

Schooling and Early Childbearing in Urban South Africa

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ABSTRACT

Although South Africa's total fertility rate is fewer than three births per woman and declining, early childbearing remains high. Limited data in developing countries, particularly the lack of information on timing of events, has made it difficult to investigate how early life characteristics affect young-age childbearing and schooling. We take advantage of a unique panel dataset to examine the dynamics defining early childbearing and the factors facilitating school enrollment after childbearing. The Cape Area Panel Study (CAPS) is a survey of 4,752 young people in Cape Town that also includes a calendar with extensive retrospective information. We found that young mothers who were weaker students prior to giving birth were less likely to enroll in school subsequent to giving birth. However, a significant proportion of young mothers managed to continue with their studies, particularly African girls. This suggests that well-focused policies are likely to have an impact on the number of young mothers who exploit the opportunity to enhance both their education and their subsequent earning and employment opportunities.

INTRODUCTION

South Africa's total fertility rate is fewer than three births per woman and is declining. At the same time, adolescent childbearing levels remain high: More than 35 percent of 20-year-old girls have given birth at least once. Although much research has found early childbearing to be a barrier for subsequent successful transitions to adulthood such as school enrollment and advancement, particularly for girls, about a third of these young South African mothers are in fact enrolled in school a year after giving birth. Findings from qualitative data (Kaufmann et al 2001) and from a small survey in a rural area (Madhavan and Thomas 2005) also suggest that early childbearing among South African girls does not necessarily mean permanently dropping out of school or having unsuccessful educational careers. In addition, Lam and Seekings (2005) have found that South African girls attain more education on average than boys across all racial groups.

In this paper, we explore the hypothesis that enrollment in school subsequent to giving birth is dependent on a girl's ability to negotiate parenthood and education, which in turn is influenced by level of social, financial, and familial support, and by household and individual characteristics while growing up, including academic performance. Although we know that girls' experiences in their formative years shape their social capital, their values, and educational aspirations, a lack of relevant data has limited investigation of how these experiences shape early childbearing and subsequent schooling in developing countries. For this study, we took advantage of new survey data to examine young mothers' school enrollment in urban South Africa, emphasizing the role of exogenous early-life characteristics.

The Cape Area Panel Study (CAPS) is a longitudinal survey of 4,752 young people in metropolitan Cape Town. We make use of the CAPS calendar data, which allow us to identify the temporal relationships between school enrollment and childbearing in the year immediately after a first birth, something that is impossible in most cross-sectional data.

This paper contributes to the literature on girls' transitions to adulthood in two key ways. First, it explores the role of early-life characteristics in shaping teen childbearing and school enrollment after teen birth. Exogenous characteristics of family and social context during childhood are likely related to successful transitions to adulthood, although they rarely have been investigated in developing countries. Second, this paper provides evidence on educational opportunities and prospects after an early birth in a society in transition. As social change continues its course in South Africa, the educational success of young mothers depends on a set of factors that should be the focus of policy initiatives. Examining the factors leading to early childbearing and facilitating young mothers' enrollment in school is even more pressing in this context, where early childbearing is likely to recently have become a more probable impediment to schooling as a result of rapid social change and increasing educational aspirations (Eloundou-Enyegue 2004; Mensch et al 1998). In addition, South Africa is one of the few African countries where students are not expelled from school because of pregnancy or parenthood, creating the opportunity for young mothers to continue with or return to school. In this paper, we explore the idea that girls may have a "second chance" in terms of their education.

CONCEPTUAL BACKGROUND

Early childbearing is a widespread phenomenon in the developed and developing world with potential consequences for the future life of young adults (Singh 1998). A large body of literature has examined the ramifications of teen childbearing for young mothers. These range from positive outcomes, such as fulfillment of the progression to adulthood, to negative outcomes, such as lower educational attainment, less success in the job market, and lower earnings. Past research has emphasized the negative consequences of early childbearing, although the causal relationship of early childbearing on educational outcomes remains tenuous (Geronimus and Korenman 1993; Hoffman 1998). However, research in the U.S. shows that having a baby does not predict dropping out of high school, as girls who give birth while in school are just as likely to graduate as the ones who do not (Upchurch and McCarthy 1990).

In urban South Africa, more than 35% of 20 - 22 year-old girls have given birth at least once. Despite the prevalence of early childbearing, however, South African girls attain more education on average than boys for all population groups (Lam and Seekings 2005). Girls are allowed to continue school after the birth of a child in South Africa, which is not true in other African countries, and indeed, Kaufman and colleagues (2001) have found that many South African girls do return to complete their schooling after giving birth. They find that returning to school is a function of support from the girl's family of residence, and paternal recognition of the child. A relevant variable seems to be brideprice or '*lobola*', which increases with girls' education. It thus provides parents with an additional incentive to support their daughters' schooling. In a recent study on rural South Africa, Madhavan and Thomas (2005) confirm that childbearing impedes school enrollment and schooling, but that young mothers are more likely to succeed in their educational careers if provided with flexible child care options.

Other research has found that the well-being and successful educational transitions of young mothers are also directly affected by the social and familial relations within their family of residence they grew up. Child rearing in sub-Saharan Africa takes place within the context of a large social unit, often the extended family structure (Caldwell 1976). Adult children often move out and return, and younger children may also move among households as they can be "borrowed," fostered, and adopted (Bledsoe 1995). Thus, children's living arrangements may or may not include co-residence with one or both of their parents while growing up (Bruce and Lloyd 1992; Lloyd and Desai 1992). Because of this fluidity on the composition of domestic groups, accounting for family characteristics and conditions while growing up is particularly relevant in African countries. Past research has assessed the relevance of variation within the extended family for children's well-being (Madhavan 2001), and in particular, the importance of the presence of both parents for children's schooling in rural South Africa (Townsend et al 2002) as well as the However, research that accounts for how early life characteristics matter for teen childbearing and subsequent school enrollment is scarce.

Most past research on schooling and early childbearing in developing countries has been limited by the use of cross-sectional data and the lack of retrospective information on timing of events. Given the significance of childhood experiences on transitions to adulthood, we incorporate several early life measures in this study. These measures are: (1) connectedness with and presence of parents (operationalized as proportion of years lived with mother and father until the age of 14), (2) household environment (whether or not there was a problem with alcohol or drugs in the household while growing up), (3) family cultural capital (whether or not there were more than five books in the

household while growing up), and (4) academic commitment prior to birth (proportion of grades passed between ages 8 to 14).

Further data limitations have not allowed for investigating measures of timing of events nor factors measured at the time of birth. The conflict between child rearing and education is likely to be most pronounced right after a young mother gives birth. Moreover, the longer girls stay out of school, the more difficult it is to return. For young mothers, enrolling in school depends on the ability to negotiate parenthood and education, which in turn is affected by social, financial, and familial supports available immediately after the birth of a child. Examining school enrollment in the year subsequent to giving birth and school enrollment at some future point in time are important distinctions to consider. Here, we focus on school enrollment in the year subsequent to the birth.

In this paper, we explore the factors associated with early childbearing and school enrollment after birth, emphasizing early-life characteristics. First, we attempt to identify whether and how early-life factors are associated with early childbearing in urban South Africa. Second, we focus on the factors correlated with young mothers' school continuation after the birth of a child.

DATA AND METHODS

Data: The Cape Area Panel Study

This paper takes advantage of a new household survey in metropolitan Cape Town. The Cape Area Panel Study (CAPS), a collaborative project of the University of Cape Town and the University of Michigan, is a longitudinal study of youth and their families. This paper uses data from the first wave of the survey, which was conducted in the second half of 2002.¹

Wave 1 of CAPS contains two major sources of data. First, the survey includes a household questionnaire, in which demographic data on the entire household is collected. Second, the survey includes a detailed young adult questionnaire, which collects data on household members between the ages of 14 and 22. The young adult questionnaire includes a life history calendar that provides retrospective information on schooling, living arrangements, employment, fertility, and sexual partnerships. A basic numeracy and literacy skills test was also administered to each youth respondent.

CAPS was designed using a two-stage probability sample of households. Cape Town has three predominant population groups – black/Africans, who comprise about 27% of the population, Coloureds who comprise about 50%, and Whites, who comprise about 22%. The CAPS sample oversampled African and white households to get large enough samples to make meaningful comparisons across groups. All households in our screener sample of about 10,000 households that contained at least one resident between the ages of 14 and 22 were selected for inclusion in the sample. Additionally, a subset of households with no 14-22 year olds was also included. Upon recruitment into the survey, the household demographic questionnaire was administered to the person most knowledgeable about the household. Full-length young adult interviews were given separately to up to

¹ One-third of the sample was interviewed for a second time in 2003, the remaining two-thirds were interviewed for a second time in 2004, and the entire sample is being interviewed again in 2005. Details about CAPS, including questionnaires, are available at <http://caps.psc.isr.umich.edu>.

three young adults in the household. The baseline wave of CAPS provides data on roughly 5,000 households and 4,750 young adults.

Analytical Sample

Since we are interested in births and school enrollment, we restricted our attention to the 2,802 female respondents in the first wave of CAPS. Inspection of the dataset revealed that adolescent fertility is a rare occurrence among the white sub-population. Because whites also constitute a minority of Cape Town's population, we decided to exclude them from the analysis. Our final sample thus contains 2,282 respondents, 53% of whom are African and 47% of whom are Coloured².

Table 1 contains summary statistics of the sub-sample that we are working with. The mean age of these girls is 17.95 years, and roughly three quarters have spent most of their lives in an urban area. The mean number of siblings is 2.38. Parental education levels are about 8.2 years for both mothers and fathers, which corresponds to slightly more than a primary school level. Of note is that, on average, these girls have spent most of their childhood with their mothers (85%), but the proportion of early childhood spent with their fathers is much lower (57%).

In terms of home environment, 75% of the respondents' current home has at least five books. At the same time, fully 20% of respondents indicated that there was someone with a drinking problem in their household while they were growing up. The proportion indicating that there was someone with a drug problem in their household while they were growing up is small, though not insignificant, at 7.5%.

In our sample, 375 of the 2,282 respondents had already given birth to their first child. The mean age at which the first birth occurred was 17.38. Of these young mothers, 74% lived with their mothers in the year they gave birth, while only 37% lived with their fathers. A small proportion lived with their maternal grandparents (8%), and a very small proportion lived with their paternal grandparents (2%).

Tables 2a and 2b indicate the mean birth rate by various characteristics in the dataset. It also indicates the proportions of mothers that were enrolled in school in the year after their first birth. In Table 2a, we see that Coloured girls are more likely than African girls to experience a young birth, and less likely to remain in school subsequent to the birth. Fully 36% of the young African mothers were enrolled in school during the year after the birth. Unsurprisingly, the probability of a birth increases dramatically with age in this young group, and the chance of being enrolled in school thereafter drops. Some of this enrollment decline may reflect births to girls who have completed their high school degrees.

Adolescent fertility has a negative correlation with both parents' education. However, while a mother's education is positively related to the likelihood that a girl is enrolled in school in the year after giving birth, the pattern is not obvious for a father's education.

From Table 2b, we see that early life characteristics also correlate with whether a girl becomes a teenage mother. Those who grew up in households where there were drinking or drug problems are more likely to become young mothers. However, having their parents present during their childhood does not seem to matter strongly. Those who currently live in households with at least 5 books are considerably less likely to experience motherhood as adolescents. In addition, the better students are

² We continue to use the racial categories as captured in the survey instrument.

less likely to have their first birth at a young age, and more likely to remain in school or re-enroll after the birth.

Methods

We estimate two separate regression models for this paper. In the first, we estimate a logit model, where our dependent variable is whether the girl has had a birth yet or not. In the second, we estimate the probability that a young mother who had her first child prior to completing high school will be enrolled in school in the year following the birth.

In the logit model, we assume that the underlying data generating process for an individual is:

$$P_i = E (Y=1 | X_i) = 1 / (1 + e^{-XB})$$

Where P_i is probability that the dependent variable takes on a value of 1 for person i , X_i refers to person i 's characteristics, and B refers to the parameters to be estimated. The vector B is assumed to be constant across all individuals in the model.

CAPS interviewed all young adults in households if there were three or fewer household members aged 14 to 22 inclusive. If there were more than three, three were selected at random. To adjust our standard errors for potential non-independence of observations within the same family, we clustered them at the household level. We believe that this is preferable to the alternative of randomly selecting one observation from each household, as it is more statistically efficient. The results are presented in Table 3, with the coefficients reported as odds ratios.

We also calculated the marginal effect of a unit increase of each independent variable, *ceteris paribus*, on the predicted probability of the event, for those independent variables that are continuous. For those that are binary, we calculated the change in predicted probability that arises when we assume that everyone has a value of zero, and find the difference when we assign everyone a value of one. The means of these imputations are reported in the column labeled 'Marginal Effect'.

RESULTS

Descriptive Results

Figure 1 shows the mean cumulative birth rate by age, for each race group. It plots, on the same axis, the rates of school enrollment. As shown, from age 15 onwards, we observe that Coloured and African girls are more likely than White girls to drop out of school, regardless of childbearing status. At the same ages, some of them start to experience their first births. These two series suggest a negative relationship between early child-bearing and school enrollment. Coloured females, who experience the highest fertility rates, are also least likely to be enrolled in school; African females fall in between Coloured and White females on both measures, for the most part. The magnitude of these trends is also relevant: educational outcomes may be compromised for up to 20% of African females and 25% of Coloured females – the proportions that have a first birth by age 19.

Figures 2 and 3 show the mean enrollment rates for groups of girls through their life course, by the age of their first birth. The group line corresponding to the 'no births' category includes only African or Coloured respondents who were aged 20 – 22 at the time of the survey. This was done as we could not

be certain that a 15 year old who had not yet had a birth when the survey was conducted, would reach age 20 without having had a birth.

The graphs are truly remarkable. While our data is somewhat limited, since we only observe the calendar year in which the birth occurred, it is very clear that enrollment rates dropped precipitously between the year preceding the birth, and the year after the birth. It is also noticeable that a small proportion of the girls who subsequently became teen mothers had, in fact, already left school prior to the birth. For example, 10.7% of the young girls who experienced their first birth at age 17 were not enrolled in school at age 15. While we need to be cautious in terms of the causal claims that we make, we can certainly claim that a huge proportion of girls who were enrolled in school prior to becoming pregnant do not return to or remain in school subsequent to the birth.

At the same time, a non-trivial proportion either does not drop out, or leaves and then returns to school. Fully 35% of girls who had a child before completing high school were enrolled in school in the year after the birth. What factors seem important for this difference in responses is the focus of our second regression analysis.

Early Childbearing

A first step in understanding teenage fertility is to examine the household and environmental characteristics that correlate with it. We thus regress the outcome of a teenage birth on various demographic and early life characteristics. For girls aged 19 – 22 at the time of the survey, the dependent variable has a value of 1 if a girl had a birth by age 19, and is zero otherwise. For girls less than 19 years old, the variable has a value of 1 if the girl had a birth, and zero otherwise. We implement a logit model with coefficients reported as odds ratios.

Based on the results shown in Table 3, we observe a clear effect of age on the probability of birth. African girls are significantly less likely to have had a first birth than Coloured girls. Girls from larger families are more likely to have had a birth, while the coefficient on a mother's education is below one and also significant. A one-unit increase in a girls' mother's education reduces the chance of a birth by 0.09. Somewhat surprisingly, the likelihood of young-age birth is only slightly affected by a father's educational attainment or by the proportion of childhood spent with either parent.

We also included the response to a question on whether the household has at least five books, which we interpret as a proxy for the household's preference for education, albeit a crude one. Girls who live in such households are 33% less likely to have a young-age birth, which suggests that family context may be very important in determining both adolescent fertility and educational attainment.

We found that girls who grew up in households where someone had a drinking problem are more likely to have had a young-age birth. Moreover, the odds for those who grew up in households where someone had a drug problem are almost twice as high as those who did not, where the marginal effect is 8.1% points. This finding points to the relevance of childhood household environment for girls' transitions to adulthood.

Finally, we include a dummy variable that equals 1 if the girl passed 90% of her years at school from ages 8 to 14 (inclusive), 0 otherwise. This is intended to measure the educational potential of the girl before giving birth. This variable has an odds ratio of 0.1, which suggests that better students are much less likely to have a young-age birth. The marginal effect is a significant 4.5% point reduction. While

just suggestive, this implies that a fair number of teen births occur among girls who were not doing as well in school as their counterparts, and whose performance may not have been affected by early motherhood. If this is true, then teenage fertility may not be too detrimental to educational attainment after all, at least in the South African context.

Some predictions provide a useful alternative to interpreting our results. For example, if we assume all the other variables are at the mean value of the sample included in the regression, an African girl who had not passed 90% of her grades between the ages of 8 to 14, and had no problem drinker in her household growing up, has a 7.0% probability of being a teenaged mother – a probability that declines to 4.77% for girls who had passed 90% of their grades. Similarly, an African girl who had not passed 90% of her grades and grew up in a household with a problem drinker has a probability of 9.33% of being a teenage mother – a probability that declines to 6.41% for girls who had passed 90% of their grades. These statistics suggest that the proportion of grades passed during her early childhood is an important factor to consider in understanding adolescent childbearing.

Racial differences also exist, with the birth rate higher among Coloured girls in each of the corresponding categories. In this population group, 11.97% of girls with otherwise mean-value characteristics, no drinker in the household, and who had not passed 90% of their grades from the ages of 8 -14 had given birth. Those who had a drinker and were also weaker students had a predicted probability of 15.66%; those with no drinker but a relatively good school performance had a predicted probability of 8.3%; those with a drinker and good school performance had a predicted probability of 10.99%. These data suggest that prior performance in school is important, regardless of race.

In sum, we find that performing well in school, having a better educated mother, and growing up in a household that had books but that did *not* have alcohol and drug abuse are all associated with a lower chance of teen childbearing.

Having a Second Chance? School Enrollment after Childbearing

We now look at the characteristics of girls who gave birth before completing high school, but were enrolled in school in the subsequent year. Results are shown in Table 3.

The magnitude of the race coefficient is remarkably large. Young African mothers are 23% more likely to be enrolled in school than their Coloured counterparts. Given the earlier finding that African girls are also less likely to have an early birth signals strong racial differences in the process of adolescent childbearing and educational attainment. In short, African girls are less likely to have early births and are also more likely to return to school after an early birth. We believe that these racial differences may be accounted for, at least in part, by the higher rates of drop out and grade repetition in African schools than in Coloured or White schools, which may minimize the stigma of these events for young African mothers and make it easier for them to balance new motherhood and school enrollment.

In terms of having one's parents present as a child, we find that the proportion of years up to age 14 that a girl has lived with her mother does not have a significant correlation with the chance of attending school in the year after her birth. However, this is not true for girls who lived a greater proportion of their lives with their fathers. The odds ratio on this coefficient is 0.259, with a mean marginal effect of -0.183, and the coefficient is significant at the 5% level. This is surprising, and we can only speculate as to the reasons that childhood residence with their fathers would have a negative effect on these teen mothers' post-childbearing school attendance.

One possibility is that having a father who worked as migrant laborer – and was thus absent from the household for large periods of time – is correlated with a better socio-economic environment in the household. Thus, girls whose fathers were not present during their own childhood might in fact have better resources that enable them to continue with their schooling after giving birth. This would be consistent with findings on the impact of labor migrants on children's schooling (Townsend et al 2002).

Other things equal, the older the girl is when she gives birth, the more likely she is to drop out of school. This age gradient is fairly steep, with a marginal effect of 6.1% points for each year of age. It is also interesting to note that in this multivariate regression framework, a parent's education does not seem to matter significantly for whether the girl remains in school or not. The variables on parents' education do not show much variation, however, and that may contribute to the lack of significance we found.

Again, we find that the coefficient on the proportion of grades passed from ages 8 to 14 is greater than 1, which indicates a large and significant effect. In addition to the evidence that girls who perform better are less likely to bear children, they are also more likely to continue with their schooling if they do have a child.

Somewhat interesting, by its lack of significance, are the coefficients for the alcohol or drug abuse variables. While both of these are significantly correlated with who has a birth at a young age, they do not seem to significantly affect the probability of subsequent enrollment in school.

Surprisingly, whether the girl was living with her mother or not is not statistically significant in predicting school enrollment after the birth, but living with paternal grandparents is. If a serious difficulty for young mothers is to find affordable child care while she goes to school, then grandparents can provide this assistance, particularly if they live in the same household. If we accept this explanation, then the state subsidization of childcare facilities would assist these mothers in continuing their education.

We conclude our analysis by presenting some predicted probabilities of the chance that a young mother included in the regression is enrolled in school in the year subsequent to giving birth. For African mothers who had not passed 90% of their grades during the ages of 8 – 14, and with mean values for all the other variables, the chance that they will be enrolled in school in the year after giving birth is 19.9%, a probability that nearly doubles, to 39.3%, for those who had passed 90% of their earlier grades. Among Coloured girls, the effects of early school success are even larger: the chance that young Coloured mothers who did not perform well in school would return after giving birth 4.0%, which increases to 9.8% among those who had passed 90% of their earlier grades.

These simulations indicate that the decision to maintain enrollment in school after having a child is strongly affected by girls' prior experience at school, which probably affects their belief about potential future success at school. These results suggest at least one potential policy implications. Policies aimed at improving school experience for adolescent girls would not only decrease teen childbirth rates, but encourage young mothers to remain in school.

CONCLUSIONS AND DISCUSSION

Although the issues of adolescent childbearing and young mothers' educational attainment have received attention in developed and developing countries, there have been few studies in sub-Saharan Africa. It is generally accepted in the literature that early childbearing prevents girls from successful educational transitions. However, the important question of providing girls with a "second chance" for successful educational careers after giving birth has received less attention. Few studies have considered how early life characteristics, including household environment, may be associated with both teen childbearing and subsequent school enrollment.

We find that the presence of drug users and drinkers in the childhood household are correlated with childbearing. In addition, we find that early school success decreases the likelihood of early childbirth and increases the chances of returning to school among young mothers. It is possible that targeting educational assistance to young girls who are struggling in school could be an effective way of preventing early childbearing, as well as maintaining enrollment among those who give birth at a young age.

We also find that living with paternal grandparents substantially increase the chance of enrolling in school right after giving birth, which suggests that the availability of child care may be an important factor in school continuance.

We also observed large differences in the pattern with which Coloured and African girls experience motherhood and school continuation. African teens are significantly less likely to bear children and, among those that do, are much more likely to continue with their schooling thereafter. One possible explanation is that less stigma may be associated with an African girl becoming a teenage mother and returning to school. There is also a higher rate of grade repetition among African youth, which may also reduce feelings of isolation young African mothers who take more time to complete their schooling.

We do not investigate the cumulative effects of a birth on educational attainment, but rather the subsequent enrollment which is directly related to attainment. Our analysis speaks to important issues relating female labor force participation, educational investments, and the effects of adolescent fertility. As South Africa continues to open its economy and develop, it is imperative that the labor force has the skills required to remain competitive. For most young women, educational opportunities become limited subsequent to a first birth. However, a significant proportion manages to continue with their studies. This suggests that well-focused policies are likely to have an impact on affording more of these young women a second chance at education, which in turn will affect their subsequent earning and employment opportunities.

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Table 1: Summary Statistics of Analytical Data

	[N]	Mean / Percentage	Std. Dev.
Age	2282	17.95	2.45
African	2282	53%	0.50
Lived mostly in urban area	2282	74%	0.44
Mother's education (years)	1997	8.20	3.35
Mother's education missing	2282	13%	0.33
Father's education (years)	1398	8.21	4.14
Father's education missing	2282	39%	0.49
Number of Siblings	2277	2.38	2.69
Drinker in HH growing up	2282	20%	0.40
Drugs in HH growing up	2282	7.5%	0.26
HH has >= 5 books	2282	75%	0.43
Proportion of grades passed aged 8-14	2278	95%	0.10
Proportion of years lived with mother (up to 14)	2282	85%	0.29
Proportion of years lived with father (up to 14)	2282	57%	0.45
Age at 1st birth	375	17.38	1.98
Lived with mother at age of 1st birth	375	74%	0.44
Lived with father at age of 1st birth	375	37%	0.48
Lived with maternal grandparents at age of 1st birth	375	8%	0.27
Lived with paternal grandparents at age of 1st birth	375	2%	0.14

Source: African and Coloured Females in CAPS 2002 (unweighted)

Table 2a. Childbearing by Selected Characteristics: African and Coloured Females, 14-22 Year-Olds

Demographic Variables	Ever Had a Birth	Enrolled in year after 1st birth
Race		
African	15.60	36.67
Coloured	17.29	11.24
Age		
14	0.00	--
15	0.82	--
16	3.08	--
17	8.27	--
18	12.04	--
19	21.67	--
20	27.42	--
Age at first Birth		
14	--	63.64
15	--	36.84
16	--	26.47
17	--	29.51
18	--	15.00
19	--	14.58
20	--	3.03
Spent most of life in		
Urban area	14.90	21.46
Rural Area	20.72	30.17
Mother's Education		
Less than high school	16.79	24.73
High School	8.99	35.71
Greater than high school	5.26	100.00
Missing/Unknown	20.28	18.18
Father's Education		
Less than high school	15.03	24.54
High School	9.29	7.14
Greater than high school	7.02	50.00
Missing/Unknown	20.25	25.00

Source: Cape Area Panel Study, 2002

Table 2b. Childbearing by Selected Characteristics: African and Coloured Females, 14-22 Year-Olds

	Ever Had a Birth	Enrolled in Year after 1st Birth
Early-Life Characteristics (mean, by birth)		
No Drinker in HH while growing up	15.46	24.63
Drinker in HH while growing up	20.13	23.46
No Drugs in HH while growing up	15.92	25.16
Drugs in HH while growing up	22.22	17.14
Proportion of Years passed in ages 8 – 14		
Less than 90%	22.57	18.25
More than 90%	13.83	28.30
Proportion of life lived with parents (up to age 14)		
Never lived with father	16.33	28.45
Proportion lived with father > 0 & < 1	20.15	25.74
Always lived with father	14.36	19.70
Never lived with mother	16.00	26.67
Proportion lived with mother > 0 & < 1	16.94	24.72
Always lived with mother	16.23	24.08
Living Arrangements in year of 1st birth		
Not living with Mother at First Birth	n/a	14.29
Living with Mother at First Birth	n/a	27.55
Not living with Father at First Birth	n/a	26.36
Living with Father at First Birth	n/a	20.93
Not living with Maternal Grandparents at First Birth	n/a	24.69
Living with Maternal Grandparents at First Birth	n/a	20.69
Not living with Paternal Grandparents at First Birth	n/a	23.68
Living with Paternal Grandparents at First Birth	n/a	57.14
Less than 5 books in HH	22.89	27.27
At least 5 books in HH	14.24	22.81

Source: Cape Area Panel Study, 2002

Table 3. Odds Ratio of Early Childbearing and School Enrollment in the Year subsequent to giving birth: African and Coloured Females, 14-22 Year-Olds

Demographic Characteristics	Ever Had a Birth			Enrolled in Year after 1 st Birth		
	Odds Ratio	Std. Error	Marginal Effect	Odds Ratio	Std. Error	Marginal Effect
Age	25.267***	16.813	0.457	--	--	--
Age squared	0.932***	0.016	-0.007	--	--	--
Age at first birth	--	--	--	0.608***	0.060	-0.061
Race (coloured omitted)	0.554***	0.100	-0.063	5.925***	2.519	0.233
Lived mostly in urban area	0.830	0.153	-0.020	1.822	0.733	0.077
Number of siblings	1.120***	0.049	0.012	0.903	0.084	-0.013
Mother's education	0.941**	0.025	-0.006	0.983	0.062	-0.002
Education mother missing	0.509**	0.147	-0.064	0.528	0.386	-0.079
Father's education	0.970	0.028	-0.003	0.941	0.079	-0.008
Education father missing	1.446	0.392	0.040	0.608	0.454	-0.065
Household has >=5 books	0.626***	0.101	-0.052	--	--	--
Early Life Characteristics						
Prop. years lived with father until age 14	0.950	0.182	-0.005	0.259**	0.147	-0.183
Prop. years lived with mother until age 14	1.083	0.302	0.008	2.191	1.287	0.095
Drinker in Household while growing up	1.365*	0.256	0.034	0.840	0.333	-0.023
Drug problem in household while growing up	1.976***	0.493	0.081	2.324	1.281	0.120
Passed >=90% of academic years aged 8 - 14	0.665***	0.097	-0.045	2.607***	0.930	0.125
At Time of First Birth						
Lived with mother in year of 1st birth	n/a	n/a	n/a	1.933	0.950	0.082
Lived with father in year of 1st birth	n/a	n/a	n/a	1.230	0.587	0.027
Lived with maternal grandparents when of 1st birth	n/a	n/a	n/a	0.879	0.420	-0.017
Lived with paternal grandparents when of 1st birth	n/a	n/a	n/a	17.824**	22.015	0.458
[N]	2,277			309		
Log pseudolikelihood	-769.666			-117.807		
Pseudo R2	0.246			0.259		

Notes: * Significant at 10% level, ** 5% level, *** 1% level; Standard errors clustered at the household level

For continuous variables, marginal effect is calculated by giving each person an additional unit; For discrete variables, marginal effect is calculated by comparing the predicted probabilities when the observations have a zero value with the cases when they all have a value of 1.

Figure 1

Female enrollment rates and proportion given birth by age and race
 Data: CAPS 2002

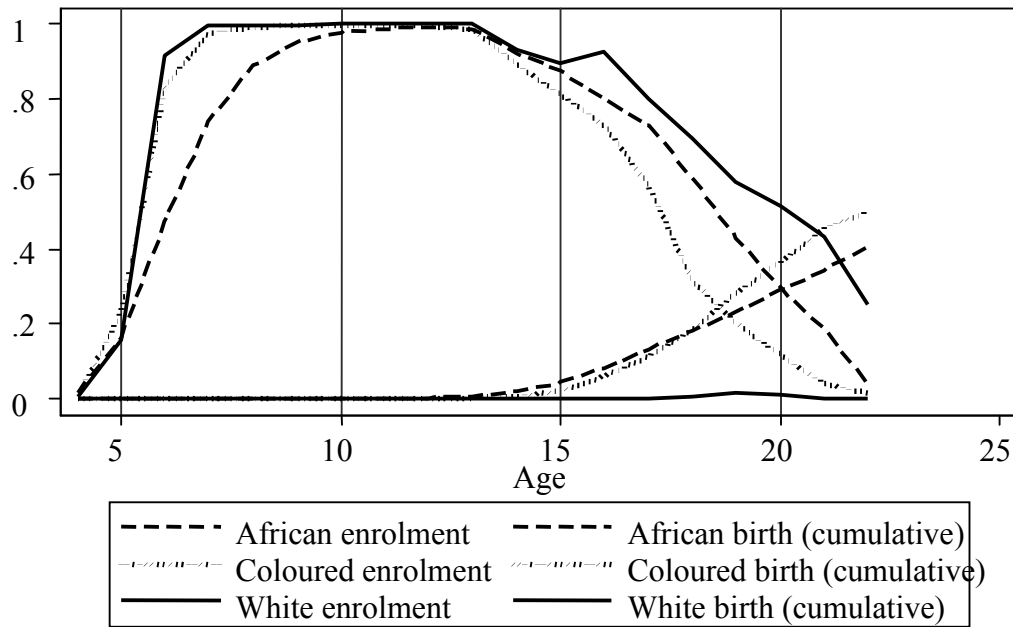
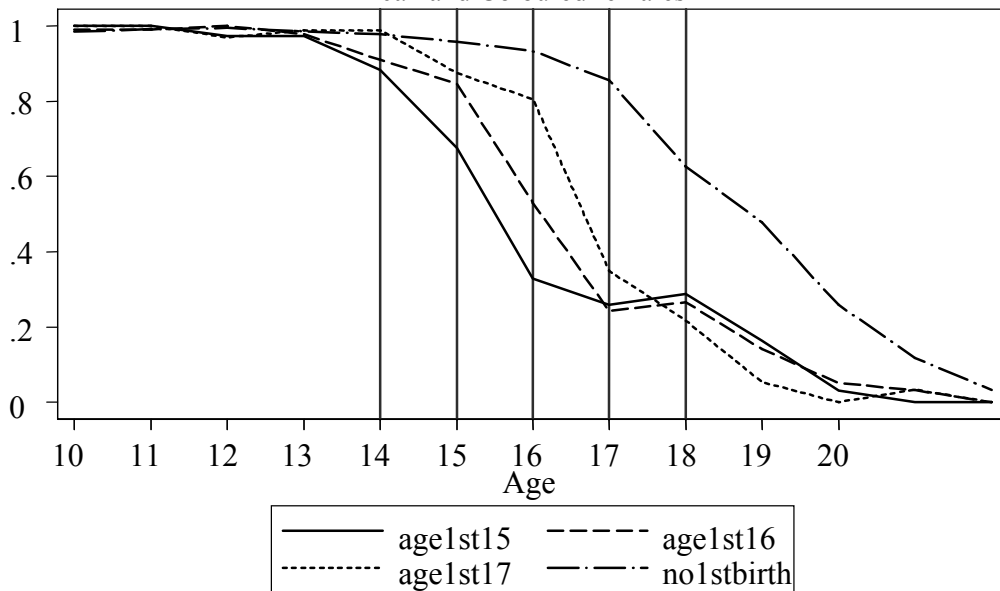


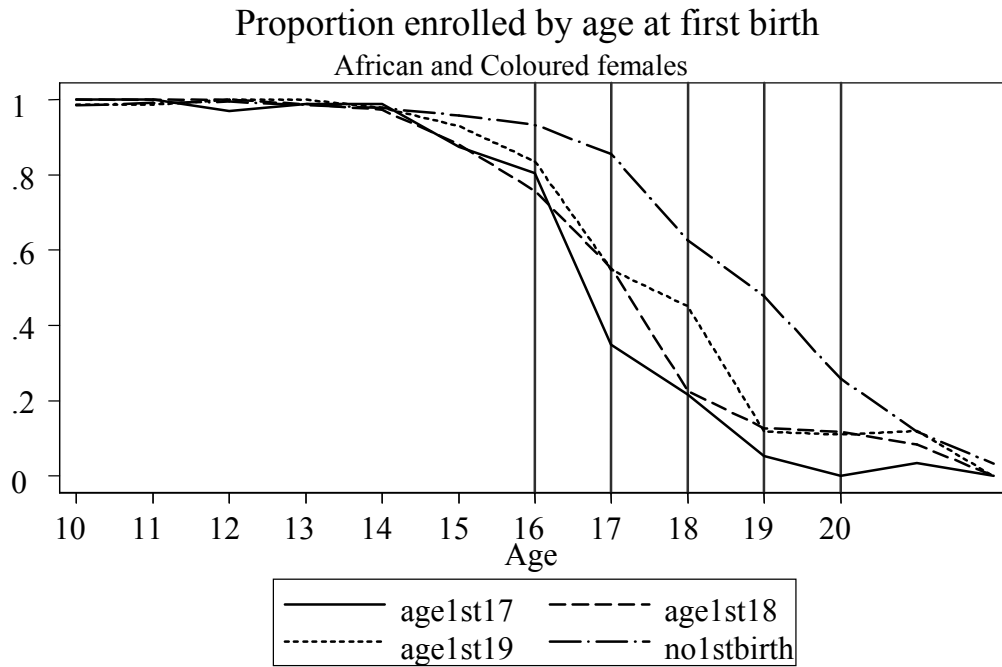
Figure 2

Proportion enrolled by age at first birth
 African and Coloured females



Data Source: CAPS 2002

Figure 3



Data Source: CAPS 2002



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