PURDUE EXTENSION
CENTER for RURAL DEVELOPMENT
EC-793-W

Poverty and Teen Childbearing in Rural Indiana

Brigitte Waldorf and Danielle Carriere
Department of Agricultural Economics
Purdue University

Introduction

Poverty has many facets, affecting individuals and communities in multiple ways. Teen childbearing is one such issue that is frequently associated with poverty. In fact, previous research by social scientists suggests an association between poverty, lack of economic opportunities, and teen births. (For the difference between teen pregnancy and teen childbearing rates, see sidebar on page 4.) As the economists Kearney and Levine (2012) put it, girls choose "motherhood at a young age instead of investing in their own economic progress because they feel they have little chance of advancement" (p.142).

In this publication, we discuss the connection between poverty and teen childbearing in rural Indiana. We first describe the patterns of teen childbearing in the U.S. and discuss why we are concerned about teen childbearing. Next, we document the extent of teen childbearing in Indiana's rural counties and investigate the association between teen childbearing and various indicators of economic opportunity. Finally, we discuss the implications for addressing teen childbearing in Indiana's rural communities.

Facts and Figures: Teen Childbearing in the United States

Teen childbearing is more widespread in the U.S. than in any other developed country (Kearney and Levine, 2012). In 2012, the teen birth rate in the U.S. was 29.4 babies born per 1,000 girls and young women under the age of 20 (Martin et al., 2013). This is more than twice as high as in Canada, three times as high as in Germany, and about six times as high as in Switzerland and Japan. At the current rates, about 14 percent of American women will have a baby before their 20th birthday, compared to only 2.5 percent of Swiss women.

Information on teen childbearing in the United States is collected through the National Vital Statistics System. Based on the most recent information for the year 2012 (Martin et al., 2013), the following key facts emerge:

- Teen childbearing in the U.S. has been declining since 1991, when the teen birth rate was more than twice as high as today.
- Geographically, there are huge differences across states. The highest rates—over 40 births per 1,000 teenagers—are concentrated in the South: New Mexico (47.5), Oklahoma (47.3), Mississippi (46.1), Texas (44.4), West Virginia (44.1), Louisiana (43.1), and Kentucky (41.5). The lowest rates—fewer than 20 births per 1,000 teenage girls—are found in Minnesota (18.5) and along the East coast: New Hampshire (13.8), Massachusetts (14.1), Connecticut (15.1), Vermont (16.3), New Jersey (16.7), Maine (19.4), New York (19.7), and Rhode Island (19.9).

The Rural Indiana Issues Series

Audience: Local and state leaders who work with rural communities.

Purpose: To find data about issues of concern in rural communities and to interpret that data in meaningful ways to aid in decision-making.

Method: U.S. Census, Indiana Youth Institute, and National Vital Statistics data analyzed across the county groupings—rural, rural/mixed, urban.

Potential Topics: Demographic changes, business development, health, health care, local government, taxes, education, agriculture, natural resources, leadership development, etc.

Outcome: Better, more informed decisions by rural decision-makers.

PURDUE EXTENSION | LOCAL FACES COUNTLESS CONNECTIONS
1-888-EXT-INFO · www.extension.purdue.edu

Table 1. Teen Birth Rates in Indiana and the U.S., 2007 and 2012

Year	Indiana	U.S.	Difference
2007	45.2	42.5	2.7
2012	33.0	29.4	3.6
Average annual change	- 5.4%	-6.2%	

Source: *Martin et al., 2010, 2013*

- Teen birth rates vary substantially across racial and ethnic groups. Among Asian and Pacific Islanders, the rate was only 9.7 births per 1,000 teenagers in 2012. For all other racial groups, it was much higher: 27.4 for white teenagers, 34.9 among American Indians and Alaska Natives, and 44.0 among black teenagers. Hispanic teenagers have the highest rate, with 46.3 births per 1,000 teenage girls.

Reasons for Concern

Having a baby as a teenager disrupts the education of the young mother and makes it quite challenging for her to become economically independent while taking care of the child. Parenting becomes even more difficult if the child's father is absent or not willing/able to provide adequate support. The U.S. Department of Health and Human Services (2013) reports that, compared to girls who do not have children as teenagers, teen mothers are less likely to finish high school and more likely to rely on public assistance, be poor as adults, and have children who suffer worse educational, behavioral, and health outcomes than children born to older parents. Moreover, teen childbearing is problematic from a health perspective. As reported by the National Institutes of Health (2014), teen mothers have an above average risk of pregnancy-related high blood pressure, and the risks for the baby include low birth weight and premature birth.

Teen Childbearing in Indiana

During the last decade, Indiana's teen birth rate was above the national level (see Table 1). In 2007, Indiana had about 45 births per 1,000 teenage girls, compared to the national average of 42.5 births. Both in Indiana and the nation, teen birth rates have declined since 2007, but the decline was comparatively slow in Indiana. By 2012, the gap between Indiana's and the nation's teen birth rates had increased from 2.7 to 3.6 births per 1,000 teenage girls. With 33 births per 1,000 teenage girls in 2012, Indiana's rate is also higher than that of all its neighboring states, except Kentucky. Indiana's relative poorer performance in reducing teen childbearing places added urgency on:

- Avoiding teen pregnancies in the first place, and
- Tackling the social and public health concerns surrounding teen childbearing.

Teen Childbearing in Rural Indiana

Teen childbearing rates in Indiana's rural counties vary substantially. (Details on the classification of Indiana's 92 counties into rural, rural-mixed, and urban categories are in Ayres, Waldorf, McKendree, and Hoelscher, 2012.) In Table 2, we ranked the 42 rural counties by their teen childbearing rates and then split them into two groups. The first group—those that have a teen birth rate that exceeds the Indiana average—includes the majority of rural counties. These counties are listed on the left side of Table 2. Jennings County tops the list, with a teen birth rate of 69 for the 7-year period.

Table 2. Teen Birth Rates in Indiana's Rural Counties, 2004 to 2010 average

Above Indiana Average			Below Indiana Average		
Rank	County	Teen Birth Rate	Rank	County	Teen Birth Rate
1	Jennings	69	23	Ripley	41
2	Fulton	52	24	Tipton	39
3	Starke	52	25	Gibson	39
4	Blackford	51	26	Parke	38
5	Fountain	49	27	Benton	36
6	Perry	48	28	Switzerland	36
7	Sullivan	48	29	Jasper	35
8	Greene	47	30	Newton	34
9	Randolph	46	31	Harrison	34
10	Union	46	32	Warren	32
11	Martin	45	33	Spencer	32
12	Rush	45	34	Whitley	32
13	Owen	45	35	Putnam	31
14	White	45	36	Franklin	31
15	Jay	45	37	Ohio	31
16	Vermillion	44	38	Carroll	28
17	Pike	44	39	Posey	27
18	Crawford	43	40	LaGrange	26
19	Clay	43	41	Wells	24
20	Washington	43	42	Brown	22
21	Orange	42			
22	Pulaski	42			

Source: *Average teen birth rates for the 7-year period 2004 to 2010 are published in* County Health Rankings.

Note: *The most recent data on teen childbearing refer to 2011 (see the vital statistics at* Stats Indiana http://www.stats.indiana.edu/vitals/*). However, the small population sizes of many rural counties and the resulting comparatively small number of teen births make these single-year rates unstable (see sidebar).*

The second group includes counties with teen birth rates at or below the Indiana average. These counties are listed on the right side of Table 2. It begins with Ripley County, which is ranked as the rural county with the 23rd highest teen birth rate, exactly at

the state average of 41. At the bottom is Brown County, with the lowest teen birth rate in rural Indiana of only 22 during 2004 to 2010. Teenage girls in Brown County are about half as likely to have a baby as Indiana teenagers overall. Comparing the counties with the highest and lowest rates suggests that teenage girls in Jennings County are almost three times as likely to have a baby as teenage girls in Brown County.

In Figure 1, we mapped the teen birth rates, showing a patchwork of high and low teen birth rates throughout rural Indiana. Very high as well as very low teen birth rates are found throughout the state. The lowest rate (Brown County) is actually very close to the highest rate (Jennings County).

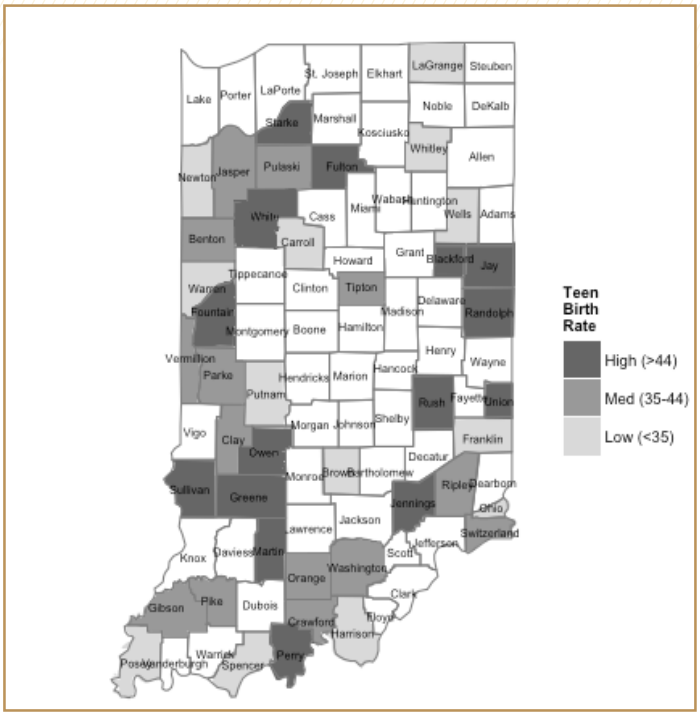
Are High Teen Birth Rates in Rural Counties Associated with Widespread Poverty?

To answer this question we investigate the relationship between county teen birth rates and six indicators that speak directly to counties' economic well-being. These indicators are median household income, percent children under age 18 who live in poverty, percent children who are eligible for free school lunch, the percent of the population who did not see a doctor due to cost, high school graduation rate, and, finally, the percent of children growing up in a single-parent household.

Table 3 shows the averages of these indicators, separately for the 22 counties with above average teen birth rates and the 20 counties that have below average teen birth rates. Compared to rural counties with a below average teen birth rate, counties with an above average teen birth rate have a:

- Lower median household income. The difference amounts to $6,274.
- Substantially higher percentage of children eligible for free school lunch. The difference is, at seven percentage points, quite substantial.
- Higher share of children growing up in single-parent households. The share is 29 percent, compared to only 24 percent in low teen birth rate counties.
- Higher percentage of children living in poverty. The difference is four percentage points.
- Higher share of people who did not receive medical care due to financial constraints. The difference is four percentage points.

Figure 1. Average Teen Birth Rates in Rural Indiana, 2004-2010



Taken together, the comparison suggests that teen childbearing is more common in rural counties with higher poverty and less common in rural counties that score more favorably on the economic well-being indicators. Interestingly, high school graduation rates are not a distinguishing characteristic between low and high teen birth rate counties. The difference is very small and amounts to only two percentage points.

Summary and Discussion

Teen Childbearing

Teen childbearing carries negative health risks for mother and baby, and costs taxpayers billions of dollars every year. In the U.S., teen childbearing has declined substantially over the last quarter of a century. But it is still much higher than in all other developed countries. Reducing teen pregnancy and teen births thus has a high public policy priority for state and federal governments.

Table 3. Indicators of Economic Well-Being and Teen Birth Rate

Indicator	Average indicator in counties with:		
	Above average teen birth rate	Below average teen birth rate	Difference
Median household income	$42,229	$48,503	– $6,274
% Free lunch	39%	32%	+ 7 % points
% Children in single parent households	29%	24%	+ 5 %points
% Children in poverty	22%	18%	+ 4 %points
% Couldn't see doc due to cost	17%	13%	+ 4 %points
High School Graduation Rate	87%	89%	– 2 % points

Median household income, % children in poverty, and % eligible for free lunch refer to 2011. The indicator "% couldn't see a physician due to cost" is based on survey data collected between 2005 and 2011.

Source: *County Health Rankings 2013.*

Rural counties in Indiana are quite mixed when it comes to teen childbearing. For instance, teenage girls in Jennings County are about three times more likely to have a baby than teenagers in Brown County. In search for an explanation for these differences, social scientists frequently emphasize the connection with poverty. Teenagers faced with poverty and little chance of upward mobility are more likely to have a baby than those who grow up in a well-off environment, where investing in education and delaying childbearing until later in life are the norm.

For rural counties in Indiana, the data on teen birth rates and indicators of economic well-being are consistent with the interpretation of teenagers becoming more prone to childbearing in the face of poverty. Indeed, on average, Indiana's rural counties with high teen birth rates score worse on several indicators of economic well-being than rural counties with low rates. They have lower income, constrained access to medical care, and more children living in single parent households.

Strategies to Reduce Teen Childbearing

Because teen childbearing has long-term adverse effects for mother and child (Ventura et al., 2011), the U.S. has long been engaged in strategies to reduce teen pregnancies and teen motherhood (National Campaign 2010). Traditional teen pregnancy prevention policies—including, for example, sex education and improved access to contraceptive—have contributed to the overall decline in teen birth rates since 1990. A useful overview of various programs for teen pregnancy prevention and their effectiveness is provided by the Department of Health and Human Services (2014). Moreover, recent research emphasizes the role of the media as a teen pregnancy reduction strategy. Kearney and Levine (2014) find that the TV show 16 and Pregnant has had a substantial influence on the declining teen birth rates. The TV show and its spin-offs expose viewers to the difficult realities of pregnant teenagers and teen mothers. Similarly, exposure to a close friend's teen birth makes young girls less likely to become pregnant (Yakusheva and Fletcher, 2013).

At the local level, communities need to adopt a two-pronged strategy that deals with reducing teen pregnancies, but also with programs that help teen mothers tackle the many social and economic challenges they face. This is even more important since we find a strong connection between teen childbearing and poverty/absence of social mobility. Local governments can make a huge difference with policies that directly speak to poverty reduction and the creation of economic opportunities for young girls.

Examples are counseling and providing information about, and enrollment assistance for, the various government programs that offer financial support for teen moms. Examples are programs like the Women, Infants and Children (WIC) program, which provides nutrition and health vouchers; the Supplemental Nutrition Assistances Program (SNAP); the Children's Health Insurance Program (CHIP); and the Temporary Assistance for Needy Families program (TANF). Moreover, to counter adverse long-term effects of teen childbearing, programs that facilitate teen mothers' continued education in high school, college, and apprenticeships are essential. Affordable child care services, for example, may allow a teen mom to graduate rather than dropping out of high school. Another example is education grants for mothers, such as Pell Grants, which can encourage young mothers to invest in a college education. Making such information accessible, and reaching out to teen moms will benefit young mothers and ultimately make the community stronger.

Terms & Concepts

Teen Birth

Teen births are defined as live births to 15-19 year olds.

Teen Birth Rate

When making comparisons between places of different size—say Chicago compared to Lafayette—we use the teen birth rate. It is defined as the annual number of teen births divided by the number of females between the ages of 15 to 19 years old, multiplied by 1,000.

For example, in 2011, Jennings County recorded 52 babies that were born to 1,028 girls and young women who were between 15 and 19 years old. Thus, the teen birth rate for Jennings County in 2011 was:

$1000 \times 52 / 1{,}028 = 50.6$

Small County Instability

For very small counties, the rates can become unstable because very small changes can already make big differences in the rates.

Take Benton County, for example. In 2011, only 219 teenage girls were living in Benton County, and they gave birth to a total of 8 babies, yielding a teen birth rate of 36.6. Had there been 9 babies born instead, then the teen birth rate would have been much higher, at 41.1.

To overcome this instability, the teen birth rates for rural counties reported in this publication refer to the average for the years 2004 to 2010.

Teen Pregnancy Rate

The teen childbearing rate should not be confused with teen pregnancy rate. In addition to live birth to teenage moms, the teen pregnancy rate also includes all pregnancies of teenagers that end in induced abortion or miscarriage.

Reliable data on teen pregnancy rates for Indiana counties does not exist.

References

Ayres, J., Waldorf, B., M. McKendree, and L. Hoelscher. 2012. *Defining Rural Indiana—The First Step*. Purdue Center for Rural Development. EC-766-W. https://www.extension.purdue.edu/extmedia/EC/EC-766-W.pdf

County Health Rankings. 2013. Population Health Institute, University of Wisconsin. http://www.countyhealthrankings.org/

Kearney, M., and P. Levine. 2012. Why is the Teen Birth Rate in the United States so High and Why Does it Matter? *Journal of Economic Perspectives* 26:141-166.

Kearney, M., and P. Levine. 2014. Media Influences on Social Outcomes: The Impact of MTV's *16 and Pregnant* on Teen Childbearing. NBER Working Paper No. 19795.

Martin, J. A., B. E. Hamilton, P. D. Sutton, S. J. Ventura, T.J. Mathews, S. Kirmeyer and M. J. K. Osterman 2010. Births: Final Data for 2007. U.S. Dept. of Health and Human Services, National Vital Statistics Reports, vol. 58, #24.

Martin, J. A., B. E. Hamilton, M. J. K. Osterman, S. C. Curtin and T. J. Mathews 2013. Births: Final Data for 2012. U.S. Dept. of Health and Human Services, National Vital Statistics Reports, vol. 62, #9. http://www.cdc.gov/nchs/data/nvsr/nvsr62/nvsr62_09.pdf#table02

National Campaign to Prevent Teen and Unplanned Pregnancy. National Data. Washington, DC. http://thenationalcampaign.org/

National Institute of Health. 2014. *Medline Plus: Teenage Pregnancy*. http://www.nlm.nih.gov/medlineplus/teenagepregnancy.html

STATS Indiana http://www.stats.indiana.edu

U.S. Department of Health and Human Services. 2013. Overview: Teen Pregnancy and Childbearing. http://www.hhs.gov/ash/oah/adolescent-health-topics/reproductive-health/teen-pregnancy/

U.S. Department of Health and Human Services. 2014. Teen Pregnancy Prevention Evidence Review. http://tppevidencereview.aspe.hhs.gov/EvidencePrograms.aspx

Ventura S J., T. J. Mathews, B. E. Hamilton, P. D. Sutton. J. C. Abmam 2011. Adolescent Pregnancy and Childbirth—United States, 1991-2008. Centers for Disease Control and Prevention, Morbidity and Mortality Weekly report (MMWR), Vol, 60, Supplement, 105-108. http://www.cdc.gov/Mmwr/preview/mmwrhtml/su6001a23.htm

Yakusheva, O. and J. Fletcher 2013. Learning from Teen Childbearing Experiences of Close Friends: Evidence Using Miscarriages as a Natural Experiment. *The Review of Economics and Statistics*. doi:10.1162/REST_a_00423.

About the Authors

Brigitte Waldorf is a professor in the Department of Agricultural Economics at Purdue University. Her expertise is in demography, and she has written about a variety of population issues in Indiana, including immigrants, educational attainment, and aging. Danielle Carriere is a graduate research assistant in the Department of Agricultural Economics at Purdue University.

Oct. 2014