Children and Youth Services Review 36 (2014) 179–186

Contents lists available at ScienceDirect

Children and Youth Services Review

journal homepage: www.elsevier.com/locate/childyouth

A cross-sectional examination of birth rates among adolescent girls in foster care

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ARTICLE INFO

Article history:
Received 9 August 2013
Received in revised form 8 November 2013
Accepted 8 November 2013
Available online 20 November 2013

Keywords:
Foster care
Child maltreatment
Teen pregnancy
Teen births
Placement stability
Racial disparities

ABSTRACT

Although research has suggested that girls in foster care are at high risk of teen birth, limited data have been available from which rates could be calculated and characterized. This California study was based on a dataset constructed by probabilistically matching foster care records to statewide birth records. Using these linked data, we computed cross-sectional birth rate estimates for 15- to 17-year-old girls who were in foster care during each year from 2006 to 2010, characterizing the placement-related experiences and timing of births. Results indicated that although only a small number of 15- to 17-year-old girls in foster care gave birth each year, their birth rate was somewhat higher than the rate observed in the general population. Girls who were in foster care for less time or experienced greater placement instability had higher rates of birth. In terms of race and ethnicity, Black and Latina adolescents in foster care were more likely to give birth than their White counterparts. During the 5-year period, there were no detectable trends in the overall birth rate of girls in foster care, despite significant declines in the birth rates of 15–17 year olds in California overall. This linked data contributes new information that can be used to inform the targeting of prevention and intervention resources to girls involved with child protective services.

1. Introduction

Although the national birth rate for girls aged 15–19 fell to a historic low of 31 births per 1000 in 2011 (Hamilton, Martin, & Ventura, 2012), teen birth rates in the United States remain high among industrialized countries (Hamilton & Ventura, 2012) and teen parenting continues to pose a significant public health problem (Klein & the Committee on Adolescence, 2005). Adolescent parenting is associated with diminished physical health (Patel & Sen, 2012), higher incidence of depression (Barnet, Liu, & DeVoe, 2008), and limited educational and vocational success (Boden, Fergusson, & Horwood, 2008). Health, social, and educational challenges are also well documented among children born to adolescent mothers (Jaffee, Caspi, Moffitt, Belsky, & Silva, 2001; Jutte et al., 2010). Early childbearing is associated with an elevated risk of maltreatment among children of adolescent mothers (Lee & Goerge, 1999; Putnam-Hornstein & Needell, 2011).

Because various prevention efforts have succeeded at reducing unintended pregnancies among adolescents in the general population (Hamilton & Ventura, 2012), the target of prevention is now shifting toward particularly high-risk groups, including youth in foster care (Boonstra, 2011; Thiessen Love, McIntosh, Rosst, & Tertzakian, 2005). This targeting appears to be warranted because rates of pregnancy and birth among teens in or recently exited from foster care are substantially higher than in the general population (Courtney et al., 2005; Dworsky & Courtney, 2010; Gotbaum, 2005; Shaw, Barth, Svoboda, & Shaikh, 2010; Vinnerljung, Franzén, & Danielsson, 2007). Yet, current knowledge is limited by the absence of epidemiological data concerning birth rates for the full population of girls in foster care, birth rate trends over time, and foster care experiences that may be related to a heightened rate of birth. In this study, we linked foster care and vital birth record data to calculate and characterize annual birth rates for girls in foster care in California.

1.1. Demographic characteristics

Teen childbearing is associated with various demographic and social characteristics (Klein & the Committee on Adolescence, 2005; Woodward, Fergusson, & Horwood, 2001) and disparities in teen birth rates are evident across both race and socioeconomic status (Carter McLaughlin & Luker, 2006; Winters & Winters, 2012). In 2011, teenage mothers in the United States were more likely to be Black or Latina than White, although birth rates for Blacks and Latinas have declined more sharply during the last 20 years than birth rates among White teens (Hamilton et al., 2012). Adolescent mothers are also more likely to be from low-income families (Young, Turner, Denny, & Young, 2004) and high-poverty neighborhoods (Harding, 2003).

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http://dx.doi.org/10.1016/j.childyouth.2013.11.007

1.2. Maltreatment-related risk factors

Adverse childhood experiences contribute to higher rates of early parenting (Hillis et al., 2004). Physical abuse, especially when it occurs during preschool and elementary school, can increase the risk of childbearing during adolescence (Adams & East, 1999; Herrenkohl, Herrenkohl, Egolf, & Russo, 1998; Merrick, Litrownik, Everson, & Cox, 2008). Sexual abuse that occurs during childhood and into adolescence has emerged as a risk factor for teenage pregnancy and childbearing (Boyer & Fine, 1992; Saewyc, Magee, & Pettingell, 2004; Young, Deardorff, Ozer, & Lahiff, 2011). A meta-analysis found that girls who experienced childhood sexual abuse had more than twice the odds of teenage pregnancy than those who did not (Noll, Shenk, & Putnam, 2009). Another study found that girls who experienced either childhood sexual abuse or neglect experienced higher rates of adolescent childbirth than their nonmaltreated counterparts (Noll & Shenk, 2013). Lastly, maltreatment that occurs during adolescence, particularly neglect, has been found to significantly affect the odds of teen pregnancy (Thornberry, Ireland, & Smith, 2001).

1.3. Foster care and adolescent childbearing

Consistent with studies that have established a relationship between maltreatment and teen pregnancy and births, research has also suggested that girls in or exiting from foster care may be more likely to become pregnant and give birth as teens than those in the general population (Carpenter, Clyman, Davidson, & Steiner, 2001; Dworsky & Courtney, 2010; Gotbaum, 2005; Shaw et al., 2010). Dworsky and Courtney (2010) found that half of the girls in their 3-state Midwest sample had been pregnant by age 19 compared to one fifth of a nationally representative sample of the general population. Additionally, approximately 32% of girls in foster care in this same Midwest sample reported that they had given birth by age 19 (Courtney et al., 2005). In an analysis of foster youth in Maryland, the birth rate was calculated at 93 per 1000, a rate 3 times higher than the state's overall teen birth rate (Shaw et al., 2010).

Findings from studies that have assessed rates of teen parenting among maltreated girls under the supervision of the child protective services (CPS) system have been mixed. One study found that among teen girls involved with CPS, 1 in 6 was either pregnant or parenting (Gotbaum, 2005). Another examined the risk of teenage childbearing among those on the margin of foster care placement and found that the birth rate among girls who were placed in foster care was significantly higher than for girls who remained at home with their families (Doyle, 2007). Other studies have found no statistically significant differences in the rate of teen pregnancy and births between maltreated girls who remained in their home and those placed in foster care (Polit, Morton, & Morrow White, 1989; Widom & Kuhns, 1996).

Mixed findings concerning teen pregnancy and birth rates among girls in foster care likely reflect geographic variations, secular trends, and different inclusionary criteria. Studies based on point-in-time (e.g., on the last day of the year) estimates of girls in foster care who give birth fail to capture all girls who give birth in a single year because not all teen mothers remain in care while pregnant or after giving birth. Such estimates may also miss adolescents who exit care just prior to giving birth or those who enter care just after giving birth. Additionally, point-in-time estimates of adolescent girls in care may not adequately represent all youth who experience foster care during any given year because they are biased toward youth with longer stays (Courtney, Needell, & Wulczyn, 2004). Surveys of a small but meaningful population of foster youths who reach the age of majority while still in care may also be potentially biased because many children, even adolescents, exit care for other reasons prior to emancipation (Needell et al., 2013).

1.4. The current study

Research to date has been hampered by difficulties in measuring the number of births to youth in foster care; this limitation could be partially addressed through linkage of CPS data and vital birth records (Svoboda, Shaw, Barth, & Bright, 2012). There have been no U.S.-based studies that have used population-based birth record data to measure the rate of childbearing among girls in foster care, nor any that have examined whether there are characteristic foster care experiences associated with rates of birth. The current study used linked data to estimate the annual incidence of births among girls who were placed in foster care. Birth rates were examined over time (2006–2010) and stratified by race/ethnicity and foster care placement variables.

2. Methods

2.1. Dataset

Child protective service records for all teenage girls in foster care between 2006 and 2010 when they were 15 to 17 years of age were extracted from California's child welfare case management system. CPS records were available through a longstanding data-sharing collaboration with the California Department of Social Services. Vital records capturing all births occurring in California between 2006 and 2010 were obtained from the California Department of Public Health. Personally identifiable maternal information from the birth records was extracted for all teen mothers who gave birth when they were 15–17 years of age. This information was used to match CPS and birth records to identify girls in foster care who gave birth. Record linkages were completed using probabilistic matching software that established matches based on a combination of unique (i.e., Social Security number) and nonunique (e.g., first name, date of birth) identifiers common to both data sources (LinkPlus, Version 2.0). Match status cut-points for designating a record pair as a match or nonmatch were determined through an extensive examination of linked records. All record pairs falling above the upper cut-point were automatically deemed a match; record pairs below the lower cut-point were deemed nonmatches. A clerical review of pairs falling between the lower and upper thresholds was used to assign the final match status for remaining record pairs (Herzog, Scheuren, & Winkler, 2007). The final dataset generated from these linkages included all girls 15–17 years of age in California's foster care system between 2006 and 2010 and documented birth information for those who gave birth during each year. The linkage and analysis of these data fell under state and university institutional review board protocols and was reviewed by the California Vital Statistics Advisory Board.

2.2. Rate calculations

To generate annual teen birth rates among girls in foster care, we specified a base population denominator that included all girls 15–17 years of age who were in an active foster care placement during each year. Of those girls that were in care during the year, the numerator included all girls (ages 15–17) in foster care during each year and who gave birth at any point during that same year. As such, this numerator consisted of three groups: (1) girls who gave birth during the year and were in foster care at the time of birth; (2) girls who gave birth during the year after exiting foster care; and (3) girls who gave birth during the year before entering care. Given the size of the base population of girls in foster care, we report a birth rate per 100.

For comparative purposes, an overall population teen birth rate was calculated based on a numerator derived from vital statistics records for mothers who were 15 to 17 years of age at the time of birth. A denominator reflecting the annual counts of 15- to 17-year-old girls in the state was estimated based on data available from the California Department of Finance (2012, 2013). Estimates of state birth rates calculated for this study may differ slightly from other published rates. Differences