

The Effect of Welfare Reform on Teenage Abortion

Chris Stack

Abstract: This paper examines the effects of certain political and social influences on the teenage abortion rate. The political influence we examine is the Personal Responsibility Work Opportunity Reconciliation Act (PRWORA). The social influences included household income, unemployment, and alcohol consumption per capita. We estimate the effects of these variables on teenage abortion rates and the proportion of pregnant teens that choose abortion. We found that states that had larger decreases in the welfare rolls over the period 1995-1997 (a proxy for the severity of welfare reform) showed larger reductions in both the probability that a pregnant teen will choose to abort and the teen abortion rate. However, the effect of decreases in the welfare rolls on teen abortion was modest at best. The most important contributor to the demand for teenage abortion was alcohol consumption per capita. Therefore, we conclude that more alcohol education for teenagers and stricter penalties for those that enable teenage drinking will indirectly lower demand for teenage abortion.

Introduction

Teenage pregnancy and teenage abortion are the subject of almost constant controversy and public concern. Pro-choice and anti-abortion activists have fought for more than thirty years over every aspect of the state and federal abortion regulations. Likewise, concerns about rising teen pregnancy rates have caused disagreements over sex education in the schools and welfare policy. None of this is surprising given the costs of supporting a teenager once she becomes pregnant. In addition to the obvious costs of lost schooling and job market opportunities, Langille, et al. (2007) find that female children born to teenage mothers are also at an increased risk of becoming teenage mothers themselves. As compared to other teens, teenage mothers more frequently become socially isolated, have mental health problems, and find fewer opportunities to attain education or employment. Hoggart, et al. (2000) find that getting pregnant and giving birth as a teenager reduces lifetime earnings and increases the probability of receiving welfare. While easier access to abortion can reduce the social costs of pregnant teens, a substantial portion of the population opposes expanded use of abortion. In this paper we are assuming a value neutral position to examine the factors that influence the demand for teenage abortion.

Over the past 16 years, both the teen pregnancy rate and the teen abortion rate have been falling. The teen pregnancy rate peaked in 1990 at 116.9 pregnancies (per 1000 women aged 15-19) and fell steadily to 71.5 in 2006. Similarly, the teen abortion rate peaked in 1988 at 43.5 abortions (per 1000 women aged 15-19) and fell steadily to 19.3 in 2006. Prior to this decrease from 1990 to 2006, both rates rose. The teen pregnancy rate was 95.1 in 1972 and it rose steadily until it peaked in 1990. The teen abortion rate also rose steadily from 19.1 in 1972 to its peak in 1988. Chilman, et al. (1979) attributes the increase in teen pregnancies and abortions to

the feminist movement and a push toward equality in sexual behavior along with changing norms about sex. According to this view, the changing norms about sex caused more discussion about sex and more sexual risk taking.

But shifts in welfare policy may have also affected the demand for teen abortions. The decisions of teens regarding abortion are likely influenced by the expectation of eligibility for welfare programs as well as the level of support offered through the programs. The Personal Responsibility and Work Opportunity Act (PRWORA) of 1996 altered both of these variables dramatically and increased the flexibility states have in determining eligibility. Winn, et al. (1999) explains that before the implementation of the PRWORA, federal oversight of the design and administration of income support programs permitted cross-state variation in only narrowly prescribed areas. However, PRWORA encouraged states to exercise flexibility in constructing their own social assistance systems for impoverished families (with federal parameters, of course). This caused there to be devolution of power from the federal government to the state and local levels, as states now had the power to implement policy in the best way they felt was possible.

The goal was to encourage recipients to seek employment in exchange for assistance during a limited time period. As Haskins (2006) explains, the PRWORA allowed states to block grants, set time limits for receiving assistance, and allowed the implementation of employment requirements. It also contained performance incentives in order to encourage states to move welfare recipients into the workforce. PRWORA also held fathers responsible for child support when fathers and children lived in different states. There were also large monetary incentives for states to decrease their number of teenaged births, thus leading there to be less teenage abortions.

Danziger, et al. (1999) notes that the number of individuals receiving assistance has declined sharply since the passage of PRWORA. Prior to the PRWORA, recipients of AFDC benefits, stated that the costs associated with going to work outweigh the benefits for many recipients. Although many of these individuals could find jobs, they had a difficult time making ends meet because of increased costs for things like transportation, child care, and work clothing. Post-PRWORA, welfare caseloads declined sharply and the employment rate of single mothers increased. Between fiscal year 1994 and fiscal year 1996 the AFDC caseload dropped by 14 percent. However, between 1996 and 1999 the caseloads declined by 40 percent. Danziger, et al. (1999) also points out that 20 percent of women that received welfare benefits in 1992 were working the next year. By 1996, 34 percent of women receiving benefits were gainfully employed the next year. Employment rates of single mothers increased from 58.5 percent in March 1994 to 69.2 percent in March 1998. Monthly caseloads were examined between 1994 through 1998 and found that the decline in unemployment rates accounted for only 8 to 12 percent of caseload reductions. PRWORA ended welfare as we knew it and with the expansion of the earned income tax credit and other policy changes have helped make work pay more than welfare.

Despite the substantial impact of PRWORA, there are no systematic studies of its effect on the demand for teen abortion. This is surprising as both abortion and welfare policy remain controversial issues. However, Medoff (1999) examines the causes of falling teen pregnancy and abortion rates and points out that rising female incomes and labor force participation rates raised the opportunity costs of pregnancy. He also shows that cuts in Medicaid funding for abortions raised the opportunity costs of pregnancy and caused fewer pregnancies. Following Medoff (1999), this paper accounts for the effects of PROWRA on the abortion rate and the probability

that a pregnant teen will choose abortion. I will do this by analyzing state-level data on the proportion of teenage pregnancies that result in abortion and the abortion rate. We find that

Literature Review

A series of studies examine the causes of the teenage pregnancy rate and of the teenage abortion rate. The most commonly offered explanations include economic factors (e.g., poverty, low education level, unemployment), shifts in social policy (e.g., welfare reform, abortion rights), psychological issues (e.g., self-esteem issues, risk-taking attitude), and lack of knowledge of contraceptive alternatives. Causes of abortions in these studies have not always been obvious. Of course, there are the cases of rape and incest, but some studies also cite eugenics and propose a teenage demand model for abortions. There is also evidence that teenagers in higher socioeconomic groups are more likely to get an abortion (Hoggart, 2000).

Macleod, et al. (1999) argues that parents in South Africa and the United States provide little information on sex to their teenage children. This breakdown in communication may be the result of shyness, religious mores, and general lack of knowledge. In support, Grimes, et al. (2002) claims that the religious rights' assumption that sex education causes pregnancy posits avoidance as the solution to the problem. Grimes et al. also contends that teaching "abstinence only" is an inadequate deterrent for teens. Despite this, many state sex education programs continue to omit information on abortion, contraception, and the avoidance of STDs. Hoggart, et al. (2000) finds that effective use of contraception amongst young people is associated with: good quality information and education about sexual matters; the quality of available sexual

health services; and, significantly, the degree of openness about sexuality and the extent to which teenage sexuality is accepted by adults.

Of course, the effect of better information may depend on how the teen interprets the information. Macleod, et al. (1999) finds that pregnant teenagers have a poorly defined sense of identity and low self-image and self-confidence; they experience themselves as inadequate and inferior and are plagued by feelings of insecurity. These self-esteem issues are often the result of peer group effects such as exclusionary practices “(e.g., sending sexually inexperienced teenagers away when having discussions concerning sexual matters)” (Macleod, 1999). Basically, being excluded from friends for not having sex could lead to a drop in self-esteem and a decision to engage in sexual activity to regain acceptance in their group of friends.

Because one can't have an abortion without being pregnant, the factors driving changes in teen pregnancy rates also likely drive changes in teen abortion rates. Medoff (1999) contends that abortion demand is primarily determined by the costs of obtaining an abortion, tastes, and the opportunity costs of having a child. Opportunity costs include labor market earnings and social opportunities foregone from having the child and the benefits would include satisfaction from having the child. Thus, higher incomes for women imply higher opportunity costs of a child, and a higher demand for abortion. The same trend applies for the amount of women in the labor force and for the amount of women single in any given state. Because some states provide funding for abortion through Medicaid, they would have a higher demand for abortion.

Not surprisingly, Medoff shows that teenage abortion demand is positively related to state Medicaid funding and labor force participation. Teenage women have 54 more abortions per 1,000 pregnancies in states that continue to fund Medicaid abortions. Educational attainment

is found not to have an independent influence on the teenage abortion decision (Medoff, 1999). This suggests that teenage demand for abortion is price inelastic and increases with income, and is positively related to state Medicaid funding, women's labor force participation (labor and amount in job market). Also, teenage abortion demand was found to be coincident with the business cycle, and is positively related to the level of Aid to Families with Dependent Children (AFDC) benefits in the long-run.

Medoff (1999) also analyzes AFDC benefits for unwed mothers and concludes that, in the short-run, there is a negative impact on the demand for teenage abortions, however this does not hold true in the long-run. Hoggart, (2000) also finds there is a clear trend to higher rates of abortion in more prosperous areas. Young women who plan to attend college are more likely to have an abortion and students tend to have more abortions than non-students. Also, a group of 17 year old girls were interviewed and they said that many girls felt too young and incapable of providing the baby with an economically safe environment. Other girls felt that having a baby would make it difficult to stay in school, which in turn would make it nearly impossible to obtain a higher education and completely jeopardize their future (Ekstrand, 2005).

The foregoing raises the issue of welfare reform on abortion rates and the probability that a pregnant teen will choose abortion. Following Medoff (1999), we might conclude that because changes in AFDC benefits did not change abortion demand, the more dramatic changes brought on by the welfare reform will not influence either the abortion rate or the probability that a pregnant teen will choose abortion. However, Medoff also finds that labor force participation raises abortion demand. One key element of the welfare reform is a time limit on welfare payments. This time limit may force immediate labor force participation or raise the possibility that the teen will need to enter the labor force in the near future. As such, it may make pregnant

teens more likely to choose abortion. The effect on the abortion rate is less clear. Because of the lower welfare payments, teens may take greater care to avoid pregnancy. Thus even if pregnant teens are more likely to choose abortion, abortion rates may fall.

Data and Methods

Hypothesis:

Because Medoff (1999) finds that changes in opportunity cost causes changes in teen pregnancy and childbearing, we hypothesize that states with higher per capita incomes will have a higher percentage of pregnant teens choose abortion. Therefore, people that have a higher level of income would have an even higher opportunity cost if they were to have a child as a teenager, thus increasing the chances that they would get an abortion. People that have a lower opportunity cost of having a child as a teenager would be less inclined to have an abortion. The effect on the abortion rate is ambiguous as higher income teens may take greater precautions to avoid pregnancy.

We believe that there will be a similar effect for welfare caseloads. A larger drop in the number of welfare caseloads from 1995-1997 (more severe welfare reform at the state level) should lead to a reduction in the percentage of pregnant teens to choose abortion. In general, teenagers are more likely to choose to have children if they are sure that there will be financial support once they have the child. If there was no support, they would be more inclined to have the abortion. The effect of a more severe welfare reform on the abortion rate is ambiguous as higher income teens may take greater precautions to avoid pregnancy.

The effect of the higher unemployment level on the percentage of pregnant teens that choose abortion is ambiguous. Higher unemployment may mean few labor market opportunities for teen mothers. Thus, the lost wages and the opportunity cost of the baby will be lower. On the other hand, tight labor markets may place additional pressure on teens to think of their future. With regard to alcohol consumption per capita, we believe that there will be a positive correlation between the amount of alcohol consumed and the amount of abortions taking place. This is because with increased alcohol consumption there will be lower levels of inhibition which will lead to more unwanted pregnancies resulting in more abortions.

Model:

We do not have a continuous time series, instead we have cross-sections at the state level at four-year intervals for the years 1992, 1996, 2000 and 2004. We use a fixed-effects regression procedure to account for the panel structure of the data because the Hausman test indicates that random effects is not appropriate. Thus, our model is a cross-sectional time series regression adjusted for unobserved fixed effects. The model is specified as follows:

$$Abortion_{it} = \beta_1 \Delta Caseloads_{it} + \beta_2 Income_{it} + \beta_3 Alcohol_{it} + \beta_4 Unemployment_{it} + \alpha_i + u_{it}$$

Where i indexes states; t indexes year; *Abortion* is the number of events per 1,000 women aged 15-19 or the proportion of pregnant teenagers that choose an abortion; *Income* represents per capita income; *Alcohol* represents alcohol consumption per capita; α is the unobserved random effects; and u is the random error term capturing variations across both time periods and states.

Change in Caseloads represents the initial change in the welfare caseloads after the implementation of PRWORA. Following Strangia et. al. (2009), we use the *Welfare Caseload* variable to capture the effect of welfare reform in each state after the enactment of Personal Responsibility and Work Opportunity Act (PRWORA). This was done by subtracting the number of welfare caseloads in each state in 1995 (one year prior to the PRWORA being passed) from the number of welfare caseloads in 1997 and divided this change by the number of welfare caseloads in 1995, then multiplying by 100 to convert the change into a percentage.

The measure of this change is intended to represent of the severity of welfare reform enacted in each state and thus include it for years 2000 and 2004 in the data set. For the years prior to the passing of the PRWORA (1992, 1996), the caseloads variable was set to 0. This was done to avoid capturing the effect of natural variation in the quantity of welfare caseloads in each state rather than the effects of the PRWORA itself. The equation for change in the percentage of welfare caseloads is as follows:

$$\% \text{change welfare caseloads} = \frac{\# \text{ of 1997 caseloads} - \# \text{ of 1995 caseloads}}{\# \text{ of 1995 caseloads}} \times 100$$

Data:

Data on the teenage pregnancy and abortion rates were collected from the Guttmacher Institute. This data was compiled using birth data from the National Center for Health Statistics (NCHS). Guttmacher supplemented this data set by gathering survey data from all known abortion providers. Pregnancies were aggregated by adding up the amount of births and abortions based on the sources above. Data on the teenage birthrate was collected from the

Centers for Disease Control (CDC) website. The CDC collects data on teenage birthrates through an annual review of birth certificates. For the purpose of this study, we divided the teenage abortion rate by the teenage pregnancy rate to calculate the percentage of teenage pregnancies that result in abortion.

The data on per capita income is from the Statistical Abstract of the United States. Data on the unemployment variable is taken from the Bureau of Labor Statistics (BLS) website. The unemployment data from BLS is determined by aggregating the number of unemployment claims in each region. Data on the total ethanol consumption is from the National Institute on Alcohol Abuse and Alcoholism (NIAAA) at the National Institutes of Health website. Data on total ethanol consumption was collected by the NIAAA using questionnaires. These results were submitted to the NIH, who aggregated and compiled the results. The per capita alcohol consumption calculation includes members of the population 14 years of age or older. Population data was collected from the United States Census Bureau website. Data regarding the number of welfare cases is from the Department of Health and Human Services (HHS). The numbers are calculated based on the amount of people receiving welfare benefits in the United States.

Results

Table 1 reports means and standard deviations for the dependent and independent variables. The mean abortion rate across the entire data set was 22.2 per 1,000 women aged 15-19. However, the abortion rate generally declined over the period from 29.5 in 1992 to 15.8 in 2004. The lowest abortion rates occurred in Kentucky, South Dakota, and Utah in 2004 (6 per

1,000 women aged 15-19 in each case). The highest rates occurred in New York, California and Hawaii in 1992 (59, 63, and 68 per 1,000 women aged 15-19, respectively). The proportion of pregnant teens who chose to abort was 0.266. Like the abortion rate, this abortion proportion declined over the period from 0.289 to 0.248. The lowest abortion proportions occurred in Kentucky in 2000 and 2004 (0.091 and 0.105, respectively). The highest rates occurred in New Jersey and New York in 2004 (0.529 and 0.532, respectively). Welfare caseloads fell an average of 13.67 percentage points over the period 1995 to 1997. However, some states experienced dramatic drops. Wisconsin, Indiana, and Pennsylvania experienced the largest drops (61.95, 61.69, and 60.81, respectively) while the smallest drops occurred in California and Arkansas (8.70 and 2.97, respectively). Welfare caseloads actually rose in Hawaii by 0.16 percentage points from 1995 to 1997.

To examine the causes of the decrease in the teen abortion rate and the proportion of pregnant teens who choose abortion, we run fixed-effects regressions. The results are reported in Tables 2 and 3. Column 1 of Table 2 shows the results of a fixed effects regression on the percentage of pregnant teens who chose abortion. Because we find some modest correlation between unemployment and the change in welfare caseloads, we remove unemployment from the second specification reported in column of Table 2. However, this did not change the statistical significance for the change in welfare caseloads, per capita income, and alcohol consumption per capita.

The results in Table 2 show that changes in welfare caseloads 1995-97 and alcohol consumption per capita had a significant positive effect on the proportion of pregnant teens who chose abortion. A one percentage point reduction in welfare caseloads reduced the proportion of pregnant teens who chose abortion by 0.00074. In percentage terms, a one percentage point

reduction in welfare caseloads reduced the percentage of pregnant teens who chose abortion by 0.074 percentage points. Using the mean value for the drop in welfare caseloads 1995-1997, the welfare reform caused the abortion proportion to fall by only one percentage point. Given that the abortion proportion fell by 4 percentage points over the period 1992-2004, the effect was modest. By contrast, a one-gallon increase in per-capita alcohol consumption raises the probability that a teen pregnancy will end in abortion by 5 percentage points.

The results in Table 3 show that changes in welfare caseloads 1995-97 and alcohol consumption per capita had a significant positive effect on the abortion rate. A one percentage point reduction in welfare caseloads reduced the abortion rate by 0.2 or about one percent of the mean value of the abortion rate over the period (22.2). Using the mean value for the drop in welfare caseloads 1995-1997, the welfare reform caused the abortion rate to fall by 2.73 per 1,000 women aged 15-19. As the abortion rate fell by 14 points over the period, the effect was modest. By contrast, a one-gallon increase in per-capita alcohol consumption raises the abortion rate by 31 per 1,000 women aged 15-19. Finally, a \$1,000 increase in real per capita income reduces the abortion rate by 0.5.

Conclusion

While we expected that changes in welfare caseloads would have a negative effect on the proportion of pregnant teens that choose abortion, the results of our analysis shows that there is a positive effect. This means that a state that enacted a less generous welfare policy following the welfare reform of 1996, had a larger decrease in the proportion of pregnant teens that chose abortion. In particular, we found that a 1% decrease in welfare caseloads results in a 0.07%

decrease in the probability that a teenage pregnancy will end in abortion. This is difficult to explain. However, the effect is quite small. We also found that a one-percentage-point reduction in welfare caseloads reduced the abortion rate by 0.2 or about one percent of the mean value of the abortion rate over the period (22.2). This we may explain by arguing that the reduced prospect of benefits under welfare reform caused teens to take greater care to avoid pregnancy. As pregnancy rates fell, so did abortion rates. Given this, we may conclude, at the very least, that the large cuts in benefits that followed from the 1996 welfare reform law did not increase either the teen abortion rate or the probability that a pregnant teen would choose abortion.

We also see that the amount of alcohol per capita consumed has a positive effect on the teenage abortion rate and the proportion of pregnant teens that chose to abort. For every gallon of alcohol consumed per person annually there is a 5% increase in the chance that pregnant teen will choose to abort. In addition, a one-gallon increase in per-capita alcohol consumption raises the abortion rate by 31 per 1,000 women aged 15-19. This is likely due to people having fewer inhibitions; therefore, as pregnancies are not planned, the number of abortions will increase.

This suggests that public policies to reduce alcohol consumption may have the added benefit of reducing the abortion rate and the proportion of pregnant teens that chose to abort. One possibility is an increase the amount of substance abuse education that we are giving our children, including providing them with supporting data. It may also be worthwhile to consider stricter penalties for serving alcohol to minors. This would make people much less inclined to supply a high school party with alcohol if they could go to jail as opposed to paying a fine.

Works Cited

- Chandra, Anita, Martino, Steven C., Collins, Rebecca L., Elliot, Marc N., Berry, Sandra H., Kanouse, David E., Miu, Angela. Does Watching Sex on Television Predict Teen Pregnancy? Findings From a National Longitudinal Survey of Youth. *Pediatrics*. Vol. 122, Number 5: pp. 1047-1054. November, 2008.
- Chilman, Catherine, S. Teenage Pregnancy: A Research Review. *National Association of Social Workers, Inc.* 1979.
- Danziger, Sandra, Corcoran, Mary, Danziger, Sheldon, Heflin, Colleen M. Work, Income and Material Hardship After Welfare Reform. *Journal of Consumer Affairs*. Vol. 34/1, Summer 2000.
- Ekstrand, Maria, Larsson, Margareta, Von Essen, Louise, Tyden, Tanja. Swedish Teenager Perceptions of Teenage Pregnancy, Abortion, Sexual Behavior, and Contraceptive Habits- a Focus Group Study Among 17-year-old Female High-School Students. *Acta Obstet Gynecol Scand*. Vol. 84, pp. 980-986. 2005.
- Grimes, Mary L. A Modest Proposal for Preventing the Children of Poor People in America from Being a Burden to Their Parents or Country. *National Forum*. Summer 1995.
- Guttmacher Institute. US Teenage Pregnancy Statistics, National and State Trends and Trends by Ethnicity. Guttmacher Institute. September, 2006.
- Guttmacher Institute. U.S. Teenage Pregnancies, Births and Abortions: National and State Trends and Trends by Race and Ethnicity January 2010.
<http://www.guttmacher.org/pubs/USTPtrends.pdf>
- Haskins, Ron. *Work over Welfare: The Inside Story of the 1996 Welfare Reform Law* (Brookings Institution, Washington DC) 2006.
- Hoggart, Lesley. Teenage Pregnancy: The Government's Dilemma. *Capital & Class*. Number 79: pp. 145-165. March 22, 2003.
- Langille, Donald B. Teenage Pregnancy: Trends, Contributing Factors, and the Physician's Role. *Canadian Medical Association Journal*. Vol. 176, Issue 2: pp. 1601-1602. 2007.
- Macleod, Catriona. The 'Causes' of Teenage Pregnancy: Review of South African Research—Part 2. *South African Journal of Psychology*. Vol. 29, Issue 1. March, 1999.
- Medoff, Marshall H. An Estimate of Teenage Abortion Demand. *Journal of Socio-Economics*. Vol. 28, Issue 2. 1999.
- Strangia, Anthony. Welfare and Teenage Birthrates: A Study of the Effect of the Personal Responsibility Work Opportunity Reconciliation Act of 1996 on Teenage Birthrates. *The College of New Jersey*. 2007.
- Winn, Ellen. Understanding How Change Occurs: Implementation Research in the TANF Era. *The Forum*. Vol. 2, No. 3. November 1999.

Table 1: Descriptive Statistics

Variable	Number of Observations	Mean	Std. Dev.	Min	Max
Abortion proportion	200	0.2663102	0.101172	0.0909091	0.5324675
Abortion rate	200	22.21	11.78773	6	68
Welfare caseloads	200	-13.6754	16.93533	-61.95735	0.1607668
Per Capita Income	200	11.90643	12.60132	0.7284622	62.36874
Alcohol	200	1.826142	0.3825977	0.9486	3.4448
Unemployment	200	5.2935	1.601635	2.3	11.4

$Abortionproportion_{it}$ = teenage abortion rate divided by the teen pregnancy rate to create a ratio of teen abortions to teen pregnancies.

$Abortionrate_{it}$ = number of abortions per 1,000 women aged 15-19 in state i for year t

$Welfarecaseloads_{it}$ = percentage change in the number of welfare caseloads from 1995-1997 in state i for year t

$Income_{it}$ = real income per capita in thousands of 1996 dollars for state i in year t

$Alcohol_{it}$ = per capita annual consumption of alcohol in gallons for state i in year t

$Unemployment_{it}$ = unemployment rate for state i in year t

Table 2: Results

VARIABLES	(1) percteen	(2) percteen
welfarecaseloads	0.000741*** (0.000106)	0.000730*** (0.000129)
perincome	-0.00156 (0.00137)	-0.00146 (0.000916)
alcohol	0.0559 (0.0362)	0.0527** (0.0256)
unemployment	-0.000504 (0.00168)	
Constant	0.196*** (0.0540)	0.197*** (0.0458)
Observations	200	200
R-squared	0.294	0.293
Number of state1	50	50

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 3: Results

VARIABLES	(1) abortionrate
welfarecaseloads	0.200*** (0.0221)
perincome	-0.570* (0.307)
alcohol	31.76*** (8.208)
Constant	-26.27* (13.75)
Observations	200
Number of state1	50
R-squared	0.512

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1