggests that the association between religiosity and adolescent sexual activity and related behaviors is complex, religiosity is slightly higher in rural counties than urban counties, which may contribute to rural–urban disparities in use of family planning services as well [1,15–17].

The purpose of this study was to examine rural–urban differences in awareness and use of family planning services among female youth before participation in the federally funded State Personal Responsibility Education Program in California (CA PREP). We also examined social and demographic characteristics that may be associated with awareness and use of family planning services, including age, race/ethnicity, and prior sexual and reproductive experiences. We hypothesized that rural participants would have less knowledge about and experience using family planning services than urban participants.

Methods

Setting

CA PREP is an adolescent sexual health and pregnancy prevention program overseen by the State of California's Maternal, Child, and Adolescent Health Division. Federally funded through the U.S. Department of Health and Human Services, Administration for Children and Families, Family and Youth Services Bureau, CA PREP is designed to replicate evidence-based program models that have been shown to delay sexual activity, increase condom or contraceptive use for sexually experienced youth, or reduce pregnancy among youth [18,19]. The program provides education on abstinence and contraception to prevent pregnancy and sexually transmitted infections, including HIV. A key component of CA PREP is the dissemination of information about family planning services that are available to youth in their local communities [20]. In 2012, 21 agencies were selected to implement CA PREP in 19 counties with above state-average adolescent birth rates in 2007–2009. During the 2012–2015 program cycle, agencies administered the program in a range of settings, including mainstream middle schools and high schools, alternative or continuation schools, foster care, shelter or transitional housing, juvenile justice facilities, community-based organizations, and clinics.

Data and sample

An entry survey was administered to all participating youth up to 7 days before or on the first day of the program (or on joining the program after the first day). The anonymous paper-and-pencil survey consisted of 28 questions, including questions about demographic characteristics and sexual behaviors, and took participants about 10 minutes to complete. The survey was offered in both English and Spanish, and passive parental consent was required. The study was approved by the State of California's Committee for the Protection of Human Subjects; the Committee on Human Research at the University of California, San Francisco deemed this study exempt from review.

In total, 14,823 youth attended at least one session of CA PREP between September 1, 2013, and June 30, 2014. Entry survey data were available for 13,174 participants. Although males have an important role in adolescent sexual and reproductive health, the sample was restricted to females as they comprise most family planning clients [21]. Of the 5,914 respondents who identified as female, 1,152 were excluded because they were aged <14 years or >18 years. The sample was restricted to the 14–18 age group because $<10\%$ of participants aged 10–13 years were sexually active and $<3\%$ of all participants were aged >18 years. We excluded an additional 127 respondents who had missing data for sexual experience and another 21 respondents who had missing data on pregnancy history. The final sample included 4,614 adolescent females who participated in 567 cohorts (i.e., groups of youth) across 121 CA PREP sites. The number of participants per cohort ranged from 1 to 32, and the average number of participants per cohort was 8. The number of participants per site ranged from 1 to 494, and the average number of participants per site was 38.

Measures

Dependent variables. To assess awareness of family planning providers, participants were asked, "Have you heard of a clinic or doctor in your community where teens can get family planning services (such as going to a doctor or clinic to get condoms, birth control pills, pregnancy tests, and STD/HIV tests or information about these)?" (yes/no/not sure). To assess prior use of family planning services, participants were asked, "Have you ever been