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Loosely Evidence-Based: The Role of Research in U.S. Teen Pregnancy Policy

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ABSTRACT

Teen pregnancy has become a highly salient issue on the U.S. national policy agenda over the past 40 years. In light of significant federal investments to address teen pregnancy, it is critical to understand how policy efforts are aligned with the existing evidence, and to examine how that evidence is utilized by multiple stakeholders during the policy process.

Employing a qualitative content analysis of legislative documents, this paper analyzes the construction of teen pregnancy as an "epidemic" during the 1970s and the use of research during the passage of: the Adolescent Health, Services, and Pregnancy Prevention and Care Act of 1978; welfare reform legislation in 1996; and the establishment of the new federal evidence-based teen pregnancy prevention initiatives of 2010.

Findings reveal that research was more often used symbolically to advocate for policies that legislators wished to promote, rather than instrumentally to craft policy provisions. Research that did not support the conventional wisdom was largely omitted or cited selectively. Research utilization appears to be increasing through policies requiring replication of evidence-based strategies. Findings illustrate the immense power of conventional wisdom and deeply ingrained values to influence research and policy priorities. Implications for policymakers, advocates, and researchers are discussed.

INTRODUCTION

Over the past 40 years, teen pregnancy has become a highly salient issue on the U.S. national policy agenda. Growing concern over teen pregnancy is reflected in numerous policy and research efforts. In light of significant federal investments to address teen pregnancy, it is critical to understand how policy efforts are aligned with the existing evidence, and to examine how that evidence is produced and its meanings constructed by multiple stakeholders. The purpose of this study is to analyze how research has been utilized to shape federal teen pregnancy policy in the United States.

Before doing so, it is first important to distinguish among the terms "teen pregnancy," "teen childbearing," and "teen parenting." While the term "teen pregnancy" is used most often in both policy and public discourse, it is actually teen childbearing and teen parenting that are associated with the host of negative consequences cited by policymakers, advocates, and the media.

Second, it is necessary to consider how the term "teenager" or "adolescent" is defined. While 18- and 19-year-olds are still technically in their teen years, they are also considered adults in many respects, and their trajectories as "teen parents" may be different than younger teens. Indeed two-thirds of teen pregnancies in the U.S. occur among 18- and 19-year-olds.[1] Whether 18- and 19-year-olds are included in an analysis of the costs and consequences of teen childbearing therefore has implications for the results and conclusions of any study.

Third, public concern over teen pregnancy coincided with significant societal shifts in marriage and childbearing. While "out-of-wedlock" or "nonmarital" childbearing is by no means limited to teenagers, teenage pregnancy also became a target for the growing concern over increases in childbearing outside of marriage and single-parent households, and, specifically, the

public costs associated with supporting many such families. Whether an analysis takes into account martial status has implications for its findings and conclusions. These distinctions are all essential to a critical review of the existing evidence.

Overview of the Evidence

Unlike many other policy issues, there is little public disagreement that teen childbearing is a social problem that should be addressed and prevented.[2] There is less agreement over the reasons why teen childbearing is a social problem and on the appropriate strategies and policy interventions to curtail it.

Consequences of Teen Childbearing

Teen pregnancy was not defined as a social problem until the 1970s.[3] At the same time, a raft of studies were published highlighting correlations between teen childbearing and a host of negative socioeconomic and health outcomes. Studies cited negative educational and economic consequences for teen mothers;[4] correlations between teen childbearing and negative outcomes for the children of teen mothers;[5] and significant costs and consequences for society at large.[6] But while there was no shortage of evidence that such negative outcomes were associated with teen childbearing, there was no clear evidence that these relationships were causal, and this remains true today.[7]

In the U.S., teen childbearing is highly associated with poverty, which is itself associated with numerous negative socioeconomic and health outcomes for both mother and child. Without adequately controlling for poverty or other pre-existing factors, the issue of selection bias becomes critical to understanding the associations between early childbearing and negative outcomes related to economic stability, educational achievement, and health. Because those teens that become pregnant and choose to have a baby are more likely to be disadvantaged in the first

place, any evidence correlating teen childbearing and these negative outcomes is potentially confounded.[8] Arline Geronimus, who has written extensively on this subject, argues that the real question that needs to be answered is: "[W]ould social or public health problems be alleviated if the same women who become teen mothers postponed childbearing to older ages?"[9]

Beginning in the early 1990s, studies utilizing creative designs and natural experiments to attempt to control for pre-existing factors found that there is little or no evidence that teen childbearing has the disastrous consequences it is presumed to have for teens, their children, or society. If there is any independent effect of having a child as teen, it appears to be far more modest than previously argued, and there is even some evidence to suggest that early teen childbearing may be adaptive for some teens.

For example, a 1992 study by Geronimus and Korenman analyzed outcomes for pairs of sisters where one sister became a teen mother and the other did not.[10] Attempting to control for as many pre-existing factors as possible that may make a teen more likely to become pregnant and carry a child to term (i.e., previous poverty, family environment, etc.), the authors found that when pre-existing poverty and disadvantage were controlled for, there were essentially no differences in the future educational and economic outcomes between teens who had babies, and their sisters who delayed childbearing until older ages. The authors concluded that previous cross-sectional estimates linking teen childbearing to negative socioeconomic outcomes had been clearly overestimated, and that it is misleading to continue to argue that teen childbearing itself is the cause of future disadvantage among teen mothers.[11] Hoffman, Foster, and Furstenberg subsequently replicated this sibling study and found similar results.[12]

A similar study comparing sisters found that once background factors were adequately controlled for, the effects of teen out-of-wedlock childbearing on adult welfare receipt and

poverty were insignificant. Authors Corcoran and Kunz concluded that "those who argue that ending out-of-wedlock teen births will substantially reduce poverty and dependency are likely wrong."[13] Subsequent critiques of the sibling comparison approach offered some useful cautions for drawing conclusions about such findings;[14] nevertheless, studies utilizing the siblings approach clearly demonstrated the bias inherent in previous studies.

A creative study by Hotz et al. matched longitudinal data for a sample of teens that became pregnant and carried a child to term to a similar sample of teens who became pregnant and miscarried. In this way, the two groups were not only matched on demographic variables, but they presumably shared as many other characteristics associated with becoming pregnant and choosing to continue a pregnancy as possible (assuming miscarriage is a random event).[15] The authors utilized this natural experiment to approximate a counterfactual—all of the teens got pregnant and chose to have child, but some actually became teen mothers while the others (by chance) did not. By comparing these groups the authors could attempt to isolate the independent effects of teen childbearing.

With respect to educational attainment and economic outcomes, there was virtually no difference between the long-term outcomes for the teens who had a child and those who miscarried. In fact, Hotz et al. found that for a subset of African-American teens, there were even some potentially positive effects for those who became teen mothers compared to those who had not. They concluded that the effects of teen childbearing on educational and socioeconomic outcomes are only "slightly negative" or "negligible," and that the effects may even be positive for some teens. Hoffman replicated these analyses more recently using data through the year 2000, when all of the women in the study were at least 35 years old. Including these updated data, the findings are roughly consistent with those of Hotz et al., but they are generally not as

positive for teen mothers, especially for younger cohorts.[16] The findings of numerous other studies have challenged claims that teen childbearing has clear negative consequences for teen parents.[17] Though far fewer studies have focused on the consequences of teen childbearing for teen fathers, there is evidence to suggest that the effects for males were also overestimated by early cross-sectional studies.[18]

Other research has focused on the impact of teen childbearing on the children of teen parents. A review of these studies suggest that there is even less evidence to suggest that teen childbearing causes negative outcomes for the children when efforts are made to control for pre-existing factors. Based on a review of numerous studies on infant and child outcomes, Geronimus concludes that "…there is strong evidence to refute the idea that the association between teenage childbearing and poor infant or child outcomes is due to maternal age, per se."[19] In fact the risk of negative health outcomes for African American women increases steeply throughout the 20s and 30s; therefore, for this subset of women, those who delay childbearing are actually at higher risk for poor infant outcomes such as low birth weight than those who give birth in their teen years.[20]

Furthermore, there is no evidence to support the claim that teen childbearing has negative consequences for the children of teen parents in terms of child development or school achievement. Even cross-sectional studies that do not attempt to control for pre-existing disadvantage find conflicting estimates, and one study of African-American children found that the children of teen parents actually did better in school than those children whose parents were older when they gave birth.[21] Another study used the sibling comparison approach to examine the school performance of preschool and elementary school age children of teen mothers, and their sisters who delayed childbearing.[22] Differences on standard achievement tests were often

insignificant, and those that were statistically significant were generally better for the children of teen mothers.

Finally, advocates and policymakers also cite an association between teen childbearing and future child abuse and neglect, as well as negative outcomes for the offspring of teen mothers into their adolescent and adult years.[23] There is no evidence to establish these claims that adequately controls for family background and pre-existing disadvantage. Massat, for one, argues that the association between teen childbearing and child abuse or neglect is merely a myth, and warns that perpetuating this myth may itself have harmful consequences.[24]

A small number of studies have examined the effect of teen childbearing on future negative outcomes for the children into adolescence and adulthood. These largely cross-sectional and multivariate analyses find small effects at most, and do not adequately control for previous disadvantage. One study that utilizes within-family comparisons suggests that employing adequate controls for family background could eliminate the effects of teen childbearing on future negative outcomes for their children beyond childhood.[25]

In terms of the costs and consequences of teen childbearing for society at large, it is difficult to make a convincing argument that teen childbearing *causes* such public costs in light of the research reviewed above. The costs to society—in terms of welfare, Medicaid, poor health, and more—would likely be there regardless of teen childbearing, at least for the subset of teens that tend to become teen parents. These would appear instead to be costs of poverty, inequality, and lack of educational and economic opportunity, not of teen childbearing itself.

To return to the study by Hotz et al. that compared pregnant teens who miscarried to those who did not, the findings suggest that the costs to society are also vastly overestimated when no efforts are made to control for the pre-existing differences.[26] On the contrary, they

estimate that if all current teen mothers delayed childbearing, the total expenditures on public assistance would actually *increase* slightly. The findings also suggest that the lifetime earnings of teen mothers would actually decrease if they delayed childbearing, thus decreasing their overall contribution to the economy.

Taken together, the studies reviewed here find little evidence to suggest that teen childbearing itself has an independent negative effect on teen mothers, their offspring, or society. While these studies are not without their own limitations, they are the best estimates that we have to date, and they all demonstrate that previous cross-sectional estimates grossly overstated the negative consequences of teen childbearing. In the early 1990s, this body of literature and its interpretations were referred to among researchers at the time as the "new literature"[27] or as "revisionist views" [28] of teen childbearing. Nevertheless, as we shall see, this literature appears to have been largely ignored in the teen pregnancy policymaking arena.

What Works to Prevent Teen Pregnancy

In terms of strategies to prevent teen pregnancy, until recent years there has been a strong federal policy focus on abstinence-only sex education, which teaches that abstinence is the only way to prevent both pregnancy and sexually transmitted diseases (STDs), and explicitly omits information on condoms and other birth control methods except their failure rates. While billions of public dollars have been spent on abstinence-only education, there is a general lack of evidence to demonstrate that this is an effective strategy to prevent teen pregnancy.[29]

The weight of the existing evidence suggests that few abstinence-only programs have positive impacts on teen pregnancy-related behaviors.[30] A 2010 study did find a significant positive impact of one abstinence-only program, and in the most updated federal list of evidence-based teen pregnancy prevention programs, a total of three out of the 31 effective programs are

considered abstinence-only interventions.[31] One study found that abstinence-only education had a negative effect on contraceptive use and STD rates when teens eventually became sexually active.[32] Alternatively, there is significant evidence to suggest that some comprehensive sexuality education programs that teach about abstinence in addition to preventing pregnancy and STDs with effective contraception can delay sexual activity among teenagers, increase contraceptive use, and decrease unintended pregnancy.[33]

While it is taken for granted that teen pregnancy is a significant social problem requiring policy intervention—by both policymakers and the general public—the construction of this problem and the concomitant policy responses have not appeared to be aligned with existing evidence. The specific research studies that are utilized may influence the response of policymakers, while other research findings may be ignored or discounted if they are inconsistent with social policy goals. What counts as evidence, and which evidence counts, is critical to understanding the historical policy responses to teen pregnancy and to determining appropriate policies going forward.

PURPOSE AND METHODOLOGY

The purpose of this study is to analyze the role that research has played in teen pregnancy policymaking in the United States from the 1970s to the present. It does so through a qualitative content analysis of legislative documents associated with selected federal teen pregnancy legislation. While some outstanding scholarship has explored the historical construction of teen pregnancy as a social problem beginning in the 1970s,[34] no studies have explored the important developments that have taken place in this area from the watershed welfare reform of 1996 to the present. Furthermore, after an exhaustive search of the public literature and previous studies on

this subject, none have looked specifically at how research was utilized in the policymaking process and its influence on resulting teen pregnancy legislation from the 1970s to the present.

This study seeks to answer the overarching question: How has research been utilized to influence federal teen pregnancy legislation from the 1970s to the present? I hypothesize that research which supports existing policy goals and reinforces the conventional wisdom regarding teen pregnancy will be utilized by policymakers and other stakeholders to influence legislation, while research which does not will be omitted, misinterpreted, or ignored. I analyze the use of research during the following three policy episodes:

- 1978: The Adolescent Health, Services, and Pregnancy Prevention and Care Act;
- 1996: The Personal Responsibility and Work Opportunity Reconciliation Act;
- 2010: The new federal Teen Pregnancy Prevention (TPP) initiative, funded through the Consolidated Appropriations Act of 2010 and The Patient Protection and Affordable Care Act.

These policy episodes all involve examples of federal legislation that were successfully passed and that substantively addressed teen pregnancy in one or more ways. They are not intended to be representative of all teen pregnancy-related legislation—or of all examples of research utilization in this policy arena. Rather, they were selected as examples of significant pieces of federal teen pregnancy legislation passed during this period which I contend are emblematic of the national policy response to the issue of teen pregnancy. As is the case with many policy issues, numerous bills are introduced that do not pass or never even make it to full floor debates. As one point of reference, from 1996 to 2010 there were roughly 40 bills introduced in Congress that substantively addressed teen pregnancy. Of these, only four were enrolled and sent to the President, three of which are analyzed in this study.[35]

Focusing exclusively on federal legislation limited the potential number of bills and allowed me to utilize congressional documents for all three episodes, reducing the potential for

variation in the types of documents that would be publicly available for each episode. This decision was also purposeful because teen pregnancy policy is an arena in which federal policymaking often sets the direction for state and local efforts. The substance and tone of teen pregnancy policy is highly influenced by federal legislation, particularly through the use of block and formula grants dictating the activities that can be undertaken at the state or local level.

Lastly, I was only interested in those efforts where a policy was successfully passed or adopted. This includes examples where a specific bill was passed as well as instances in which a bill may not have passed as stand-alone legislation, but rather as an amendment or part of other legislation. One could conceive of a study that would also examine bills that failed to pass and compare the use of research in such instances; this was not a focus of this study.

The analysis addresses three primary research questions for each of the three policy episodes:

1. How was the final legislation aligned with the existing evidence base?
2. How were research findings presented and interpreted to argue for or against the legislation?
3. What research was included and what was excluded during the policy process?

Qualitative Content Analysis

I first conducted a critical review of relevant research studies published prior to each policy episode, starting from the year 1970. I included nearly all peer-reviewed studies (and reviews of multiple studies) that substantively addressed the consequences of teen childbearing or what works to prevent teen pregnancy, as well as several major reports and books published during this period. A total of 98 research studies, reports, or books published between 1970 and 2012 were reviewed.

I then conducted a qualitative content analysis of legislative documents associated with each policy episode. Documents included the final texts of the legislation passed by Congress as well as the texts of associated bills, debates, reports, hearings, and testimonies. It is important to acknowledge that any analysis relying on publicly available documents is inherently limited. Such an analysis excludes closed-door negotiations and off-the-record compromises that can only be revealed from first-person accounts, and even those may be biased or incomplete. To attempt to gain some understanding of how research was utilized during the passage of each policy, I also analyzed the contents of relevant debates, hearings, testimonies, and reports.

Sample

A comprehensive search of the Congressional Record utilizing Thomas.gov was conducted to obtain all Congressional Record documents pertaining to the selected legislation for each policy episode. Where electronic documents were unavailable print copies were obtained. A similar search was conducted using FDSys to obtain documents related to any hearings, such as oral and written statements and testimonies.

All Congressional Record documents pertaining to the Adolescent Health, Services, and Pregnancy Prevention and Care Act of 1978 were obtained either electronically or in print. The final sample for the 1978 policy episode analysis included a total of seven Congressional documents. It included the final texts of the passed legislation and two previous versions of the bill, as well as transcripts of hearings totaling 15 hours of testimony and discussion and additional written testimony submitted for the record.

All congressional documents pertaining to teen pregnancy for the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) were obtained electronically. In addition to all documents related to PRWORA, documents pertaining to H.R. 4—the previous

welfare reform bill which was vetoed by the President—were also analyzed. The final sample included a total of 208 Congressional documents, including the final texts of the passed legislation, transcripts of all floor debates totaling roughly 20 hours of debate (both bills combined), reports, and transcripts of related hearings and testimonies.

All Congressional Record documents pertaining to teen pregnancy for both the Consolidated Appropriations Act of 2010 and the Affordable Care Act of 2010 were obtained electronically. While thousands of documents pertained to each of the bills, utilizing the search term "teen pregnancy" in addition to the bill titles significantly narrowed the sample, yielding only those instances where the bills were discussed in the context of, or with mention of, teen pregnancy. The final 2010 sample included a total of 56 congressional documents, including the final texts of the passed legislation (both laws) and related bills, transcripts of floor debates, reports, and transcripts of relevant hearings and testimonies.

Coding

The content analysis was conducted separately for each of the three policy episodes. The analysis was assisted by the use of Atlas.ti version 6.1, a computer-assisted qualitative data analysis software program, which enabled me to systematically analyze thousands of pages of texts to identify relevant passages for further analysis in order to detect patterns and themes. Because some Congressional documents from the 1970s were not available in an electronically readable format, I was unable to utilize Atlas.ti for the analysis of the 1978 episode and coded by hand.

Several of the pieces of legislation under consideration are much broader bills related to welfare reform, the federal budget, or health care reform; teen pregnancy may be addressed in just one or more sections of the bills. For this reason it was necessary to utilize a series of keywords to identify relevant passages for further review. The autocode function of Atlas.ti was

utilized to identify all mentions of the keywords "teen pregnancy," "teen birth/childbearing," "teen parents," and their variants to highlight each instance for further analysis. All sentences and passages identified using the above keywords/autocodes were then reviewed individually.

A series of codes were then developed inductively, using the content of the text itself to generate additional emergent themes. This process of open coding generated the secondary codes outlined below in Table 1.

Table 1. Secondary Codes

Secondary Code	Description/Definition
CONFLATION OF TEEN PREGNANCY/ CHILDBEARING/PARENTING	An implicit or explicit claim that utilizes teen pregnancy, teen childbearing, and/or teen parenting interchangeably or fails to make the distinction when reporting findings.
CONFLATION OF TEEN AND OUT-OF-WEDLOCK CHILDBEARING	An implicit or explicit claim that utilizes teen and out-of-wedlock childbearing interchangeably or fails to make the distinction when reporting findings.
CONFLATION OF CORRELATION/CAUSATION	An implicit or explicit claim of causality rather than correlation or association.
DISPUTED EVIDENCE	A challenge to or refutation of specific research findings.
INSUFFICIENT EVIDENCE/ EVALUATION	A call for more or better research or acknowledgment that existing evidence is insufficient, including increased evaluation.
SIMPLE STATISTICS/ DEMOGRAPHICS	Utilization of simple statistics or demographics (e.g., number of teen pregnancies, number of teen parents on welfare)
PREVENTION RESEARCH	Utilization of evaluation and research on strategies to prevent teen pregnancy (including primary and secondary prevention).
ABORTION RESEARCH	Utilization of research or data on abortion.

Once all documents were coded I reviewed the recurrent themes in order to interpret the overall findings for each episode. I did not attempt to summarize code frequencies because the nature of the research questions did not warrant such a quantitative approach. Moreover, to quantify codes would also have been inappropriate given the inherently repetitive nature of the policy process; bill texts (and numerous versions) are often read aloud multiple times on the House and Senate floors, and testimonies during hearings often repeat specific clauses in order to comment on the

content of a bill. The results of these analyses are presented for each of the policy episodes in turn in the following sections.

RESULTS: THE ADOLESCENT HEALTH, SERVICES, AND PREGNANCY PREVENTION AND CARE ACT OF 1978

Analysis of Final Legislation

The Adolescent Health, Services, and Pregnancy Prevention and Care Act of 1978 was the first federal policy effort to address teen pregnancy. While two versions of the legislation were introduced in the House and Senate, the bill was ultimately passed as an amendment as Title VI of the Public Health Service Act (P.L. 95-626).[36] The stated purposes of the final legislation were as follows:

> (1) to establish better coordination, integration, and linkages among existing programs in order to expand and improve the availability of, and access to, needed comprehensive community services which assist in preventing unwanted initial and repeat pregnancies among adolescents, enable pregnant adolescents to obtain proper care and assist pregnant adolescents and adolescent parents to become productive independent contributors to family and community life, with primary emphasis on services to adolescents who are 17 years of age and under and are pregnant or who are parents;
> (2) to expand the availability of such services that are essential to that objective; and
> (3) to promote innovative, comprehensive, and integrated approaches to the delivery of such services.[37]

It is clear from the stated purposes alone that the legislation was intended to tackle the issue of teen pregnancy from multiple angles. The bill emphasized prevention—of both initial and subsequent teen pregnancies—as well as services and supports for teens who were already pregnant or parenting. At the time, the existing evidence base was dominated by studies that quantified the scope of the problem, rather than on programs to prevent it. The legislation appears to acknowledge the importance of preventing pregnancy, while also addressing the reality that some teens would inevitably still become pregnant.

Below are several of the findings included as a rationale for the final legislation:

> SEC 601. (a) The Congress finds that—
> (1) adolescents are at a high risk of unwanted pregnancy;
> (2) in 1975, almost one million adolescents became pregnant and nearly six hundred thousand carried their babies to term;
> (3) pregnancy and childbirth among adolescents, particularly young adolescents, often results in severe adverse health, social, and economic consequences, including a higher percentage of pregnancy and childbirth complications; a higher incidence of low birth weight babies; a higher frequency of developmental disabilities; higher infant mortality and morbidity; a decreased likelihood of completing schooling; a greater likelihood that adolescent marriage will end in divorce; and higher risks of unemployment and welfare dependency;
> (4) an adolescent who becomes pregnant once is likely to experience rapid repeat pregnancies and childbearing, with increased risks;
> (5) the problems of adolescent pregnancy and parenthood are multiple and complex and are best approached through a variety of integrated and essential services;
> (6) such services, including a wide array of educational and support services, often are not available to the adolescents who need them, or are available but fragmented and thus of limited effectiveness in preventing pregnancies and future welfare dependency . . .[38]

There was no doubt that adolescents were at high risk of unwanted pregnancy. While unintended pregnancy was by no means limited to adolescents, nor was pregnancy among adolescents a new epidemic, adolescents were, and continue to be, at risk for unintended pregnancy. The findings that one million adolescents became pregnant in 1975 and nearly 600,000 teens gave birth were rather indisputable estimates based on vital statistics. This does, however, ignore the fact that adolescent childbearing was actually on the decline and had been so for some time. Though not cited here, these statistics appear to have been taken directly from the *11 Million Teenagers* report from the Alan Guttmacher Institute, which was cited numerous times during the hearings.[39]

The findings on the "severe adverse health, social, and economic consequences" of teen childbearing were also based on the existing evidence; however, the studies on which these findings are based were flawed in both their conception and execution. As discussed earlier, such studies often utilized simple cross-sectional methods and failed to adequately control for other important socioeconomic factors that are highly correlated with teen childbearing. The studies on which such assertions were likely based are precisely those that researchers later claimed to have

overestimated the effects of teen childbearing. Nevertheless, these studies were all that existed at the time; they had not yet been challenged or scrutinized as they would be in the 1990s.

In addition, while there is no doubt that "the problems of adolescent pregnancy and parenthood are multiple and complex," the findings related to integration of essential services do not appear to have come from existing research findings. Nor was there evidence that such services were "available to the adolescents who need them, or are available but fragmented and thus of limited effectiveness in preventing pregnancies and future welfare dependency."[40] When the legislation was passed in 1978, very little was known about exactly which services were available in communities throughout the United States, nor about which were effective. The major goal of better linking and coordinating of services appears to have been based more on anecdotal evidence or a hunch about what might make services more effective, rather than on any evidence that such linkages would enhance the impact of programs and services. Rather than funding programs to demonstrate and evaluate which services were indeed associated with the most positive outcomes for teen parents and their children, the final legislation mandated a list of core services that does not appear to be based on research and did not provide an opportunity to increase scientific knowledge of what works to achieve positive outcomes.

Nevertheless, the new legislation's inclusion of both prevention and support for pregnant and parenting teens provided an unprecedented opportunity to test new approaches to addressing teen pregnancy. But the legislation fell short when it came to evaluation. The requirements for grantee evaluation were thin, mandating the inclusion of "a description of the results expected from the provision of services and activities, and the procedures to be used for evaluating those results."[41] These vague requirements were made worse by the stipulation that no more than three percent of funding could be used for evaluation. Given the dearth of evidence on effective

programs and services to prevent teen pregnancy, this misstep on the part of the federal government would affect the evidence base for years to come.

Analysis of Congressional Hearings

Both versions of the Adolescent Health, Services, and Pregnancy Prevention and Care Act of 1978 were the subject of a series of committee hearings. The House version of the bill—H.R. 12146—was introduced by Congressman John Brademas (D-IN) on April 17, 1978 at the behest of the Carter administration.[42] It was then referred to committee, where a series of hearings were held. The Senate version of the bill—S. 2910—was introduced and championed by policy entrepreneurs Senator Edward M. Kennedy (D-MA) and Joseph Califano, then secretary of DHEW.[43] Senate committee hearings were also held.

Though the literature on research utilization in policymaking demonstrates that it is often difficult to determine whether research was utilized, the analysis of all relevant hearings and testimonies utilizing the coding scheme outlined earlier revealed many examples of explicit research utilization throughout the congressional hearings. It is important to note that these are only examples of explicit research utilization—when an individual cites a relevant statistic, research finding, or study. Surely it is possible that research was being utilized more implicitly, perhaps without an individual's conscious awareness of its use. What follows is a discussion of the common themes identified through the legislative content analysis.

Research utilization was largely symbolic. The large majority of research utilization during this episode falls into the category that policy scholars have referred to as *symbolic* use, whereby policymakers utilize research symbolically to confirm the policies they wish to promote.[44] An analysis of the debates, in tandem with the proposed and final legislation, suggests that supporters of the bill had already made up their minds about what a federal initiative to

address teen pregnancy should look like. In particular, Senator Kennedy had introduced a very similar bill three years earlier which died in committee. This earlier proposed bill—the School-Age Mother and Child Health Care Act (S. 2358)—had included many of the same provisions, including the strong focus on the coordination of services.[45] Despite the use of the term "prevention" in the 1978 bill's title and content, it was clear that the emphasis of the legislation was on services and support for pregnant and parenting teens, and not on prevention of initial teen pregnancies. In fact the tension between prevention and support became the most contentious issue during the policy process, and research was utilized on both sides to argue for emphasizing one over the other.

Research presented most often included simple statistics and demographics to describe the scope of the problem of teen pregnancy, which was commonly referred to as an "epidemic." Some witnesses, when citing such statistics, attempted to get even more precise in their presentation of data to describe the scope of the problem. Sargent Shriver stated that the phenomenon of teen pregnancy would be more accurately described as "endemic."[46] Representative William Cohen (D-ME), preferred to describe the "dilemma" of teen pregnancy as "pandemic."[47] However legislators chose to describe the trends in teen pregnancy, all were drawing upon the medical model to infuse science into the debate and lend credence to their arguments that this was an urgent problem requiring a swift government response.

Research findings on programs for pregnant and parenting teens were overstated. In arguing for the legislation, expert witnesses and policymakers repeatedly cited the demonstrated success of a handful of existing programs for pregnant and parenting teens. In fact, these programs and their accompanying evaluation studies were so often cited that they needed only to be referred to as "The Baltimore Study," "The New Haven Study," or the "Johns Hopkins

Program." In this sense the use of research was also *conceptual*—policymakers' knowledge of these evaluation studies provided some degree of guidance or "enlightenment" about potential effective approaches to addressing teen pregnancy.[48] Representatives of these programs and the researchers who had evaluated them testified in both the House and Senate hearings. While these particular programs were more established and rigorously evaluated than others, their evaluation studies were not without flaws, and the findings were overstated throughout the debates to suggest that these were model programs already proven effective.

Primary prevention efforts were claimed to be *ineffective*. In contrast, throughout the hearings several witnesses and representatives argued that primary prevention programs were ineffective, thereby making the case that the emphasis of the legislation should be on support for pregnant and parenting teens. As mentioned earlier, the evidence base at the time was sorely lacking in research on effective efforts to prevent initial teen pregnancies. The only studies of "successful" programs were aimed at secondary prevention of subsequent pregnancies among teen mothers. But while there were no published studies on effective sexuality education programs that had demonstrated success at the time, this did not mean that such programs did not work. Nevertheless, in arguing for an emphasis on pregnant and parenting teens, several witnesses inaccurately stated that a primary prevention approach would be inherently ineffective.

For example, in his written testimony before the House Committee on Interstate and Foreign Commerce, Sargent Shriver stated definitively that "we have learned that sex education programs in the schools will not work to reduce the number of pregnancies among these adolescents."[49] During his oral testimony he stated with equal certainty that "the scientific evidence indicates there is not a great deal that can be achieved with the younger teenage population by 'primary prevention' . . ."; this was quickly followed by a statement that "[w]e do

have evidence that significant progress can be made by what we call 'comprehensive teenage programs,'" and he cited the Johns Hopkins program as an example.[50] The senators present at the hearings appeared to accept this notion that no positive evidence equals negative evidence on prevention.

Other witnesses appeared to be concerned over the lack of emphasis on primary prevention in the legislation. In a particularly emphatic testimony, Dr. Robert Johnson of the New Jersey Medical School argued that "any legislative effort which would not emphasize prevention would be a misappropriation of resources."[51] Several policymakers also expressed concerns over the lack of emphasis on prevention. For example, in response to Sargent Shriver's testimony that primary prevention programs targeted at teens who have never been pregnant "have not succeeded," Representative James Scheuer somewhat rhetorically questioned, "Therefore, we do not aim anything at that group?"[52]

The use of the word "aim" here is striking. An analysis of both the final legislation and the congressional proceedings suggests that research was used to reinforce different or competing constructions of the policy's target population; in a sense, there were different ideas about just who was responsible for "the problem." Teenagers also seemed to be a target for the growing concern over out-of-wedlock childbearing, despite the fact that childbearing outside of marriage was increasing among women of all ages.[53]

Demographic data were cited selectively. Demographic data on trends in teen pregnancy, childbearing, and abortion were cited repeatedly to demonstrate the size and scope of the problem at hand. Such simple statistics and demographics were cited so often that it became easy to see just how many different ways one could present the data in order to support almost any argument about the urgent need for legislation or for various types of services for teens. How

one chooses to subdivide such data, and what trends are included or excluded, directly impacts one's conclusions.

First, while nearly every witness mentioned the numbers of births to teens during a given time period, most omitted the fact that the teen birth rate had been on the decline for many years. Most witnesses, whether intentionally or not, chose to present raw numbers of pregnant teens and babies born to adolescents, also obscuring the fact that there was in fact a larger teenage population than in previous years. Focusing on raw numbers of parenting teens would certainly be appropriate for determining the need for services, for example, but was not appropriate to illustrate a growing epidemic. Citing statistics to establish the problem with no comparison to previous years, whether intentional or unintentional, is a misleading and selective use of research.

Those who did acknowledge the recent decline in teen birth rates were typically researchers; however, they were also quick to qualify that trend. For example, in her June 14, 1978 testimony, Wendy Baldwin, then a social demographer then with the National Institute of Child Health and Human Development of the National Institutes of Health, stated the following:

> At present the birth rate of teenagers is declining over the levels we saw in 1960. This does not mean, however, that the number of births are declining at the same rate. In 1976 we had approximately 571,000 births by women under the age of 20. This was only 6 percent lower than what we saw in 1961 when the birth rate was substantially higher . . . Our population of adolescents has greatly increased, so that even the declining birth rates mean higher number of births to adolescents.[54]

The issue of age also became prominent during the hearings. Numerous witnesses testified to the importance of focusing on younger teens, who were not experiencing the same rate of decline in birth rates as other cohorts, and for whom the experience of a teen birth appeared to be even more challenging. Researcher James Jekel made a clear distinction between "teenagers" and "adolescents," stating that adolescents—those ages 17 and younger—should be the focus of the legislation (the final legislation did state an emphasis on teens 17 and under, it

also defines "adolescent parents" as those ages 21 and under). In his written testimony submitted for the record, Dr. Jekel stated several concerns about the House version of the bill, among them:

> I am concerned with the implication that all teenagers are adolescents (sec. 2(a) (2) says there were 600,000 adolescents who carried their babies to term. Over half of the 600,000 were deliveries to 18 and 19 year olds, many of whom were married.) I believe the bill should more clearly focus on those under age 18.[55]

Despite the issue of whether the legislation should target all teens, those under 17, or even the youngest teens as some witnesses suggested, the presentation of data on various age groups throughout the hearings was at times confusing and misleading.

Conflation of correlation and causality. Negative outcomes for teen parents, their children, and society were repeatedly listed without acknowledgment that underlying disadvantage might cause many of the outcomes cited, rather than teen childbearing itself. A typical example comes from Quentin Lawson, speaking on behalf of the Baltimore City Government. He stated that: "I am sure you will agree with me that research has shown that teenage pregnancy results in a number of crippling effects, both to the offspring and to teenage parents. It is crippling in terms of nutrition, crippling in terms of the health needs, and certainly in education, and in the area of employment."[56] Senator Hathaway (D-ME) also stated with certainty that "[teenage mothers] drop out of school; they are more prone to divorce; they neglect their children; suffer from chronic unemployment; go on welfare; and may become alcoholics or drug abusers."[57] Such examples where correlation and causality are conflated are common throughout the hearings and many claims are uncited. Without any mention of a source for such claims, one is left with the impression that they are "facts" rather than findings.

Not surprisingly, one of the only testimonies that directly addressed the issue of causality came from a researcher: Kristin Moore, then at the Urban Institute. In her testimony before the Senate Committee on Human Resources on July 12, 1978 Moore stated:

> The question of causality is also critical. While I do not want to imply that pregnancy is the only reason girls drop out of school, among those girls who do get pregnant, the pregnancies seem to increase the chances that the girl will drop out over and above her chances had she not gotten pregnant.[58]

While it is notable as nearly the sole reference to disentangling correlation from causation in the hearings, the research on which this statement is based is insufficient to make such a claim. The dataset utilized in this study did not allow the researchers to pinpoint the timing of pregnancy and dropout, and therefore relied on statistical modeling to determine the direction of causality.[59]

Evidence was rarely disputed. Challenges to the evidence presented by witnesses during the hearings were scarce. Given the state of the evidence base at the time, there were also surprisingly few acknowledgments of the gaps in current knowledge. Instead, witnesses often spoke with unwarranted certainty about programs that "worked" and prevention programs that did not work. Testimony after testimony listed statistics on teen pregnancy and childbearing, the negative consequences associated with teen pregnancy for the teen, her child, and for society, and occasionally the findings of one or more studies on effective programs for pregnant and parenting teens. While the legislators present did question the witnesses in many cases, the questions rarely included any challenges to the evidence presented.

A rare example of a real challenge to evidence presented came from a congressman. During the June 28, 1978 hearing Congressman James Scheuer (D-NY) politely challenged the testimony of Sargent Shriver that primary prevention efforts were ineffective. Referring to a separate series of hearings on family planning issues held earlier that year he said, "I appreciate Mr. Shriver's testimony, and I want to say for the record, that we had a great deal of evidence that family planning programs do work for teenagers."[60] He went on to say, "It is my understanding, and I will submit a brief statement for the record, that there are programs that have reached sexually active teenage girls and have averted conception. There are a lot of

sexually active teenage girls in this country who use contraceptives and do not become pregnant."[61] Scheuer did submit a statement for the record citing several studies demonstrating that many adolescents were successfully utilizing family planning programs.

Nearly unanimous call for enhanced evaluation requirements. The original bill stipulated that a maximum of one percent could be spent on program evaluation. This appeared to be one of the few areas of unanimous agreement; nearly every testimony argued that one percent for evaluation was insufficient, recommending increases to three or even five percent. This was somewhat surprising—particularly coming from many service providers who would have the ultimately responsibility for carrying out the evaluation, even at the cost of being able to provide additional services. In the final bill, this was raised to three percent.

Many existing peer-reviewed studies were cited. While the existing evidence base was not extensive at the time, it is notable that most of the existing studies were cited at some point during the hearings or in written testimony submitted for the record. Witnesses presented numerous findings from peer-reviewed studies as well as other existing reports, books, and unpublished evaluation studies. After reviewing the hearings against the existing literature, it does not appear that any particular studies were systemically omitted or ignored.

Many of the studies cited were funded by the federal government. The finding that most existing studies were utilized is not surprising given that majority of them were actually funded by the federal government. Some were evaluation studies of DHEW-funded programs—such as the Baltimore and New Haven programs—while others were studies commissioned by the federal government on issues related to teen pregnancy. While I do not suggest that these studies are inherently biased given their support from the federal government, this is another indication that teen pregnancy was deemed highly important by the federal government.

Several studies were cited extensively. While many of the existing studies available in 1978 were mentioned in one form or another during the hearings, several studies were cited repeatedly throughout the hearings. For example, the 1976 report by the Alan Guttmacher Institute—*11 Million Teenagers: What Can Be Done About the Epidemic of Adolescent Pregnancies in the United States*—was cited by one witness after another to establish the scope of the problem.[62] Indeed the number "11 million" is probably mentioned more than any other figure throughout the hearings by advocates, researchers, and policymakers. It is interesting that so many chose to focus on the 11 million sexually active teenagers given that their proposals were so often targeted at a small fraction of those teens—those that had already become pregnant. Nevertheless, this AGI report—with its rather provocative title—appears to have been influential in shaping the policy discourse during the passage of this legislation. Several other studies were also cited repeatedly throughout the hearings: the Baltimore study by Furstenberg; the New Haven study by Jekel; the evaluation of the Johns Hopkins program; and two studies by Zelnik and Kantner on trends in teen pregnancy, childbearing, abortion, and contraceptive use.[63]

Abortion figured prominently. Another surprising finding was the extent to which statistics related to abortion were presented during the hearings. Conservative and liberal witnesses alike—as well as congressmen—utilized evidence of the number of abortions among teenagers as a rationale for the bill. Joseph Califano, DHEW Secretary, stated that "well over 300,000 teenage abortions were reported in 1976 to the Centers for Disease Control."[64] While the connections between teen pregnancy, contraception, and abortion are obvious, policymakers have often avoided connecting these potentially polarizing issues during policy debates in more recent years. The desire to prevent abortion among teenagers indeed appeared to be a common

ground during the hearings. Even some of the witnesses from so-called "pro-life" groups spoke of the importance of family planning in this regard.[65]

But as the testimonies went on, it became clear that stakeholders were talking about preventing abortion somewhat differently. Some highlighted the need for primary prevention strategies, including family planning and sex education, to prevent teens from getting pregnant in the first place, thereby reducing abortions. However, others viewed support services and programs for pregnant and parenting teens as a way to prevent abortion, suggesting that having such support available would make a pregnant teen more likely and able to carry the child to term, and less likely to "have to" choose abortion. Since abortion was legalized in 1973, teen pregnancy had become detectable, quantifiable, and therefore disputable, which likely also contributed to the increased attention to the issue.

Race was virtually ignored. Finally, the issue of race was almost completely absent from discussion of teen pregnancy and childbearing. This is conspicuous given significant trends in teen pregnancy and childbearing among blacks and Latinas. There are few mentions of racial patterns in teen childbearing, made almost exclusively by researchers. While perhaps hoping to avoid a charged, racialized debate, failing to openly acknowledge racial disparities in what was deemed a significant public health issue kept policymakers and researchers from having to address critical underlying issues of inequality and disadvantage.

Summary

Based on these analyses, I conclude that the Adolescent Health, Services, and Pregnancy Prevention and Care Act of 1978 was an evidence-based policy to the extent that one could expect at the time. But given the limited existing evidence base, perhaps this legislative effort should have been less evidence-based and more "evidence-generating."

It is worth mentioning that the federal program funded by the Adolescent Health, Services, and Pregnancy Prevention and Care Act of 1978 would ultimately be repealed in 1981 and replaced with the Adolescent Family Life (AFL) program, passed as Title XX of the Public Health Service Act. With the shift to the Reagan Administration also came a shift in teen pregnancy policy; this shift toward teen pregnancy prevention through abstinence programs marked the beginning of an important change in the federal policy approach to teen pregnancy—one that would continue to grow in force for many years to come.

RESULTS: THE PERSONAL RESPONSIBILITY AND WORK OPPORTUNITY RECONCILIATION ACT OF 1996

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA)—commonly referred to as the "Welfare Reform Act"—may not seem an obvious choice for a study of teen pregnancy policy. Introduced on June 27, 1996 (H.R. 3734) and signed into law on August 22, 1996 by President Bill Clinton (Public Law 104-193), the primary purpose of the bill was to fulfill Clinton's famous commitment to "end welfare as we know it."[66] But while not precisely a piece of teen pregnancy legislation, the policy addressed teen pregnancy and childbearing in several direct and important ways. Furthermore, the policy illustrates how teen childbearing and welfare dependency were causally linked in the minds of policymakers, regardless of whether research supported the notion that teen childbearing itself causes poverty or welfare dependence. The legislation also represented a significantly increased policy focus on abstinence-only education as a primary prevention strategy despite a lack of evidence that this was an effective approach to reducing teen pregnancy.

Analysis of the Final Legislation

An analysis of the final legislative text revealed a significant emphasis on teen pregnancy—most of which does not appear to be aligned with the evidence base at the time of its passage. The legislation addressed teen pregnancy in three key ways: 1) Section 408 prohibited Temporary Assistance for Needy Families (TANF) aid to teen parents who do not complete high school, and for teen parents not living in an adult-supervised setting; 2) Section 905 required the Secretary of Health and Human Services (HHS) to establish a strategy for preventing out-of-wedlock teenage pregnancies, assuring that at least 25 percent of United States communities have a teen pregnancy prevention program in place; and 3) Section 912 amended Title V of the Social Security Act to provide $50,000,000 between 1996 and 2002, for states to teach abstinence-only education in public schools, including teaching that abstinence is the only way to avoid unintended pregnancy and disease.[67]

The legislation includes a number of research findings related to teen pregnancy to establish a rationale for addressing teen pregnancy in the context of welfare reform, among them:

> (D) Mothers under 20 years of age are at the greatest risk of bearing low birth weight babies.
> (E) The younger the single-parent mother, the less likely she is to finish high school.
> (F) Young women who have children before finishing high school are more likely to receive welfare assistance for a longer period of time.
> (G) Between 1985 and 1990, the public cost of births to teenage mothers under the aid to families with dependent children program, the food stamp program, and the medicaid program has been estimated at $120,000,000,000.[68]

In light of the existing evidence at the time of this policy episode, it is clear that these findings are just that—selectively cited findings from studies that support these notions, while findings of other studies are omitted, intentionally or not. Especially with respect to low birth weight, this "finding" is in clear contrast to the evidence available at the time. After controlling for pre-existing advantage, the preponderance of evidence available at the time suggested that teen

mothers were actually *less* likely to have low birth weight babies.[69] Nevertheless, statistics are presented here more as facts than as findings, written into the law to justify policy intervention.

Section 906 of PRWORA also directly addresses teen pregnancy and its purported connection to statutory rape. Statistics showing that a significant proportion of teen pregnancies involved a father over 18 provided the rationale for enforcing statutory rape laws as a means to prevent teen pregnancies. The legislation states that: "An effective strategy to combat teenage pregnancy must address the issue of male responsibility, including statutory rape culpability and prevention. The increase of teenage pregnancies among the youngest girls is particularly severe and is linked to predatory sexual practices by men who are significantly older."[70]

While this appears to be an example of utilization of research to inform public policy, it is based solely on simple statistics and correlations, not on any evidence that enforcing statutory rape laws would actually have an impact on teen pregnancy. What was arguably a moral or "sex panic" at the time over teens having babies with older men illustrates an example of grasping at (policy) straws to curtail this perceived epidemic.[71] It also portrays teenage girls as victims, preyed upon by older men, who would not otherwise have chosen to have sex, become pregnant, or carry a child to term. Such images become especially important when considering appropriate policy solutions. Rather than focusing on research on effective strategies to prevent teen pregnancy, the final legislation calls for the development of more "studies [of] the linkage between statutory rape and teenage pregnancy."[72]

The third section of PRWORA legislation that directly addresses teen pregnancy is Section 912, which calls for an increase in abstinence-only education, providing a significant additional funding source for this untested policy "solution" to teen pregnancy. The final legislation amends Title V of the Social Security Act to provide for an increase in funding and

authorizes the provision of abstinence education, along with a separate funding set-aside for states who apply for it. It defines an abstinence education program as one which:

> (A) has as its exclusive purpose, teaching the social, psychological, and health gains to be realized by abstaining from sexual activity;
> (B) teaches abstinence from sexual activity outside marriage as the expected standard for all school age children;
> (C) teaches that abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems;
> (D) teaches that a mutually faithful monogamous relationship in context of marriage is the expected standard of human sexual activity;
> (E) teaches that sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects;
> (F) teaches that bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society;
> (G) teaches young people how to reject sexual advances and how alcohol and drug use increases vulnerability to sexual advances; and
> (H) teaches the importance of attaining self-sufficiency before engaging in sexual activity.[73]

This eight-point definition of abstinence education would form the basis of federally-funded sexuality education for years to come. Again, this definition is presented as a series of facts rather than as a set of findings, mingling moral and value judgments with uncited claims.

Finally, the legislation stipulated new requirements for teen parents in order to receive benefits under the newly reformed welfare system (Temporary Assistance to Needy Families, or TANF, which replaced the previous Aid to Families with Dependent Children, or AFDC). A "teen head of household" (defined as under the age of 20) was considered to meet the new welfare work requirements if she or he maintained "satisfactory attendance at school" or "participated in education directly related to employment" for at least the minimum number of work hours required for assistance.[74]

The legislation also stipulated "no assistance for teenage parents who do not attend high school or other equivalent training program" and "no assistance for teenage parents not living in adult-supervised settings." In order to receive benefits, a teenage parent was required to "reside in a place of residence maintained by a parent, legal guardian, or other adult relative of the individual as such parent's, guardian's, or adult relative's own home." An exception could be

made for teen parents who had no parent or adult relative or where the teen had been subjected to serious harm or abuse by such relatives. In this case, the teen would be required to live in a "second chance home, maternity home, or other appropriate adult-supervised living arrangement" as determined by the State in order to receive public assistance.[75] These restrictions applied only to those teen parents who were under 18 and unmarried, raising the reoccurring issue of who is considered a "teen" with respect to pregnancy, childbearing, and parenting. Earlier versions of the bill had attempted to deny all benefits to teen mothers—an effort which was hotly contested on the floor given the likelihood of disastrous consequences for babies born to young mothers living in poverty.

PRWORA also called for research on the benefits, effects, and costs of operating the different programs established by the legislation, including "studies on the effects of different programs on welfare dependency, illegitimacy, teen pregnancy, employment rates, child well-being" and any other area deemed appropriate by the Secretary of HHS.[76] This broad stipulation did not set a clear direction for research into the causes or consequences of teen pregnancy, nor did it require rigorous evaluation of teen pregnancy programs to enhance the evidence base on effective strategies to prevent teen pregnancy.

Analysis of Congressional Floor Action and Hearings

Research utilization was largely symbolic, and to some extent, conceptual. As in the 1978 policy episode, an analysis of congressional debates and hearings revealed that the large majority of research utilization fell into the category of *symbolic* use of research, whereby policymakers use research symbolically to confirm the policies they wish to promote.[77] But the use of research was also to some extent *conceptual*. Policymakers' knowledge of research linking teen

pregnancy to both welfare dependency and statutory rape arguably provided some degree of guidance about approaches to addressing teen pregnancy through welfare reform.

The most common types of research utilization found in the debates and hearings on welfare reform represent symbolic attempts to quantify "the problem" and establish the urgent need to address teen pregnancy directly in the context of welfare reform. Research findings are generally presented without any discussion of correlation or causality—as if the conclusions are obvious or adequately understand by all—and they implicitly reinforce the conventional wisdom that teen childbearing *causes* poverty and welfare dependency.

A typical example comes from Representative Eva Clayton (D-NC) on July 16, 1996. While arguing that a current version of the welfare reform bill did not adequately address the prevention of teen pregnancy, Representative Clayton stated that: "There is a connection with the fact that every 32 seconds a baby is born in poverty, every 1 minute a child is born to a teen mother, every 9 seconds a child drops out of school, and every 14 seconds a child is arrested."[78] There is no supporting citation offered for these statistics and there need not be, as evidenced by numerous examples on the floor where uncited findings are presented as facts.

Another example comes from Senator Chuck Grassley (R-IA) during a debate on an early version of the welfare reform bill on during September 13, 1995. Citing an unspecified report from the Centers for Disease Control and Prevention (CDC) he stated:

> In fact, the Centers for Disease Control has estimated that between 1985 and 1990, the public cost of births to teenage mothers under the Aid to Families with Dependent Children Program, the Food Stamp Program, and the Medicaid Program was $120 billion. Apart from the obvious consequences on the children, who have greater health problems and lower educational aspirations, and the cost to the young mother, who is less likely to gain independence, we have to look at the consequences for society as well.[79]

While on the one hand citing a report from the CDC on the public costs associated with teen childbearing, Senator Grassley also makes uncited claims about the "obvious consequences on

children." Given the equivocal state of the evidence at the time, the consequences of teen childbearing for children (or teen parents for that matter) were by no means obvious. Furthermore, such examples of research utilization serve only to argue that reducing teen pregnancy is critical to reducing welfare dependency; he does not, for example, cite any research on how teen pregnancy might be effectively reduced.

Most claims went uncited. While some claims about teen pregnancy and childbearing are accompanied by a citation or source, the majority were uncited. One would not expect policymakers to provide full citations in the context of a policy debate, but most do not mention even the name of an associated researcher or organization or give any idea about where they have obtained such information. One such example with direct policy implications comes from Senator Faircloth (R-NC) during a debate on July 23, 1996:

> Abstinence education programs across the country have shown very promising results in reducing teenage pregnancies and reducing the teenage pregnancy rate, and it deserves to be expanded with Federal assistance. This provision does not take funds from existing programs and will be a critical help in meeting the bill's goal of reducing out-of-wedlock births. Mr. President, our colleagues on the other side have asked us repeatedly to consider the children. Abstinence education is an effective means to help children avoid the trap of teenage pregnancy.[80]

In fact there was no credible evidence at the time establishing abstinence education as an effective method of reducing teen pregnancy. On the contrary, the evidence at the time suggested that some programs that included information on abstinence in addition to information on contraception had positive effects. The research presented by expert witnesses during the subcommittee hearings also did not support abstinence-only education. Nevertheless, this statement was not challenged by others on the floor except in arguments about how to fund it.

Findings were oversimplified and conflated. Even when cited, findings were often presented out of context from fairly complicated studies with numerous and sometimes conflicting results. Such statements rarely incorporated the nuanced conclusions drawn by the

original authors of the study or report. Little attention was paid to the potential for overstating findings, understating their limitations, or conflating findings across various groups and studies.

A common theme was the almost interchangeable use of the terms "teen pregnancy" and "teen childbearing" throughout the debates. Claims are repeatedly made about the disastrous consequences of teen pregnancy. While it is teen pregnancy that Congress is attempting to prevent through this legislation, it is teen childbearing that is associated with the negative costs and consequences cited throughout the debates. When these terms are used interchangeably, it represents an inaccurate reporting of research findings that may have implications for potential policy solutions.

For example, during a Senate floor debate on December 22, 1995, Senator Stevens (R-AK) made the following statement in support of the bill: "Teenage girls get welfare checks, but only if they become pregnant. Instead of discouraging teen pregnancy, our Government actually rewards it with a cash bonus."[81] Taken literally, one can imagine the government handing out reward checks to any teenage girl with a positive pregnancy test result. Taken as intended, this example of the conflation of teen pregnancy and childbearing demonstrates the strong assumption of an inevitable path from teen pregnancy to childbearing to welfare receipt. Further implicit in this statement is the notion that teen pregnancy and childbearing are caused by perverse economic incentives—an argument for which there was no supporting evidence.[i]

The conflation of teen and out-of-wedlock childbearing is also prevalent throughout the debates. Again, the use of these terms interchangeably often results in inaccurate reporting of research. One cannot assume that findings on the consequences of teen pregnancy or those on out-of-wedlock childbearing automatically apply to the other, especially given that out-of-

[i] The March 14, 1995 testimonies given by Rebecca Maynard, Kristin Moore, and Robert Granger all demonstrated that there was no evidence that welfare benefits actually encouraged teen pregnancy and childbearing (which refuted the popular conception of such a "perverse incentive").

wedlock childbearing is certainly not limited to teens. Such links also raise questions about appropriate policy solutions—for example, whether marriage promotion is an appropriate "solution" to poverty for teenage parents.

Rarely did examples of research utilization involve discussions of potential underlying causes of teen pregnancy. The few examples where underlying causes were addressed generally came from researchers. During his March 14, 1995 testimony Robert Granger of MDRC stated:

> Research has identified many intertwined factors that contribute to the rising rate of unwed teen pregnancies and births. Examples include poor economic prospects, a desire to achieve "adult" status, ignorance about contraception, poor marriage prospects, aggressive males, changing norms that accept unwed motherhood, sexual abuse, and public policies that encourage early pregnancy and discourage marriage. All these reasons are part of our current policy discourse, and all are accurate to some degree.[82]

Not surprisingly, policymakers were far less likely than researchers to discuss potential underlying causes of teen childbearing. A rare example from a legislator came from Senator John Kerry (D-MA) on September 14, 1995:

> Case in point is teenage mothers, especially those who fail to avoid having children because they see no worthwhile future that awaits them if they avoid having children. We must invest in efforts to educate these children about the costs and realities of parenthood, and we must invest in education programs that provide real futures for school-age pregnant girls and new mothers and, where they can be identified, new fathers.[83]

Simple statistics and demographics dominated the discourse. In terms of which research was utilized and which was excluded during this policy episode, the most common type of research utilization was citation of simple statistics and demographic data related to teen pregnancy, childbearing, and welfare, such as the numbers of teen mothers on the welfare rolls, or the average amount of time that teen mothers spent on welfare in recent years. Statistics cited most often come from national vital statistics—such as the numbers or proportion of births to teens in recent years—or welfare utilization statistics by age, and occasionally, race. These examples represent a rather simplistic use of research to reinforce the notion that teen childbearing is an epidemic or crisis, and one that is closely related to welfare dependency.

Other examples simply cite public costs as if to prove that welfare reform must address teen pregnancy, even though teens represented roughly eight percent of welfare recipients at the time.[84] Notably, these are also numbers that generally cannot be contested. Vital statistics, demographics, benefits utilization numbers, and the like, are typically uncontroversial (at least outside of wonky researchers that enjoy arguing over denominators). But they are presented without any explicit discussion of correlation or causality—as if the conclusions are obvious or adequately understand by all—and they serve to implicitly reinforce the conventional wisdom that teen childbearing causes welfare dependency. Arline Geronimus has argued that policymakers may be "overly dependent on 'interpreters' and overconfident of simplistic 'truths.'"[85] This is supported by this analysis of research utilization during the welfare reform debates, where simple statistical associations and counts were heavily favored over the numerous existing studies that attempted to examine the underlying causes and complex relationships underlying issues of teen pregnancy and childbearing.

Prevention research was lacking. Despite the explicit goal of welfare reform to reduce teen pregnancy, there were surprisingly few examples of utilization of research on prevention. Though rare, discussions of findings related to what "works" to prevent teen pregnancy occasionally included results of evaluation studies conducted of policy efforts or community-based prevention programs. Such examples typically involved discussion of the success (or failure) of one or more approaches to teen pregnancy in the past. Furthermore, given the equivocal state of the research on teen pregnancy and childbearing at the time of this legislation, there were surprisingly few calls for more or better research and evidence on the subject.

Controversial or contradictory studies were effectively omitted. Most sources cited on the floor were, not surprisingly, government agency reports (e.g., CBO, CDC, GAO). Others came directly from the expert testimony in hearings. While it is possible that legislators were accessing other research through their staffers, lobbyists, or others, this analysis suggests that the research they attend to or cite is likely to be either government-sponsored or taken directly from hearings. The evidence base may be essentially confined to that presented at hearings by invited witnesses and government agency reports. This analysis found that the contradictory studies mentioned earlier were not cited during the policymaking process.

For example, although Geronimus and Korenman had been publishing on the consequences of teen childbearing for several years, they are cited only once throughout the welfare reform debates—by a fellow researcher. Furthermore, during the testimony of researcher Rebecca Maynard during a Capitol Hill Hearing on March 14, 1995, she cited Hoffman et al. (1993)—a replication of Geronimus and Korenman (1992)—but not the original study itself, in which the findings were less supportive of the negative consequences she cited here. At the very least, the evidence base at the time was not as clear cut as the testimony suggests. Maynard testified that:

> Just over half of all teen-age mothers complete their high school education during young adulthood. Many of those who do complete high school have especially low basic skills (Strain and Kisker 1989; Rangarajan et al. 1992; and Nord et al. 1992). As a result of their low basic skills and the compounding effects of their parenting responsibilities, they have limited employment opportunities and opportunities primarily restricted to the low-wage market (Berlin and Sum 1988; Cohen et al. 1994; Moore et al. 1993; Hoffman et al. 1993; and Rangarajan et al. 1994). Consequently, poverty rates for this group are extremely high, even for those who are employed.[86]

The study by Hotz et al., which compared teens who had been pregnant and miscarried to those who became teen parents, was never mentioned.[87]

While one cannot say whether a witness' testimony intentionally omits evidence that does not support an argument, it is clear from the analysis that the debate about the causes and

consequences of teen childbearing in academic journals was just that—academic—and was not part of the welfare reform policy process. In an account of the period surrounding welfare reform by Arline Geronimus, she observed that, "The possibility that delaying childbearing by teen mothers might, on balance, increase spending on public assistance was not considered in the debate over welfare reform. Instead, the presumption that preventing teen childbearing would result in substantial cost savings was taken as axiomatic."[88]

Summary

An analysis of the final legislative text combined with congressional floor debates and hearings revealed that the bill's text and comments on the floor clearly state the relationship between teen childbearing and welfare dependence as a causal one, despite the lack of evidence for this assertion. Instead, the final legislation and the proceedings leading to its passage appear to have been based on the beliefs and assumptions of policymakers—a reflection of the conventional wisdom about teen pregnancy as an epidemic with serious consequences for teens, their offspring, and society. There was no evidence cited—either in the bill itself or on the floor—to support the majority of the bill's provisions related to teen pregnancy. In general, research appears to have been used symbolically to establish teen pregnancy as a growing problem, one linked directly to welfare dependency and requiring intervention. It appears to have been used less so to craft the specific policy response to teen pregnancy.

I do not imply that the research evidence available in 1996 or even today provides easy or clear solutions to addressing teen pregnancy. It is not as if policymakers somehow ignored an existing road map to solving the problem as they defined it. Instead, conflicting studies and findings likely created uncertainty about the best way forward. Nevertheless, there was some evidence to suggest that the overarching assumption that teen pregnancy causes welfare

dependence was flawed, and none to support the abstinence-only approach or its moralistic eight-point definition. Based on these analyses I conclude that the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 was not an evidence-based policy with respect to its focus on teen pregnancy prevention.

RESULTS: THE NEW EVIDENCE-BASED TEEN PREGNANCY PREVENTION INITIATIVES OF 2010

Teen pregnancy rates continued to decline dramatically during the period following welfare reform.[89] But for the first time since the early 1990s, the rates of teen pregnancy, birth, and abortion increased slightly from 2005 to 2006. Recent data released by the Guttmacher Institute, however, suggest that this is not a trend. Rates for all three indicators were again on the decline and the teen pregnancy rate in 2008 was at its lowest in 40 years: 68 per 1,000 females age 15–19.[90]

The policy landscape had also changed dramatically since welfare reform with respect to the role of research in policymaking. During this time the term "evidence-based" was increasingly utilized to refer to practices, programs, and policies in a variety of policy arenas, including that of teen pregnancy. In 2010, the Obama administration launched new federal initiatives in a marked shift toward evidence-based approaches to teen pregnancy prevention. In a press release, HHS Secretary Kathleen Sebelius stated that "[t]een pregnancy is a serious national problem and we need to use the best science of what works to address it. This investment will help bring evidence-based initiatives to more communities across the country while also testing new approaches so we can expand our toolkit of effective interventions."[91]

The new federal teen pregnancy prevention initiatives launched in 2010 have come to be commonly referred to as the "Evidence-based Teen Pregnancy Prevention Initiatives." Clearly

this name and nature of the effort suggests that it was evidence-based—or was at least intended to be. This section will explore the extent to which this recent federal effort to address teen pregnancy was indeed an evidence-based policy, and how the very concept of evidence-based came to be defined and applied during this policy episode.

Analysis of the Final Legislative Texts

The new federal teen pregnancy prevention initiatives were established through two distinct pieces of legislation: The Consolidated Appropriations Act of 2010 and the Patient Protection and Affordable Care Act. The primary focus of both bills, of course, was not teen pregnancy. The Consolidated Appropriations Act of 2010 was introduced on July 22, 2009 as H.R. 3288 and was signed into law on December 16, 2009 as Public Law 111–117. This broad legislation to appropriate funds for the Fiscal Year 2010 included up to $110 million for the new teen pregnancy prevention program, which would be administered by the Office of Adolescent Health. It designated at least $75 million for grants to replicate evidence-based teen pregnancy prevention programs; at least $25 million was designated for grants to implement and evaluate new or promising strategies to prevent teen pregnancy. The remaining $10 million was designated for evaluation and technical assistance to grantees.

The language utilized in the legislative text clearly specifies that programs funded under this program must be proven effective by rigorous evaluation. The section of the bill that addresses teen pregnancy stipulates funding for "programs that have been proven effective through rigorous evaluation to reduce teenage pregnancy, behavioral risk factors underlying teenage pregnancy, or other associated risk factors, of which not less than $25,000,000 shall be available for research and demonstration grants to develop, replicate, refine, and test additional models and innovative strategies for preventing teenage pregnancy…"[92] The legislation also

includes significant funding—$4.5 million—for evaluation of teen pregnancy prevention approaches.[93]

The Patient Protection and Affordable Care Act—introduced on September 17, 2009 as H.R. 3590—was signed into law on March 23, 2010 as Public Law 111–148. In addition to its broader health care reform purpose, the legislation also included $55 million for the Personal Responsibility Education Program (PREP), which would be administered by the Administration for Children and Families. It made $45 million available in PREP grants to fund programs that replicate evidence-based teen pregnancy prevention strategies and "incorporate other adult responsibility subjects, such as maintaining healthy relationships, improving communication with parents, and financial literacy."[94] The legislation stipulated that such programs must include information about both abstinence and contraception. The remaining funds ($10 million) were to be awarded as grants to test new and promising approaches to reducing teen pregnancy and repeat pregnancy among those under the age of 21.

The legislation required the replication of evidence-based effective programs which were defined as "programs that have been proven on the basis of rigorous scientific research to change behavior, which means delaying sexual activity, increasing condom or contraceptive use for sexually active youth, or reducing pregnancy among youth." It also included a smaller amount of funding to test new and promising approaches to reducing teen pregnancy, similar to the funds provided through the Consolidated Appropriations Act in 2010. This amounted to $10 million for such demonstration programs and the legislation stipulated that programs must participate in a "rigorous Federal evaluation."[95]

Unlike earlier legislative efforts to address teen pregnancy, the Affordable Care Act included specific definitions of terms related to teen pregnancy prevention programs. In

particular, it required that all funded programs be both "medically accurate" and "complete" and defined those terms clearly. In terms of evaluation requirements, the legislation stipulated that "an organization or entity awarded a grant under this paragraph shall agree to participate in a rigorous Federal evaluation." Furthermore, it reserved 10 percent of funds for the purposes of evaluation—a significant increase from earlier bills that included between one and three percent for evaluation.

Despite replacing the major funding stream for abstinence-only education with funding for evidence-based programs, Congress did not eliminate funding for abstinence programs entirely. The Affordable Care Act actually restored funding for abstinence-based programs. Section 2954 of the legislation—titled "Restoration of Funding for Abstinence Education"—amended Section 510 of the Social Security Act to restore the abstinence education funding for the fiscal years 2010 through 2014. This was precisely the federal program that was proven ineffective by a 2007 evaluation by Mathematica Policy Research.[96] The funds had reportedly been inserted into the health care reform legislation at the suggestion of Orrin Hatch (R-UT) during the Senate Finance Committee's consideration of the bill and managed to survive the process of revisions.[97]

Based on a review of both legislative texts, it appears that the new teen pregnancy prevention initiatives established through these two legislative efforts were, by definition, evidence-based. The reinstatement of abstinence-only funding through the Affordable Care Act, however, was clearly not. The restoration of this program demonstrates how entrenched values and interests can have a significant impact on public policy. While research was used to replace the teen pregnancy prevention funding included in the federal budget, it appears to have been completely ignored with respect to this aspect of the Affordable Care Act.

Once these policies were implemented in 2010, making grants available to replicate evidence-based programs or to demonstrate and evaluate promising programs, the focus on evidence was also explicit. The grant announcement included a list of evidence-based programs: applicants could choose to replicate and evaluate these in their communities (based on a review conducted by Mathematica Policy Research in 2009).[98] A smaller number of grants were made available for promising programs with some—but not yet strong—evidence of success in reducing teen pregnancy. A statement by HHS also underscored the importance of both utilizing and improving the evidence base:

> HHS is committed to conducting high-quality evaluations of program models funded to replicate evidence-based strategies and test new, innovative approaches to reducing teen pregnancy. This is critical to ensuring that programs can be replicated effectively and to expanding our evidence base of what works and what does not, so that we can improve the effectiveness of programs and target resources appropriately.[99]

Not only was the program evidence-based, but, through this two-tiered approach, it was also designed to be evidence generating.

Analysis of Congressional Floor Action and Hearings

Research utilization was instrumental and imposed. In the previous policy episodes, the use of research was largely symbolic—policymakers generally utilized research to confirm the policies they wished to promote. To be clear, this type of use was still present to some extent. But in this policy episode, the utilization of research was more so characterized by what policy scholars have referred to as *instrumental* use, whereby research is used to give direction to policy and practice.[100] In the development of the new federal teen pregnancy initiative, the federal government commissioned Mathematica to conduct a systematic and comprehensive review of teen pregnancy prevention strategies that had been evaluated rigorously and found to have positive results on specific outcomes.[101] They then utilized this list of 28 "evidence-based"

programs to create the new policy, making grants available for the replication and further evaluation of these strategies.

During this policy episode, the research utilization also represented what policy scholar Carol Weiss has more recently referred to as *imposed* use of research, in which "program stakeholders are obliged to pay attention to evaluation results . . . they would lose their funding if they did not agree to adopt a program that had been proved effective through scientific inquiry."[102] Weiss refers specifically to the case of the Drug Abuse Resistance Education (D.A.R.E.) program in this quote; however, in the case of the new federal teen pregnancy legislation, programs similarly could not receive funding unless they selected strategies from among a list of evidence-based teen pregnancy prevention programs. Even for the second tier category of demonstration and evaluation grants, the use of scientific evidence was imposed.

Widespread use of scientific and research-oriented language. The analysis also revealed widespread use of scientific and research-oriented language. As mentioned earlier, the term "evidence-based" was ubiquitous, but also meaningful and clearly defined. Additional terms, such as "scientific evidence," "rigorous evaluation," and "medically accurate" were also used widely. This illustrates a dramatic shift from the previous policy episodes with regard to the stated importance of research and evidence in policymaking.

Claims were more often cited than not. Another distinguishing feature of this policy episode was that the large majority of claims made throughout the policy process were accompanied by a citation or source. It is likely that the heightened importance of research and evidence throughout this particular policymaking process increased participants' efforts to make "evidence-based" claims, and to establish them as such through the explicit citation of supporting evidence. The fact that claims were often clearly cited during the policy debates, unlike in the

previous episodes, also made it possible to examine the extent to which those claims were accurate representations the original research findings. The ability to examine such citations against the original studies reveals some examples in which citations are slightly off—citing the wrong year or a number instead of a rate. For the most part, however, research was cited accurately.

Data on recent rise in teen pregnancy were cited often. There are numerous examples throughout the legislative documents that cite recent trends in teen pregnancy rates to reinforce the need for legislation. Despite the longstanding decline in teen pregnancy and birth rates, data from the National Center for Health Statistics in 2006—the most recent year for which data was available at the time—suggested that the decline may be slowing, or even reversing. This was highlighted in numerous testimonies by both policymakers and advocates to sound an alarm that there is much work to be done, and to establish teen pregnancy prevention as an important component of the federal budget as well as health care reform.

For example, in a report to HHS from the House Appropriations Committee regarding appropriations for Fiscal Year 2010, the committee wrote:

> The Committee is deeply concerned that teenage birth rates have begun to rise after 14 years of decline. In 2006, teenage birth increased for the first time since 1991, following a 34-percent decline over that period. Preliminary data indicates this increase may have continued in 2007.[103]

This represents an accurate report of the data; however, while data on teen pregnancy and birth rates should be a component in any teen pregnancy policymaking effort, it is important to stress that any single year rate does not yet constitute a trend and should be interpreted with caution. Indeed the 2008 data suggest that this is not a trend. Rates for teen pregnancies, births, and abortions were again on the decline and the teen pregnancy rate was at its lowest since 1972: 68 per 1,000 females age 15–19, down from 117 per 1,000 in 1990.[104]

More discussion of, and funding for, evaluation. In keeping with the emphasis on research and evidence throughout the policymaking process, the analysis of the legislative documents during this period revealed an increased emphasis on evaluation, in terms of both more discussion of, and funding for, evaluation. The conversation surrounding evaluation had also changed significantly since the previous policy episodes; it was not simply mentioned nominally as an important component of the initiative, but was discussed in terms of scientific rigor and expectations of appropriate methodology. For example, as Senator Patty Murray (D-WA) stated before the Senate Appropriations Committee on March 10, 2010 that: "Applicants that wish to replicate a program that is not on the list [of evidence-based programs], may apply to do so, but a set of stringent criteria . . . must be met."[105] The funding announcement also explicitly includes the "feasibility of evaluation plan" as one of the important aspects it will be reviewing to determine awards.

Most research was prevention-oriented. The extent to which research on teen pregnancy prevention was utilized during the policy process was also notable. This was a clear difference from the policy episodes discussed earlier, in which most of the research utilized was dominated by simple statistics and demographics meant to demonstrate the extent of the problem, or research on the negative consequences of teen childbearing. Instead, during this policy episode, the conversation had shifted markedly to research on prevention—including numerous evaluation studies of programs that had demonstrated positive impacts on teen pregnancy or related behaviors.

In addition to the use of evidence on what "works" to prevent teen pregnancy, prevention-oriented research was also utilized to discuss the evidence for what does not work.

Testimony referring specifically to the Mathematica Policy Research evaluation of federally-funded abstinence-only programs stated:

> Contrary to the claims of abstinence-only proponents, these programs have had no positive impact on teen sexuality. A study commissioned by the U.S. Department of Health and Human Services found that youth who participated in abstinence-only programs were no more likely than their peers to abstain from sex, and participants reported having similar numbers of sexual partners and having initiated sex at the same average age as their counterparts who did not participate in the programs.[106]

With wording almost identical to that of the Mathematica report's executive summary, the research was accurately reported.[107] The results of the legislative document analysis reveal that the evidence base had changed dramatically since the 1990s; much more evidence was available on what works (and what does not work) to prevent teen pregnancy, and this evidence was heavily utilized both in the crafting of the new federal teen pregnancy initiative and throughout the policy process.

Controversial or contradictory studies remain uncited. Despite the widespread use of research during this episode, controversial or contradictory studies on teen childbearing—such as those reviewed earlier by Geronimus and Korenman or Hotz et al.—were not cited. To be clear, the preponderance of research cited was related to prevention—not the consequences of teen childbearing. Nevertheless, in numerous instances, claims were made (and often cited) about the purported negative consequences of teen childbearing, and the work of these researchers still was not included.

One example of such a claim cites the 2006 report by Saul Hoffman conducted for the National Campaign to Prevent Teen and Unplanned Pregnancy.[108] A 2009 testimony from The Pew Center on the States before a House subcommittee stated that: "A report by the National Campaign to Prevent Teen Pregnancy, authored by the chairman of the economics department at the University of Delaware, showed that the taxpayers' tab for teen childbearing in 2006 alone was calculated at over $9 billion."[109] Another example from a report from the House, though

uncited, offered that "reducing the incidence of teenage pregnancy can have untold individual and societal benefits, including reducing poverty, improving education outcomes, improving child well-being, and reducing the need for abortions."[110] In light of the studies conducted by Hotz et al., Geronimus and Korenman, and others, such benefits are not only "untold," they are also unproven.

Both a 2009 Mathematica Policy Research review and a 2007 by Douglas Kirby review are cited often throughout the hearings. Publications by the Guttmacher Institute, which is both a research and advocacy organization, are also cited throughout the hearings, particularly to demonstrate that most teen pregnancies are unintended. Several other citations also came from reports and materials published by advocacy organizations summarizing the literature, rather than the studies themselves. This is not surprising; given the enormous number of studies on teen pregnancy conducted in the past 40 years, one would expect policymakers to give preference to reports that synthesize the evidence. Nevertheless, it is important to note that such reports are often produced and utilized for advocacy purposes.

The evidence base on prevention is clearly defined and applied. Finally, and perhaps the most unique aspect of the research utilization during this policy episode, was the extent to which the evidence base was clearly defined and applied during the policy process. Summarized in both the government-sponsored review on effective programs conducted by Mathematica, and the *Emerging Answers* review conducted by Douglas Kirby, the evidence base on what works to prevent teen pregnancy was reviewed, defined, and applied for the purposes of developing a new federal program to prevent teen pregnancy.[111] Not only did this force the use of evidence to inform the policy, but it also established a shared agreement on what constitutes evidence.

While this is far from the process—or lack thereof—of defining and applying the evidence-base to policymaking that we saw in the previous episodes, it would be a mistake to take these findings completely at face value. For example, a program that has been determined effective based on a single evaluation study—which is the case for numerous programs—should not be taken as definitive evidence that such a strategy will be successful elsewhere. It may be the best place to start, but it must also be interpreted with caution. Nevertheless, the fact that the policy also funds evaluation of those models provides a good chance for building up the strength of the evidence base, regardless of whether evaluation findings are positive or negative.

Summary

Based on the analysis of the final legislative texts, congressional hearings, and debates, I conclude that these new federal teen pregnancy prevention initiatives are indeed examples of evidence-based policy—excepting the restoration of abstinence-only funding. They are also "evidence-generating" by design.

While this movement toward evidence-based policymaking is undoubtedly positive, it continues to take for granted that teen pregnancy prevention is a critical policy goal that is itself evidence-based. This goal is based on the assumption that a reduction in teen pregnancy will result in a reduction in poverty, health problems, welfare and Medicaid costs, and even incarceration. Forty years after teen pregnancy became a salient national policy issue, the evidence on which this assumption rests remains inconclusive. But studies that questioned the causal relationship between teen childbearing and a host of negative outcomes were still not part of the debate. As policy scholars Schneider and Ingram have argued, "social constructions may be perceived by the legislature, executives, courts, and ultimately, the citizenry to be so hegemonic that they are viewed as a 'natural' condition and seldom questioned."[112]

It is also worth mentioning that the focus on research and evaluation was not entirely new during this policy episode. Earlier teen pregnancy prevention policies, including the 1978 teen pregnancy program and the Adolescent Family Life legislation also required and funded research and evaluation. But this emphasis was essentially in name only, and evaluation was underfunded and not clearly defined, resulting in poor studies that did not meaningfully enhance the evidence base. The emphasis on research and evaluation during this policy episode—in terms of providing both funding and direction for evaluation—is in clear contrast to previous policy efforts.

DISCUSSION AND RECOMMENDATIONS

The preceding sections have demonstrated a rather remarkable evolution of research on teen pregnancy and childbearing over the past 40 years and how that research has been utilized—or not—to inform three key policy efforts. In light of the findings reviewed above, I offer the following recommendations for three key audiences within the teen pregnancy policy subsystem: policymakers, advocates, and researchers.

Policymakers

Address poverty and inequality. Though much easier said than done, if 40 years worth of research tells us nothing else, it demonstrates clearly that teens who become parents are different than those who do not in important ways. They are, on average, already poorer and otherwise socially disadvantaged before they become pregnant. Without adequately considering pre-existing disadvantage, including poverty and the educational and economic opportunities available to disadvantaged teens, policymakers overstate the negative effects of teen childbearing.[113]

This study has demonstrated that policymakers often conflate correlation with causation, which is not simply a matter of semantics: when they do so, they assume that preventing teen childbearing will have a significant impact on school dropout, poverty, health issues, welfare, and the host of other purported consequences of teen childbearing. This is a misguided assumption. It is not evidence-based. Policy efforts that attempt to address teen pregnancy without addressing the underlying issues of poverty and access to educational and economic opportunities will ultimately fall short of their goals.

Seek out evidence that contradicts the conventional wisdom. In order to ensure that policies are truly evidence-based, policymakers and their staff must also seek out evidence that contradicts the conventional wisdom about a given policy issue. When developing policy proposals or crafting legislation, one should search for existing studies that may contradict a particular policy position, rather than simply looking for research to support it.

Balance prevention and support. Preventing teen pregnancy and supporting parenting teens are not mutually exclusive. Nevertheless, given scarce resources and competition for funding, tension can understandably mount. It is the responsibility of policymakers to weigh this issue carefully and to ensure that the goals of teen pregnancy prevention do not preclude support for teens who become parents. History tells us that there will likely always be a significant number of teens in the United States who choose to become parents, and providing social supports for these teens and their children is in everyone's best interest.

Take care not conflate teen pregnancy, teen childbearing, teen parenting, and out-of-wedlock childbearing. Policymakers must make efforts to be clear when they are talking about teen pregnancy, teen childbearing, teen parenting, and out-of-wedlock teen childbearing.

Again, while these might seem like minor distinctions or simply semantics, they are not. These distinctions have real policy implications that must be considered.

Preventing teen pregnancy requires access to information and contraception, as well as the motivation to avoid pregnancy in the first place. Preventing teen childbearing requires all of the above in addition to access to safe and affordable abortion services should a teen choose not to carry to term, or high quality pre- and post-natal care, child care, and other supports if one does carry to term, as well as adoption services. Out-of-wedlock childbearing, on the other hand, is not limited to teens; if reducing out-of-wedlock childbearing is the policy goal, the target population and approach to any policy effort widens considerably. Policymakers must be clear about their specific policy goals and the rationales behind them, taking care not to conflate these issues when choosing the appropriate policy instruments. One size surely will not fit all.

Require and adequately fund rigorous evaluation. Policy efforts must require rigorous evaluation and fund it accordingly. As we saw in the 1978 policy episode, the failure to adequately fund evaluation, as well as a lack of clear guidelines and expectations for such evaluation, resulted in a lack of credible evidence for many years to follow. While we do not have all the answers, policymakers now have enough evidence to make instrumental and/or imposed use of research when designing teen pregnancy policies. The new federal teen pregnancy prevention initiatives provide a model for future policy efforts. Not only should public policy encourage (and where appropriate, require) the use of evidence-based practices that have been rigorously evaluated, but it should also require rigorous evaluation of new approaches to enhance the evidence base. Without adequate funding and clear requirements, evaluations will not produce meaningful results that can be utilized to inform future policy efforts.

Advocates

Seek out contradictory research. Advocates also stand to benefit from seeking out studies that may contradict their positions. When developing advocacy strategies or materials, or when responding to various policy issues raised by the government or in the news media, a concerted effort should be made to seek out and understand any existing research that may contradict or disprove one's position. Whether or not such research ultimately changes one's strategy or messaging, a deeper understanding of possible alternative explanations will make for stronger advocacy efforts.

Educate policymakers while acknowledging the limitations of research. Policymakers often rely on advocates to provide them with evidence relevant to a particular policy issue. Advocates are well positioned to educate policymakers on what the evidence can and cannot say about a particular issue. Furthermore, advocates must take care not to suggest that a lack of evidence means that something *does not* work, only that we do not yet know if it works. This is another important distinction that will strengthen the credibility and efficacy of advocacy efforts in the long run.

Help policymakers to disentangle teen pregnancy, teen childbearing, teen parenting, and out-of-wedlock childbearing. Advocates also stand to benefit from helping policymakers to disentangle these issues, making for more precise and effective policy goals and recommendations. Not only must advocates take care not to confuse these terms themselves, but they can make efforts to point out such distinctions for policymakers when opportunities arise.

Openly address underlying values. By continually citing research on the negative consequences of teen childbearing for teens, their children, and society, advocates may obscure their underlying values. This pattern was clearly established during the 1978 policy episode and

continues today. In order to make the case for government intervention, many advocates not only described teen pregnancy as an epidemic, but also as a serious social and public health problem in terms of costs and consequences for society. But underlying these agenda-setting efforts are often deeply held values about reproductive choice and the belief that teenagers deserve access to information and quality reproductive health care (or alternatively, strict mores against sex outside of marriage, contraception, and abortion). There are also likely strong values about economic inequality and social justice that also remain hidden behind the shield of research.

Based on the analyses of these three policy episodes, it appears that advocates may have become trapped in a cycle of defining and redefining the problem as one of teen pregnancy or childbearing, rather than as one of positive reproductive rights—to information, access to health care, personal choice and freedom, and healthy sexuality. In focusing on the negative consequences of teen childbearing, liberal and conservative advocates alike have also missed opportunities to illuminate the underlying problems of racial and economic inequality faced by so many American teenagers.

It would be naïve to think that a shift in advocacy efforts will be quick or easy. Nevertheless, shifting away from this approach will ultimately help to better secure access to reproductive health information and health care, and to highlight racial and economic inequalities, if such goals are not tied to research documenting the negative consequences of teen childbearing. Advocates let policymakers "off the hook" by failing to address these critical underlying issues. As Arline Geronimus so accurately cautioned, this "energetic focus on reducing teen childbearing may distract from the development of more effective antipoverty policies."[114] There is also a danger that teen parents and their children will be stigmatized, further exacerbating disadvantage and perhaps creating a self-fulfilling prophecy. Continually focusing

on the costs and consequences of teen childbearing effectively blames teens and erodes the interrelated goals of reproductive, economic, and social justice.

Openly address racial disparities. Given the importance of poverty and disadvantage when considering outcomes for teen mothers and their children, to ignore racial disparities in teen pregnancy and childbearing is to ignore the underlying disparities in poverty, health, education, and economic opportunity. The failure to cite more complicated and nuanced studies serves to obscure some very troubling findings related to racial disparities. Advocates are best positioned to ensure that these issues are part of any discussion on teen pregnancy prevention, and must not shy away from difficult conversations related to race, ethnicity, or culture and their links to economic and social inequality.

Researchers

Challenge the conventional wisdom. Researchers are not without their own values and assumptions about issues such as teen pregnancy and childbearing. We have ideas about relationships among variables of interest which influence and are influenced by our own research questions, a potential funder's research questions, or both. But too rarely do we as researchers truly set out to test the null hypothesis—to disprove the conventional wisdom rather than to prove it.

In the words of economist David Howell, "Without some measure of persistent disbelief, the research agenda becomes an exercise in confirmation, a search for evidence and interpretations that lend support to the prevailing wisdom—the 'theory' and vision of things we began with."[115] Cultivating such disbelief is necessary for research related to all aspects of teen pregnancy and childbearing, including its causes, consequences, and effective prevention strategies. For example, evaluation studies of teen pregnancy prevention programs should test the

hypothesis that a given program does not work, or that positive effects observed may be the result of some factor other than the program itself. This is critical to producing sound, scientific evidence that can make meaningful contributions to policymaking. In practice this may simply mean being more conscious of how we frame research questions and hypotheses, the methods we use, and how we interpret the findings, but this is unlikely to happen on its own without a concerted effort. This is a challenge to all researchers who hope to have a meaningful influence in any given policy arena.

Better educate policymakers and advocates on the importance of correlation versus causation. While researchers have come to include a caveat about correlation and causation almost automatically in any report, these terms and their importance are not necessarily clear to advocates or policymakers. In the case of teen pregnancy research, this concept is critical to understanding the relationship between childbearing and numerous negative outcomes. While it may be fruitless at this point to debate effect sizes and the appropriateness of instrumental variables—at least among anyone outside of research circles—it remains critically important to remind multiple audiences that there is still no unequivocal evidence that teen childbearing itself *causes* the negative consequences so often cited throughout the policy debates. Researchers can better assist both advocates and policymakers to clearly understand what can and cannot be concluded from any given study.

Furthermore, researchers should make concerted efforts to make both the implications *and* the limitations of their research clearer for lay audiences. This should include any findings for subgroups; for example, if findings differ significantly for African American teens, such findings, and their implications, should also be highlighted.

Make findings accessible and timely. Making research findings available and accessible to non-research audiences—and doing so in a timely manner—is an age-old recommendation. It is nevertheless one that follows naturally from the findings of this study. The lag between research and publication often meant that the results of relevant studies were not published until after an important policy episode had passed. Of course this may or may not have made a difference in terms of a study's utilization. The same is true for vital statistics. The lag in the availability of data on teen pregnancy, birth, or abortion rates means that our knowledge of any trends is often several years behind.

The research-to-publication delay is difficult to address (and virtually impossible for vital statistics). While some journals have responded to this need by making expedited publishing options available for critical or particularly timely research findings, it is unlikely that research findings on teen pregnancy will ever rise to the importance of, say, a new vaccine or promising health treatment. Researchers should therefore make efforts to make their findings clear, accessible, and useful to advocates and policymakers in real time. This could take the form of briefs or working papers that would not preclude the possibility of later publishing one's full findings in a peer-reviewed journal. Organizations such as the Guttmacher Institute and the Urban Institute have provided some excellent examples.

In addition to the above implications and recommendations for members of the teen pregnancy policy subsystem, this study has broader implications for public policy and future research. The rising evidence-based movement reflects the growing demand for researchers to produce and disseminate research that will be useful to policymakers, and for policymakers to actually utilize that research to enhance policies and programs. This makes it increasingly

important to understand when, how, and under what conditions research is used by policymakers and how research use can be improved. A better understanding of how research is currently (and historically) utilized can promote the generation of more useful research and improve its use by policymakers to better address teen pregnancy and many other social issues. There is good reason to believe that the use of research in increasing, but we must proceed with caution. The use of evidence is but one component of sound policymaking.

Limitations

It is also important to note several limitations of this study. First and foremost, the analysis and its conclusions rest solely on the explicit use of research observable through public records. To fully understand the dynamics of such decision making and the politics involved therein would require in-depth qualitative research, including interviews with high-level stakeholders. Fortunately, such research is currently underway by leading policy scholar, Ron Haskins of The Brookings Institution. With funding from the William T. Grant Foundation, Haskins is currently undertaking an analysis of six Obama administration evidence-based initiatives (including the teen pregnancy initiatives) and the processes through which they were developed, promoted, and implemented.[116] It is my hope that the work undertaken in this study will be a meaningful complement to this forthcoming research.

This study is also limited to research and policy from the United States. The decision to focus solely on the U.S. was purposeful; not only does the U.S. have higher rates of teen pregnancy and childbearing than other Western industrialized countries, but it may also be unique in terms of its mores regarding sexuality, approaches to sexuality education, access to contraception and health care, and more general approaches to the welfare state and social safety net. One could devote an entire study to any one of those factors and its relationship to policy.

For these reasons, I chose to limit the scope of the research in order to analyze changes in the U.S. policy landscape over time. Nevertheless, the findings on the use of research for policymaking purposes may be relevant to other localities despite potential differences in political systems and policy priorities.

The analyses also focused on three policy episodes involving specific examples of legislation that successfully passed. While these episodes were chosen carefully for their significance in the teen pregnancy policy arena, it is possible that the policy processes surrounding other teen pregnancy-related bills—including those that failed to pass—might differ. Furthermore, the analysis was limited to federal policymaking. Given that jurisdictions may differ in their individual policy and budget priorities related to teen pregnancy, it is also possible that the use of research evidence may differ at the state or local levels. Nevertheless, given that a large portion of state and local teen pregnancy funding comes directly from the federal government in the form of formula and block grants, one can reasonably expect a similar state-level approach to teen pregnancy policy.

Despite these limitations, this study is unique in its focus on the past 40 years of research on teen pregnancy. It is also unique in its consideration of research not only on effective strategies to prevent teen pregnancy, but also the use of research evidence regarding the consequences of teen pregnancy, that which has been utilized to effectively place and keep teen pregnancy as a prominent issue on the national policy agenda for four decades.

CONCLUSION

The history of teen pregnancy policymaking in the United States tells an interesting tale. In 1978, policymakers started out with a relatively balanced view: they argued for preventing teen pregnancy while also acknowledging the importance of support and care for teen parents and

children in need. But the lack of research evidence available at the time enabled policymakers to effectively ignore prevention—citing evidence that support programs for teen parents did work, and prevention programs did not. The lack of funding for testing and evaluating new teen pregnancy prevention strategies essentially ensured that evidence on effective prevention strategies would not be produced or published for years to come.

This resulting lack of evidence on prevention arguably enabled the inclusion of funding for moralistic, abstinence-only programs during the 1996 welfare reform, for which there was no evidence. While research on effective teen pregnancy prevention programs began to mount, abstinence-only programs continued to receive significant federal funding for over 10 years. It was only when there was evidence that federally-funded abstinence programs *did not* work that federal funding was made available for evidence-based comprehensive programs that *did* work. It took a long time for enough credible evidence to be produced and attended to, but the recent federal teen pregnancy prevention initiatives imply that times are changing.

Given the recent emphasis on evidence-based policymaking, research may have even greater potential to influence legislation in numerous policy arenas. In order to take full advantage of this recent trend—and to ensure that it continues—many of the recommendations discussed above for policymakers, advocates, and researchers may require a new level of collaboration among these three key audiences. If research is misunderstood at best, or misused at worst, programs and policies will likely fail to address the numerous interrelated needs and inequalities related to teen pregnancy and teen childbearing. Furthermore, the belief that reducing teen pregnancy will also significantly reduce poverty, health problems, welfare, Medicaid costs, and even incarceration is not proven. The evidence on which this assumption rests remains equivocal at best.

By focusing on teen pregnancy (or childbearing) as *the problem*—rather than as a reflection of poverty, social inequality, unequal access to information and health care, or even of differing values—we are potentially diverting significant resources away from the systemic problems that underlie so many of the social and public health issues in the United States. Furthermore, a laser focus on teen pregnancy prevention also potentially diverts critical resources away from supporting pregnant teens in need of affordable abortion services, as well as supports for those teens who choose to become parents. The assumption that teen childbearing causes poverty and a host of negative outcomes for teens, their children, and society—and the concomitant policy focus on teen pregnancy prevention—appears to be here to stay. An analysis of the history of the use of research in teen pregnancy policymaking illustrates the immense power of conventional wisdom and deeply ingrained values to influence both research and policy priorities.

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