Long-Term Health Consequences for Children of Teen Childbearers:

Results from the CDS-II

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Do children of teen mothers fare worse in terms of their health than their comparable peers, controlling for background factors? Though this question is a high-priority policy concern, little consensus exists about the causal link between early childbearing and children's health outcomes.

There are two competing hypotheses within the academic community. One hypothesis, reflecting traditional scholarship, proposes that early maternal childbearing hurts children's health. The second hypothesis posits that, for certain disadvantaged groups, teen childbearing may actually be protective.

Proponents of the first hypothesis typically cite two reasons that early maternal age can prove damaging. First, the mother's physiologic immaturity and biological limitations can lead to preterm or low birth weight (LBW) babies and higher risks of neonatal mortality (Hediger et al., 1997; Borja & Adair, 2003; Barker, 2004). Second, teen mothers lack the emotional, financial, and physical resources critical to raising healthy children (Hayes, 1987). In contrast, supporters of the second hypothesis argue that a significant proportion of teen mothers, specifically highly disadvantaged African American women, face "weathering"—early health deterioration from an accumulation of insults to health (Geronimus, 1996). Offspring will therefore fare best if their birth coincides with their mothers' peak health, often occurring during their teenage years (Geronimus, 2001).

The evidence on this is inconclusive. On the one hand, a number of studies have found that correlations between age at birth and poor child health outcomes, confirmatory evidence for the first hypothesis. For example, children of teenage mothers are more likely to be born low birth weight (LBW), to grow up in substantially less nurturing or developmentally supportive single-households (Maynard, 1997), to suffer higher incidents of neglect and abuse (Goerge & Lee, 1997), and to be consistently rated in poorer health than their counterparts (Wolfe & Perozak, 1997). However, these studies have limited controls for background characteristics, such as socioeconomic status (SES). Because unmarried teenage motherhood occurs disproportionately among disadvantaged women, these findings may therefore reflect a failure to fully account for family and individual background factors, rather than the age at birth.

On the other hand, Geronimus and colleagues, in a series of studies using sister data to control for unobserved background factors common to sisters, found that children of African American teens had lower rates of LBW and infant mortality than older Black women (Geronimus & Korenman, 1993; Rich-Edwards et al., 2003). However, they employed few health outcomes.

In this paper, I use recently released longitudinal data to further examine these two differing positions. My work improves on Geronimus' research in that I look at multiple child outcomes. In particular, Geronimus examines child health *at birth.* However, that early fertility timing confers initial health advantages may prove relatively meaningless if it results in chronic or acute diseases or poor health conditions. I therefore, examine illnesses induced by both environmental and biological factors, including chronic and acute conditions, obesity, and self-reported health. Likewise, my work improves upon the traditional research in that I have a stronger measure of the long-term economic circumstances in which the teen mothers themselves were raised. Past research has shown that multi-year measures of income are stronger predictors of child well-being (Brooks-Gunn). Finally, for both groups of research, the scarcity of accessible longitudinal data has resulted in minimal scholarship extending beyond the infant and early childhood years (Levine, Pollack, & Comfort, 2001). While maternal age at birth may prove a significant indicator of infant health, do these findings persist as the children age? Do the trajectories between African American children of teen mothers and white children converge or diverge?

While an insufficient sample size prevents a matched-pair sisters analysis, I assume that the lack of full controls for across-family heterogeneity will overestimate the adverse effects of teen pregnancy. Therefore, if my findings support the traditional perspective on teen childbearing (Hypothesis 1), this evidence must be viewed with caution. If, however, I find a similar pattern to Geronimus, with teen childbearing conferring a protective effect, then my analysis using these more stringent conditions will strongly support Geronimus' perspective.

Theoretical Perspectives on Health Outcomes

The traditional scholarship on the health consequences for children of teen mothers typically draws from two perspectives. Figure 1a is a visual representation of these frameworks. The first model, the developmental perspective, posits that teen mothers face poor pregnancy outcomes due to the mother's physiologic immaturity (Scholl et al., 1994). The nutritional needs of a growing fetus must compete with the high nutrient demands of adolescence and pregnancy (Borja & Adair, 2003; Scholl et al., 1994; Wallace, 2004). Furthermore, adolescents may have unstable hormonal patterns that could increase the risk of preterm births (Hediger et al., 1997). These factors predispose young mothers to have low birth weight babies (LBW), a condition associated with neonatal mortality, infant morbidity and developmental difficulties such as blindness, deafness, mental retardation, chronic respiratory difficulties (Barker, 1990; Barker, 2004; McCormick, 1997; McCormick, et al., 1992) along with adult morbidity, such as diabetes, obesity, and hypertension (Godfrey and Barker, 2001; Power et al., 2003; Ben-Shlomo & Kuh, 2002; Levy-Marchal & Jaquet, 2004).

Several empirical studies lend support to this model. For example, a study of 214 adolescents and 415 adult mothers, Borja and Adair (2003) demonstrated that, upon controlling for relevant background factors and behavioral risks, maternal age—mediated through its effects on maternal weight-for-height during pregnancy—remained a significant predictor of LBW. Similarly, Fraser, Brockert, & Ward (1995) performed a stratified analysis of 134,088 white girls and women, 13 to 24 years old, in Utah, who delivered singleton, first-born children between 1970 and 1990. Their results indicated that, independent of confounding socioeconomic factors, teen mothers (13 to 17 years of age) had a significantly higher risk ($P<0.001$) than mothers who were 20 to 24 years of age of delivering an infant who had low birth weight, a preterm birth, or was small for gestational age.

The second perspective draws from social causation theory (Elstad & Krokstad, 2003). According to this perspective, socioeconomic consequences of teen pregnancy, such as poverty and limited education, mediate the effect of young maternal age on pregnancy outcome through exposure to harmful social environments as well as behavioral practices.[1]

For example, individuals living in poverty experience greater exposures to

[1] See Hoffman et al. (1993) for a literature review on the socioeconomic consequences of teen pregnancy.

occupational, environmental, and social hazards (e.g., pollution, crime, stress) than do their more economically advantaged counterparts. These hazards can lead to worse health outcomes such as LBW, along with long-term morbidity, such as diabetes, asthma, obesity (Chen et al., 2003; Ensminger, 1995). Similarly, low socioeconomic status and education have been associated with high risk behavior, such as sedentary lifestyles, worse nutrition, and less preventative health care (Lantz, House et al., 1998; Winkleby & Cubbin, 2004). Low SES and educational attainment predispose adolescents to behaviors that increase the risk of poor pregnancy and later health outcomes, such as lack of prenatal care, poor diet, infrequent medical visits, and cigarette use (Wolfe & Perozek, 1997; Borja & Adair, 2003; Scholl et al., 1993). In a meta-analysis of prenatal care use, Scholl et al. showed that adolescents sought care later in their pregnancy and visited the doctor less than older women (1993). Similarly, Wolfe and Perozek (1997) found that children of teen moms visited medical providers less frequently, used less health care, and were consistently rated in poorer health than their counterparts. These factors can result in LBW (and their associated long-term consequences), along with adult morbidity.

Alternative Model

Within the last decade, an alternative perspective has emerged, based largely on a life course analysis and a culturally adaptive model of fertility planning. Developed by Arline Geronimus, this perspective proposes that early fertility patterns may be culturally adaptive for highly disadvantaged African American women (Geronimus, 1996, 2004). Central to this model is the weathering perspective, in which “a woman’s health reflects the cumulative impact of her experiences from conception to her current age”

(Geronimus, 2001). For highly disadvantaged African American women, an accumulation of health insults beginning in infancy could lead to early health deterioration and excess mortality. Whereas postponing childbearing into one's 20s and 30s may be normative for European Americans, the steep decline in African American women's health over their reproductive years may mean that African American women enjoy their peak health at substantially younger ages. Thus, among highly disadvantaged African American women, offspring of teen mothers would fare better than their older counterparts. As Geronimus explains, "Children may fare best if their birth and preschool years coincide with their mother's peak health and access to social and practical support provided by relatively healthy kin" (2004:159). Figure 1b presents Geronimus' alternative framework.

How, then, does this perspective address the existing evidence to the contrary? Geronimus and others have challenged the validity of established scientific findings on methodological grounds (Geronimus et al., 1993; Geronimus et al., 1994; Geronimus, 1996; Turley, 2003; Rauh, Andrews, and Garfinkel, 2001). The scientific evidence, they contend, are biased by a failure to account for unobserved heterogeneity. That teen childbearing is more common in disadvantaged communities means that the apparent negative effects of early fertility may reflect a selection bias. While helpful, the inclusion of covariates such as socioeconomic status (SES) cannot adequately control for the myriad unobserved or immeasurable factors affecting the child's outcome.

To assess a more accurate causal relationship between maternal age and child's health outcome, Geronimus and colleagues performed a matched comparison group study between teen mothers and their siblings. Because sisters share the same family background measures, this type of analysis would provide a more accurate estimate of the impact of teen childbearing. Their results were striking. They found that, among black and white singleton first births to Michigan residents aged 15-34 in 1989, African American infants whose mothers were 25 were twice as likely to be LBW as those with 16-year old mothers (Geronimus 1996; Geronimus 1997). In another study of Harlem teen mothers, infant mortality rates for African American teens in Harlem were half of those of older mothers (Geronimus, 2001).

Though controversial, Geronimus' findings have been replicated and substantiated in studies across different geographic locations and using alternative measures of infant health (Rauh, 2001; Rich-Edwards et al., 2003; Moore, 1997).

Data and Measures

The Panel Study of Income Dynamics (PSID) is a longitudinal study of a national sample of American women, men, and children. The sample size has grown from 4,800 families in 1968 to over 7,000 families in 2001. My data comes from the 1997 and 2002 Child Development Supplement (CDS) to the PSID. In 1997, the PSID added information on PSID parents and their children, ages 0-14, to its core data collection. Of the 2,705 families selected, the CDS finished interviews with 2,394 child households (an 88% response rate) and approximately 3,600 children. In 2002-2003, the CDS recontacted families in CDS I who were still active in the PSID sample, as of 2001. From the CDS I sample, 2,017 families (91% response rate) were re-interviewed, supplying data on 2,908 children/adolescents aged 5-20.

Due to the small number of children from additional racial categories, I limit my analysis to 1,363 White and 1,187 Black, non-adopted children with available data on their birth date and that of their mother.

Dependent Variables

The health measures include the following dummy variables: low birthweight (LBW), coded as 1 for children less than 5.5 pounds; health status at birth, rated as 1 for above average and 0, average or below; excellent health, derived from an ordinal general health variable (with "1" being excellent health and "5" being poor) coded as 1 for excellent health; and overweight, based on the child's Body Mass Index (BMI) score, a measure of body fat derived from the individual's weight and height. In concurrence with the Center for Disease Control's (CDC) classification of childhood obesity, a child with a BMI-for-age equal to or greater than the 95th percentile was coded as 1. Because of the age range of the children, I include a variable for childhood obesity only for the second wave of data. I also include an acute health conditions index, a summary measure based on the total number of acute illnesses a child suffered from in the last year (including allergies, asthma, serious ear infections, headaches, elevated lead levels, anemia, digestive problems, hyperactivity, speech impairment, epileptic fits, orthopedic impairment, and skin disease) and a chronic conditions index, based on the number of chronic conditions a child suffered from (including seeing or hearing difficulties, heart problem, autism, mental retardation, and developmental delays). [2]All variables were

[2] Both indexes are based on Wolfe and Perozek's model (1997), with two modifications. Wolfe and Perozek constructed dummy variables coded as 1 if the child suffered from any of the above acute/chronic conditions. However, in order to differentiate between superficially and severely ill children, I chose to use instead summary measures total acute and chronic conditions. Additionally, the acute variable constructed from the CDS II questionnaire varies slightly because of differences in the questions asked in the CDS II survey. Digestive problems, unasked on the CDS II, were replaced by variables for stomachaches, dizziness, and pain.

asked of the primary caregiver, and with the exception of LBW and health at birth, were derived from both the 1997 and 2002 CDS waves.

To assure that the above health measures are not biased by differential rates of medical diagnoses, I also include variables for year of child's last annual check-up; number of doctor visits in the last year due to illness; number of doctor visits due to injury; and a dummy variable coded as 1 if the child suffered from physical or mental conditions that limited participation in athletics, school, or recreational activities.

Finally, I use the Woodcock-Johnson Revised Test of Achievement for Reading and Math from the CDS-II to measure the construct validity of my sample. Standardized scores on the Letter-Word, Applied Problems and Passage Comprehension subtests assess cognitive achievement, specifically in the area of math and reading skills.

Independent Variables

The primary independent variable is a dummy for teen childbearing, derived from the mother and child's birth date. A child whose mother was 19 or younger at time of childbirth is coded as 1. Additional controls include race of the child, expressed both as a dummy variable (1=Black, 0=White) and in interaction with teen childbearing, the sex of the child (1=male), the child's birth order, the current family size, the child's age, and marital status of the mother at time of childbirth, (1=married, 0=all non-married, including single, divorced, and widowed), all factors which may impact child health outcomes (Bennett, Braveman et al., 1994; Holt et al., 1997, Moore, 1997).[3] To measure for potential endogeneity between marital status and teen childbearing, I also incorporate

[3]The variable construction for marital status was based on Corcoran and Kuntz's (1997) definition used to assess unmarried teen births and poverty.

an interaction variable based on the above measures. Finally, to control for the socioeconomic status of the mother, I use an average of the mother's income-to-need ratio for the three years prior to childbirth, derived from the family's yearly income and the US census annual needs standard figure.

Methods

My analysis consists of a series of logistic and ordinary least squares regressions. For each health outcome, I first estimate an unadjusted regression specification on both the CDS-I and CDS-II datasets. I then include controls for the mother's SES, the child's race, sex, age, birth order and the mother's marital status at time of birth. I then replicate these procedures while including a Black-teen interaction variable.

In addition to these analyses, I also perform a series of tests to assess my result's content and external validity. A number of the above health measures are based on medical conditions or illnesses typically diagnosed at the doctor's office; thus, lower illness rates may, in part, be due to reduced "diagnosis opportunities." To assure the above health measures accurately reflect physical condition of the offspring rather than frequency of doctor visits, I perform two sets of regressions. The first set examines differential rates of healthcare utilization; the second uses dependent health variables unrelated to medical visits. Additionally, I estimate a regression specification to assess the effects of teen pregnancy on children's standardized achievement scores. Past findings suggest that children of teen mothers will likely perform significantly worse than their counterparts (Hofferth & Reid, 2004; Levine, Pollack, & Comfort, 2001). Confirmation of these results would therefore lend support for the representativeness of my sample.

Results are based on the smallest samples, though all key results are robust to the inclusion of the larger sample. Unless otherwise specified, all results are weighted scores. Statistical estimates were computed using STATA software package.

RESULTS

Full Sample

Table 1 presents summary means of children of teen mothers and their older counterparts, divided by race. Consistent with past literature, teen mothers are more likely to be poor, unmarried, and African American. Their average age at birth, 18, is approximately 10 years behind the non-teen mothers. Moreover, their children tend to fare poorer in terms of health, though the population as a whole is generally healthy.

Table 2 presents the initial results the regression estimates in five rows. Row (1) indicates the baseline correlations for the bivariate regressions using the 1997 and 2002 data. Teen parenthood proves statistically significant for only two of the five health outcomes. Children of teen mothers are less likely to be reported in excellent health in both 1997 and 2002, and more likely to suffer from chronic conditions in 2002. However, there is no significant relationship between teen motherhood and LBW, health at birth, being overweight, and suffering from acute health conditions in either 1997 or 2002. With the inclusion of full controls, shown in row (5), the impact of adolescent childbearing persists for chronic health conditions in 2002 and excellent health status in 1997, though diminished somewhat. The effect on excellent health in 2002, however, is no longer significant.

Effects by Race

Table 3 presents the results with the inclusion of an interaction variable for race and teen parenthood. Row (1) provides the unadjusted odds-ratios. While, in the broader population, Black babies are significantly more likely to be born LBW, to be overweight, and less likely to be in excellent health, the coefficients reverse directions for Black teen mothers. Indeed, children of Black teens are almost three times as likely as those of older mothers to be reported in excellent health in 1997; the odds ratio increases to 3.172 in 2002. Similarly, childbearing among the African American population is associated with reduced acute and chronic illness. Moreover, Black children of teen mothers are no more likely to be born LBW or suffer from obesity.

Row (2) once again presents the final regression models with the inclusion of the race-age interaction. While African American children on the whole are less likely to be reported in excellent health and more likely to suffer from acute and chronic conditions for both 1997 and 2002 data, Black children of childbearers are significantly more likely to be reported in excellent health (OR of 2.56 in 1997; 2.738 in 2002), and less likely to suffer from acute conditions (OR of .395 in 1997; .367 in 2002) or chronic conditions (OR of .395 in 1997; .367 in 2002).

Discussion

Chart 4 provides a final summary of the health outcomes. Among African Americans, there appears to be a protective effect of teen parenthood. Unlike their white counterparts, whose mothers are less susceptible to weathering, Black children of teens face fewer instances of negative health outcomes in 1997 and 2002, even in the absence of demographic controls. Moreover, the very health outcomes for which the offspring of Black teen mothers have a comparable advantage excel prove most problematic for children of white teen mothers.

Taken together, these data offer strong support for Geronimus' cultural adaptive framework (Geronimus & Korenman, 1992; Geronimus et al., 1994). In examining only infant and early childhood outcomes, her research did not speak to the long-term health consequences for children, leaving open the possibility that harmful effects could emerge later in life. My results provide no evidence to support this claim. On the contrary, I find that potential health benefits detected early in life persists as black children age.

Furthermore, these findings are particularly noteworthy, given the inherent bias in my models toward overestimating the adverse impact of teen childbearing. As discussed in my introduction, past scholarship has developed complex methodologies to disentangle the negative effects of the mother's background and prior SES from that of the actual pregnancy (Geronimus & Korenman, 1993; Corcoran & Kunz, 1997). In my paper, I make no adjustments. That teen pregnancy nevertheless proves insignificant in the health outcomes demonstrates the robustness of my results. Moreover, the respondents' performance level on the Woodcock-Johnson test is congruent with past findings by noted researchers. In terms of academic achievement at least, my sample is unexceptional. It is therefore highly unlikely that the lack of a disparity in health outcomes is due to the exceptionality of my sample. Likewise, healthcare utilization rates are no different for children of teen mothers and older mothers, minimizing the risk of skewed health measures due to under-diagnosis.[4]

Finally, unlike past studies which examined single measure health outcomes (general health) for this age group, the richness of CDS database has allowed me to assess children's health through a broad battery of measures, including long-term and immediate, general and specific, chronic and acute. The consistency of my outcomes across these varied measures suggests the reliability and persistence of these findings.

However, this paper contains a number of limitations. Due to an inadequate sample size, my analysis does not distinguish between young teen childbearers, those younger than 17, and older teen mothers, those giving birth at ages 18 or 19. Yet, the physical and emotional maturity, the access to resources and the behavior of a 13 year-old mother is significantly different from that of a 19-year old mother. Perhaps for younger teen mothers, their children do suffer from adverse health consequences. Second, this paper does not examine psychological health outcomes. Future research would be useful in addressing these concerns.

In conclusion, this paper contributes to the current discourse surrounding teen pregnancy. If, as the research suggests, teenage pregnancy is a culturally adaptive mechanism for a community already wrought with poverty, then policies aimed at curbing teen pregnancy may be misguided at best and harmful at worst. Much like doctors, the first imperative of policy makers is to do no harm (Geronimus and Thompson). Policymakers would do well to reevaluate their programs directed toward curbing teen pregnancy—and reallocate their scarce resources toward identifying and

[4] For sake of brevity, results from these tests are not included in the text. Please contact the author to

eliminating the poverty afflicting these communities.

access the regression output.

Figure 1a Conventional Framework: Consequences of Teen Pregnancy for Child's Health

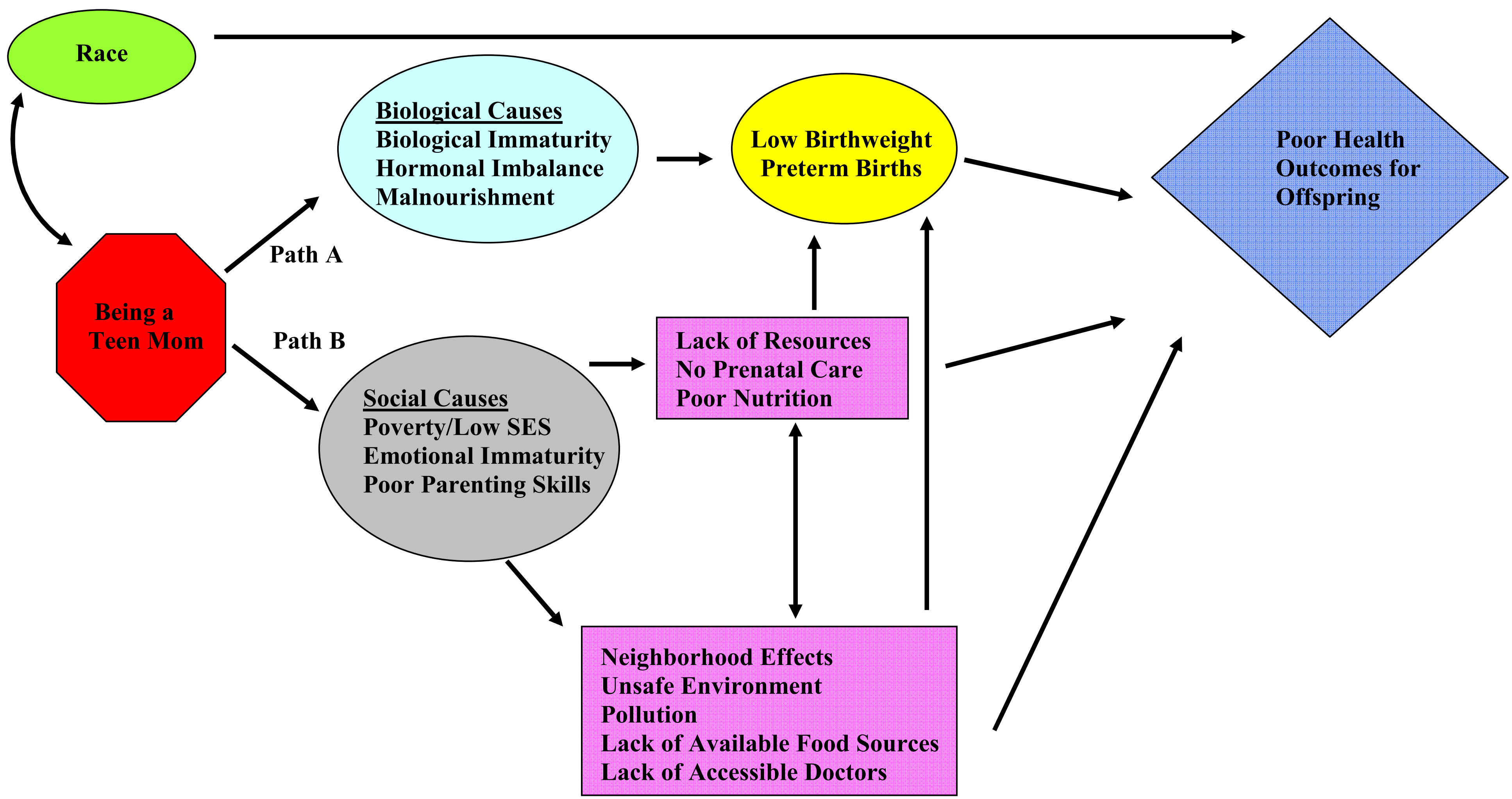

Figure 1b Alternative Framework: Consequences of Teen Pregnancy for Child's Health

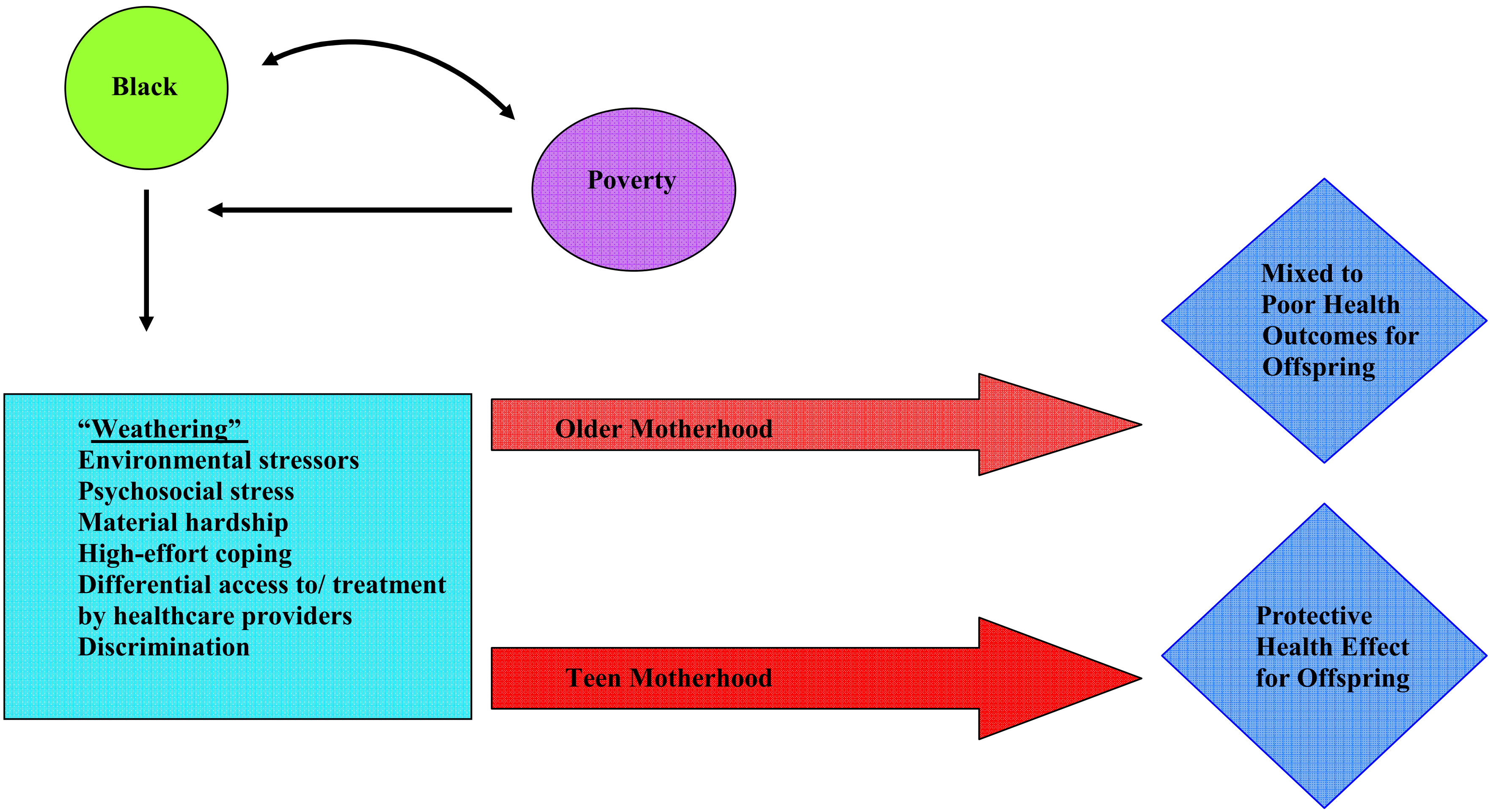

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Table 1
Summary Statistics

	Full Sample		Black		White	
Variable	Offspring of Teens	Offspring of Non-Teens	Offspring of Teens	Offspring of Non-Teens	Offspring of Teens	Offspring of Non-Teens
Demographics						
Offspring of Teens (%)			20	80	8	92
	(342)	(2156)	(234)	(921)	(108)	(1235)
Income-to Needs Ratio	1.6	3.1	1.3	1.96	2.2	3.87
Male (%)	53.2	50.1	58.1	51.7	42.6	49.7
		(1090)	(136)	(476)	(46)	(614)
Child's Age (CDS-II Sample)	11.4	12.4	11.6	12.7	11.2	12.2
Child's Birth Order	1.2	2.1	1.3	2.3	1.2	1.9
# of Children in Family, CDS-I	2.1	2.3	2.2	2.5	1.8	2.2
# of Children in Family, CDS-II	2.4	2.2	2.5	2.3	2.2	2.2
Married at Birth (%)	20.2	71	8.1	43.5	46.3	90.5
	(69)	(1519)	(19)	(401)	(50)	(1118)
Age at Birth	18	28.3	17.9	27.6	18.4	28.8
Health Outcomes						
Born LBW (%)	13.7	8.5	15.6	13.3	9.3	5
	(46)	(184)	(36)	(122)	(10)	(62)
Born Above Average Health (%)	23.8	27.5	22.2	23.5	27	30.4
	(81)	(591)	(52)	(218)	(29)	(375)
Excellent Health, CDS-I (%)	36	51.6	34.2	40	39.8	60.2
	(122)	(1107)	(79)	(366)	(43)	(741)
Excellent Health, CDS-II (%)	49	55	49.4	42.8	48	64.1
# Acute Conditions,	.62	.56	0.56	0.51	0.74	0.6

CDS-I						
# Acute Conditions, CDS-II	.69	.77	0.56	0.68	1.1	0.85
# Chronic Conditions, CDS-I	.16	.14	0.18	0.12	0.11	0.15
# Chronic Conditions, CDS-II	.22	.21	0.16	0.19	0.36	0.23
Overweight, CDS-II (%)	21.9 (69)	22.9 (440)	20.7 (45)	29 (244)	24.5 (24)	18 (196)
Check-up Within Year, CDS-I (%)	90.7 (284)	82.3 (1566)	93 (199)	88 (716)	85.9 (85)	78 (850)
Check-up Within Year, CDS-II (%)	78.1	75.6	82.5	82.3	68.3	70.5
# Doctor Visits Due to Injury, CDS-I	.24	.22	.20	.15	.30	.27
# Doctor Visits Due to Injury, CDS-II	.35	.39	.23	.29	.50	.48
# Doctor Visits Due to Illness, CDS-I	2.2	2.3	1.9	1.7	2.9	2.7
# Doctor Visits Due to Illness, CDS-II	1.6	1.9	1.1	1.4	2.6	2.3

Note: Means/percentages are unweighted. Sample sizes are in parentheses.

Table 2

Effect of Teen Pregnancy on Children's Health Outcomes, Full Sample

	Dependent Health Variables								
	Low Birthweight†	Health at Birth	Excellent Health		Overweight	Acute Health Conditions		Chronic Health Conditions	
Model	CDS-I	CDS-I	CDS-I	CDS-II	CDS-II	CDS-I	CDS-II	CDS-I	CDS-II
(1) Unadjusted	1.584	0.967	0.514**	0.524**	1.164	0.052	0.001	-0.016	0.097
	(0.419)	(0.189)	(0.090)	(0.082)	(0.254)	(0.039)	(0.027)	(0.030)	(0.059)
(2) [b]	1.409	1.059	0.660*	0.655**	0.984	0.044	0.009	-0.032	0.079
	(0.379)	(0.212)	(0.120)	(0.105)	(0.220)	(0.040)	(0.027)	(0.032)	(0.060)
(3) [c]	1.286	1.080	0.695	0.684*	0.943	0.054	0.011	-0.025	0.089
	(0.362)	(0.220)	(0.132)	(0.113)	(0.215)	(0.040)	(0.028)	(0.032)	(0.060)
(4) [d]	1.022	1.221	0.632*	0.656*	0.946	0.051	0.016	0.022	0.116
	(0.331)	(0.260)	(0.124)	(0.113)	(0.228)	(0.041)	(0.028)	(0.034)	(0.063)
(5) Adjusted[e]	1.004	1.317	0.666*	0.755	0.907	0.034	0.003	0.022	0.106
	(0.342)	(0.297)	(0.136)	(0.137)	(0.229)	(0.044)	(0.029)	(0.040)	(0.065)
Sample Size [f]	2488	2492	2485	2842	2240	2862	2862	2486	2486
Pseudo-R^2	0.036	0.010	0.037	0.047	0.024	0.030	0.020	0.020	0.030

Note: Standard errors in parentheses. Odds ratios and psedo-R^2 reported for all outcomes except acute and chronic health; these coefficients are produced via OLS regression.

† Child's age is excluded from regression specification

[b] Includes control for Income-to-Needs Ratio

[c] Includes controls for child's race, sex, and age

[d] Includes controls for child's birth order and number of children in family

[e] Includes controls for mother's marital status

[f] Sample size constant through all models. Reported Pseudo- R^2 are from Model (5)

* significant at 5%; ** significant at 1%

Table 3

Effect of Teen Pregnancy on Children's Health Outcomes, Unadjusted and Adjusted, With Teen-Black Interaction

	Dependent Health Variables								
	Low Birthweight†	Health at Birth	Excellent Health		Overweight	Acute Health Conditions		Chronic Health Conditions	
Model	CDS-I	CDS-I	CDS-I	CDS-II	CDS-II	CDS-I	CDS-II	CDS-I	CDS-II
(1) Unadjusted									
Teen Childbearing	1.869	0.831	0.412**	0.448**	1.367	0.204	0.143	-0.037	0.192*
	(0.768)	(0.209)	(0.095)	(0.102)	(0.381)	(0.113)	(0.110)	(0.038)	(0.088)
Race (Black=1)	2.709**	0.659*	0.395**	0.390**	1.789**	0.070	(0.048)	0.020	(0.027)
	(0.572)	(0.111)	(0.054)	(0.052)	(0.294)	(0.067)	(0.070)	(0.039)	(0.037)
	0.454	1.884	2.954**	3.172**	0.485	-0.346*	-	0.043	-0.235*
Race-Teen							0.433**		
Interaction	(0.223)	(0.766)	(1.038)	(1.058)	(0.214)	(0.152)	(0.152)	(0.065)	(0.099)
(2) Adjusted[a]									
Teen Childbearing	1.417	1.048	0.485**	0.548*	1.201	0.176	0.036	-0.003	0.181*
	(0.662)	(0.290)	(0.121)	(0.137)	(0.379)	(0.122)	(0.120)	(0.050)	(0.092)
Race (Black=1)	2.607**	0.759	0.530**	0.536**	1.473	-0.056	-0.120	-0.027	-0.081
	(0.721)	(0.156)	(0.088)	(0.087)	(0.351)	(0.077)	(0.095)	(0.048)	(0.045)
	0.470	1.976	2.564**	2.738**	0.483	-0.294	-	0.072	-0.211*
Race-Teen							0.440**		
Interaction	(0.237)	(0.840)	(0.922)	(0.925)	(0.218)	(0.153)	(0.156)	(0.066)	(0.099)
Sample Size[b]	2488	2492	2485	2485	2240	2463	2463	2486	2494
Pseudo-R^2	0.038	0.011	0.040	0.042	0.026	0.040	0.020	0.020	0.030

Note: Standard errors in parentheses. Odds ratios and psedo-R^2 reported for all outcomes except acute and chronic health; these coefficients are produced via OLS regression.

† Child's age is excluded from regression specification

[a] Includes control for Income-to-Needs Ratio, child's age, sex, birth order, number of children in family, and mother's marital status at birth

[b] Sample size constant through all models. Reported Pseudo- R^2 are from Model (2)

* significant at 5%; ** significant at 1%