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# HUMAN CAPITAL CONSEQUENCES OF TEENAGE CHILDBEARING IN SOUTH AFRICA

Women in South Africa have had fewer children on average since the 1970s, but the rate of teenage childbearing in South Africa has remained the same, at 54 births per 1,000 women ages 15 to 19.<sup>1</sup> Similarly, the proportion of women ages 20 to 50 who experienced a birth before age 20 has declined since 1985 but remains historically high (see Box 1, page 2). Large numbers of young mothers are a cause for social concern in South Africa and other countries because of the adverse impact of teenage childbearing on the education and health of teen mothers and their children.

This research brief highlights the findings from recent studies on teenage childbearing in South Africa, in which analysts examined the causal relationships between teen fertility, educational attainment, and health outcomes in urban and rural regions in South Africa.<sup>2</sup> The studies use data from:

- The Cape Area Panel Study, which examined the effects of teen motherhood on the education outcomes of women as well as health and educational outcomes of children born to teen mothers in metropolitan Cape Town.
- The Africa Centre Study, which focused on the educational and health consequences of childbearing for black South African teen mothers in the rural KwaZulu-Natal region.

Teen mothers and their children pay a high social and economic cost for early childbearing. When considering the policy responses, research highlights the need for both prevention services intended to protect teen mothers from adverse socioeconomic and health outcomes, as well as support services that protect their children's health and well-being. More specifically, the studies suggest a potential for age-targeted family planning and reproductive health interventions to improve child health outcomes, girls' investment in their education, and overall well-being.

## Evaluating Outcomes for Teen Mothers

Does teenage childbearing negatively affect a woman's education and the well-being of her children? Earlier studies have shown that teen motherhood is associated with poorer health and socioeconomic outcomes, but establishing that teen childbearing leads to lower human capital levels (for example, fewer years of schooling completed or low matriculation rates) is difficult. While the research suggests that early childbearing can lead to fewer years of school completed and higher dropout rates, it is also possible that young mothers are a select group that would have attained low education levels even if their first birth had been postponed until adulthood (see Box 2, page 3).

### CAPE AREA PANEL STUDY

**Teenage Fertility and Educational Attainment in Cape Town.** Analysts used data from the Cape Area Panel Study (CAPS) to examine the effects of teenage childbearing on girls' dropout rates and years of schooling completed at age 20.<sup>3</sup> The study results confirm that, when compared to nonteen mothers (women who were not mothers by age 20), teen mothers in the Western Cape Town region have higher school dropout rates as a group, fewer years of schooling, and lower graduation rates (see Table 1, page 2).

Age at first birth also plays an important role in determining educational achievement—young mothers obtain less schooling and are more likely to drop out when they give birth in their early teens than young women who postpone childbearing to their later teens. Compared with older teens (ages 18 to 20), teens that give birth at age 17 or younger are less

TABLE 1

Teen Mother Educational Attainment, Cape Town

|  | TEEN MOTHER | NONTEEN MOTHER |
|--|-------------|----------------|
| Years of education completed by age 20               | 9.6         | 10.1           |
| Percent dropping out of school                       | 76.4        | 57.6           |
| Percent successfully completed high school by age 20 | 21.8        | 30.9           |

**Notes:** A teen mother is defined as a woman who has her first child by age 20. A nonteen mother is defined as a woman who has her first child after age 20.  
**Source:** Vimal Ranchhod et al., "Estimating the Effect of Adolescent Fertility on Educational Attainment in Cape Town Using a Propensity Score Weighted Regression," *Southern Africa Labour and Development Research Unit Working Paper 59* (2011). Mean differences are statistically significant.

likely to have completed secondary school and, on average, will have been in school for half a year less by age 20.

The CAPS data suggest a significant and negative effect of adolescent childbearing on education, but also indicate that teen mothers are more likely to come from families with fewer economic resources and lower education. Disadvantages such as living in a poor neighborhood or having parents with low levels of education contribute to both lower educational attainment and an increased probability of being a teen mother. Although these disadvantages may account for a significant part of the educational deficit between women who gave birth in their teens and those who did not, part of the difference may be attributed to the birth prior to age 20.

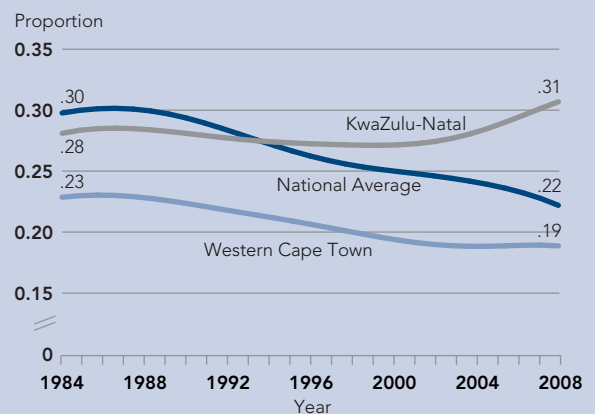
**Education of Children Born to Teen Mothers.** In addition to teenage mothers having lower school attendance, their children also have lower levels of school achievement. Analysts assessed the educational outcomes of children born to adolescent girls in Cape Town to better understand this relationship.<sup>4</sup> The children of colored teen mothers tend to have lower than average math scores for their age, are more likely to drop out of school by age 16, and are less likely to complete high school. The children of African teen mothers are only at risk of lower-than-average math scores. (In South Africa, the population is primarily comprised of four groups: "African" or "black" South Africans, "white" South Africans, "colored" South Africans, and "Asian" South Africans.<sup>5</sup>) For both groups of children, being born to a teenage mother is not the only reason the children have lower educational achievement. Comparison of these children's educational outcomes to those of siblings or cousins born to older mothers suggests that socioeconomic background contributes more to lower educational attainment than teen childbearing does. In general, being born to a teen had less of an effect on a child's educational outcomes than it did on the teen mother's own educational achievement.

BOX 1

Trends in South African Teen Fertility

Recent trend analyses from South Africa have shown that rates of teen childbearing are gradually decreasing and average age of first birth among teen mothers is slowly increasing (see figure). Still, approximately 2.7 million South African women (about one of every four women ages 20 to 50) have given birth before age 20. In addition, over 35 percent of children under age 20 (about 7 million children) were born to teen mothers.

Proportion of 20-Year-Old South African Women, All Races



**Source:** Cally Ardington, Nicola Branson, and Murray Leibbrandt, "Trends in Teenage Childbearing and Schooling Outcomes for Children Born to Teens in South Africa," *Southern Africa Labour and Development Research Unit Working Paper 75* (2012).

The proportion of women who experience teenage childbearing also varies significantly by province and population group. The Western Cape and Free State provinces share the lowest teen motherhood rates (less than 20 percent within each province). In contrast, more than 30 percent of women in the KwaZulu-Natal province have given birth by the age of 20.

Although the rate of teen motherhood in South Africa remains high, there has also been an increase in the age at first birth among teen mothers, particularly for Africans—fewer adolescent women in South Africa are becoming mothers before turning 16.

**Teenage Childbearing and Child Health.** Analysts also used CAPS to consider how being born to a girl younger than 20 years old affects child health and well-being.<sup>6</sup> They evaluated the effect on children's birth weight and height. After adjusting for prebirth characteristics of mothers, they found that the first-born

TABLE 2

Child Height and Weight, Cape Town

|   | CHILD OF TEEN MOTHER | CHILD OF NONTEN MOTHER |
|---|----------------------|------------------------|
| Percent of children born under 2.5 kg             | 17                   | 4                      |
| Percent of children below average height for age* | 37                   | 18                     |

\*Average head size and height for age are established by World Health Organization reference population statistics. Estimates in the "Child of Nonteen Mother" column are weighted using the propensity score weight such that the samples for both columns are comparable on pre-childbearing characteristics.

Source: Cally Ardington, Nicola Branson, and Murray Leibbrandt, "Health Outcomes for Children Born to Teen Mothers in Cape Town, South Africa," *Southern Africa Labour and Development Research Unit Working Paper 55* (2011).

children of young mothers are more likely to be underweight at birth and more likely to be physically stunted (short for their age) after six months (see Table 2).

Findings also suggest large differences in how teen births affect colored and African populations. While children born to colored and African teens appear at risk of stunting and being underweight at birth, for colored children the disadvantage is almost double that for African children.

AFRICA CENTRE STUDY

Adolescent Childbearing and Educational Attainment.

Ardington, Menendez, and Mutevedzi examined the relationship between teenage childbearing and educational attainment in the rural KwaZulu-Natal region using longitudinal data collected by the Africa Centre Demographic Information System (ACDIS).<sup>7</sup> When women who have their first child before age 20 and women whose first birth is after age 20 are compared on the basis of characteristics measured before their children were born, there is no evidence that teen mothers are lagging behind in schooling, are less likely to be enrolled, or differ in their household characteristics. School enrollment rates for teen mothers drop only in the period immediately preceding birth. After the birth, however, enrollment rates for teen mothers differ significantly from rates for other teenage girls. Any differences in educational attainment between mothers and nonmothers may therefore be strongly attributed to the effect of pregnancy and childbearing rather than to household economic conditions.

The study findings indicate that in terms of educational outcomes, teen mothers (women who have their first child before the age of 20) are very different from nonteen mothers. Teen mothers lag two-thirds of a year behind, on average; are 25 percentage points more likely to drop out of high school; and are 20 percentage points less likely to graduate from school before age 22.

BOX 2

Data and Measurement Concerns

Early childbearing may reduce the amount of time spent in school and ultimately in the labor force, but it is also possible that young mothers are a select group who would have attained low levels of education and limited employment even if they postponed childbearing.

To measure the impact of teen childbearing as accurately as possible, a number of research studies highlighted in this brief used statistical methods to compare teen mothers to nonteen mothers who have similar prechildbearing characteristics. The studies estimate the effect of teenage childbearing by:

- Accounting for other factors in the teen girls' background that might have produced the observed education and health outcomes.
- Comparing those women who had children as teens with other women with almost identical characteristics, but who did not have children as teens (matching).
- Comparing children born to mothers in their teens to siblings born to the same mother at an older age or to cousins not born to teens.

Through these measurement adjustments, researchers aimed to produce more precise estimates of the true impact of teen fertility. Knowing the true size of this effect may be significant in helping to identify the appropriate allocation of resources to policies and programs that would decrease the number of future teenage mothers or that would mitigate the effects on teen mothers and their children. In countries where the socio-economic conditions of teenagers prior to their pregnancy has less influence on the outcomes, it might well be more important to allocate greater resources to prevention than to treatment.

Births to young women before age 17 are associated with even greater educational deficits. Young teen mothers (women who have their first child at age 17 or younger) are about 50 percentage points more likely to drop out of high school than nonteen mothers. Those who remain in school lag behind teens who do not have any children until after age 20 by over a year, on average. Some teen mothers in the KwaZulu-Natal region do return to school after their children's births, particularly those young teen mothers who, before the birth of their children, had advanced ahead of their age group.

**Teen Childbearing and Mortality Risk.** Using data from the ACDIS, researchers documented and assessed maternal health outcomes and mortality risk for African teen mothers in KwaZulu-Natal over the course of a decade. The research suggests that adolescent fertility is strongly associated with a higher risk of mortality before age 30: Teen mothers are more likely than

TABLE 3

**Mortality Status Six Years After First Interview, KwaZulu-Natal**

|  | TEEN MOTHER | NONTEEN MOTHER |
|--|-------------|----------------|
| Percent of mothers alive after six-year follow-up    | 74.7        | 82.1           |
| Percent of mothers deceased after six-year follow-up | 9.96        | 6.34           |
| Percent of deaths due to AIDS                        | 75.0        | 70.9           |

**Source:** Cally Ardington, Nicola Branson, and Murray Leibbrandt, "Health Outcomes for Children Born to Teen Mothers in Cape Town, South Africa," *Southern Africa Labour and Development Research Unit Working Paper 55* (2011).

nonteen mothers to have died over a six-year period of observation (see Table 3).

## Teen Mothers at Risk

Despite differences in the designs of the studies described in this brief, the research conclusively finds teen mothers to be at risk of worse educational outcomes. Teen childbearing is associated with lower levels of schooling and higher dropout rates for teen mothers. In addition, teen childbearing has adverse effects on maternal and child health, including low birth weight and stunted growth for children, and increased risk of death for mothers. These outcomes indicate that the societal cost of teenage childbearing goes well beyond the immediate effects on a girl's school attendance. There are significant and persistent intergenerational effects. Helping girls delay births until they are in their 20s or mitigating the negative effect of teen childbearing could reduce the risk of poor health and even death for teenage girls. Such actions could reduce the risk of low birth weight and stunting among their children.

The research findings indicate that the effect of teenage childbearing varies significantly by region and within region by the age and population group of the teenage mother. In particular, after taking into account differences attributed to background characteristics, the estimated effect of a teen birth on girls' educational outcomes seems to be greater in the rural KwaZulu-Natal region than in urban Western Cape Town. In both Cape Town and KwaZulu-Natal, the analyses suggest that the earlier a teen birth takes place, the more detrimental the effect on completing high school and the number of years a girl attends school.

Even though teenage childbearing rates in South Africa have been declining, the proportion of women ages 20 to 50 who

have experienced a birth before age 20 remains high (see Box 1, page 2). These trends, in conjunction with the research findings highlighted in this brief, suggest the need to lower the rate of teenage childbearing even further. Such measures may reduce the number of future young South African women and children who are at risk of significant adverse impacts from teenage childbearing. To this end, policies and effective programs must be directed at:

- **Giving teenagers good information about sexual behavior and their reproductive health rights from an early age.** Under South African law, adolescents are allowed to access clinics for check-ups, reproductive health advice, or free contraception without parental permission. Providing simple, usable information about these rights and about how and where teens can access these services from within their communities may serve to delay pregnancy and age at first birth, increase family planning use, and promote safe reproductive health practices.
- **Reducing stigma and discrimination toward teen mothers in schools.** A teen mother's level of education is critical to her overall well-being as well as the well-being of her children. Policies and programs that encourage young mothers to continue their schooling throughout pregnancy, as well as to resume their schooling after birth, must be supported.
- **Improving access to reproductive health and family planning services.** In particular, increasing the availability of health and nutritional services, especially antenatal and postnatal care services, would jointly benefit the young mother and her children.

Studies that have examined teen fertility in both developed and developing countries suggest that early childbearing is strongly associated with poor maternal and child health status, lower educational attainment, lower incomes, less involvement in the labor force, and increased poverty.<sup>8</sup> However, teenage mothers tend to come from poorer backgrounds and it may be that their educational attainment and income as adults would have been low even if they had postponed childbearing until adulthood. Also, the poor health outcomes associated with teenage childbearing might well be the result of the poverty in which these girls lived prior to becoming pregnant.

The evidence from South Africa underscores the importance of examining potential consequences of teenage pregnancy and assessing directly whether the underlying root causes are the socioeconomic conditions of the mothers prior to their teen pregnancy or early childbearing itself. The impact of adolescent childbearing on critical aspects of health and education makes it imperative to reduce the number of individuals at risk of these adverse outcomes.

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## Definitions

*Nonteen mother:* A woman who has her first child after age 20.

*Older teen mother:* A woman who has her first child between ages 18 to 20.

*Stunted growth:* Low height-for-age, i.e., when a child is short for his or her age.

*Teen mother:* A woman who has her first child by age 20.

*Young teen mother:* A woman who has her first child at age 17 or younger.

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- 2 Vimal Ranchhod et al., "Estimating the Effect of Adolescent Fertility on Educational Attainment in Cape Town Using a Propensity Score Weighted Regression," *Southern Africa Labour and Development Research Unit Working Paper 59* (2011); Cally Ardington, Nicola Branson, and Murray Leibbrandt, "Health Outcomes for Children Born to Teen Mothers in Cape Town, South Africa," *Southern Africa Labour and Development Research Unit Working Paper 55* (2011); Nicola Branson, "Health and Education Outcomes for Children Born to Teen Mothers in South Africa," unpublished dissertation, University of Cape Town, 2011; Cally Ardington, Alicia Menendez, and Tinofa Mutevedzi, "Early Childbearing, Human Capital Attainment and Mortality Risk," *Southern Africa Labour and Development Research Unit Working Paper 56* (2011); and Cally Ardington, Nicola Branson, and Murray Leibbrandt, "Trends in Teenage Childbearing and Schooling Outcomes for Children Born to Teens in South Africa," *Southern Africa Labour and Development Research Unit Working Paper 75* (2012).
- 3 Ranchhod et al., "Estimating the Effect of Adolescent Fertility on Educational Attainment in Cape Town Using a Propensity Score Weighted Regression."
- 4 Branson, "Health and Education Outcomes for Children Born to Teen Mothers in South Africa."
- 5 Until 1991, South African law divided the population into four major racial categories: "African" or "black" South Africans, who account for nearly 75 percent of South Africa's entire population (and included several groups such as Khoi-San, Xhosa, Zulu, Ndebele, Sotho, Shangaan, and Venda, among others); "white" South Africans, who account for about 13 percent of the population; "Asian" South Africans, who account for nearly 3 percent; and "colored" South Africans, who are of mixed white and African descent and account for 9 percent of the population. Although the South African law of racial categories has been abolished, many South Africans still view themselves according to these categories.
- 6 Ardington, Branson, and Leibbrandt, "Health Outcomes for Children Born to Teen Mothers in Cape Town, South Africa."
- 7 Ardington, Menendez, and Mutevedzi, "Early Childbearing, Human Capital Attainment and Mortality Risk."
- 8 Ranchhod et al.; and David C. Ribar, "The Socioeconomic Consequences of Young Women's Childbearing: Reconciling Disparate Evidence," *Journal of Population Economics* 12, no. 4 (1999): 547-65.



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