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## Instability in Parent–Child Coresidence and Adolescent Development in Urban South Africa

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### Abstract

There is widespread recognition of the importance of family stability for child development. South Africa presents an interesting context in which to study the consequences of family instability because of the traditionally fluid nature of household composition due to labor migration, child fostering, and non-marital fertility. More recently, the HIV pandemic has added another source of instability. Within South Africa, however, patterns of instability differ markedly across racial groups. We use the Cape Area Panel Study (CAPS) data to examine the implications of changes in parent–child coresidence for educational and sexual development of young South Africans. We show that changes in maternal and paternal coresidence have implications for the timing of sexual initiation for both black and coloured adolescents. Maternal and paternal transitions also lead to poorer educational outcomes for coloured adolescents, but parental disruptions are not significantly related to educational outcomes for blacks. These findings suggest that the implications of coresidential instability vary by race, reflecting racial differences with respect to cultural, social, and economic conditions.

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The living arrangements of children in sub-Saharan Africa are remarkably heterogeneous. This diversity is particularly apparent in South Africa, where many children spend parts of their childhood without one or both of their biological parents (Madhavan et al. 2012; Sibanda 2011). High levels of male and female labor migration (Lu and Treiman 2011), coupled with high rates of non-marital childbearing and low rates of marriage (Hosegood, McGrath, and Moultrie 2009), result in many children not living with their fathers and, to a lesser extent, their mothers (Marteleto, Lam, and Ranchhod 2008). Paternal mortality further contributes to this pattern (Ford and Hosegood 2005). Persistent poverty and negative income shocks may also be factors in family transitions as parents seek assistance via fostering in bearing the costs of raising children (Marteleto, Lam, and Ranchhod 2008).

Although these factors result in widespread fluidity in family structures from the perspective of children, the lack of longitudinal data has allowed only a glimpse of this fluidity through

static measures of current household composition. This research documents the importance of family structure in children's development in South Africa (e.g., Case, Paxson, and Ableidinger 2004; Fuller and Liang 1999; McGrath et al. 2009; Townsend et al. 2002). Still, with one exception (Goldberg 2013b), these previous studies have not measured the amount of instability in parent-child coresidence during childhood and adolescence, nor have they considered whether such instability is consequential to the sexual initiation and educational attainment of South African youth.

Using data from the Cape Area Panel Study, which includes information on parent-child coresidence in each year of children's lives, we examine whether instability in coresidence with parents is associated with aspects of young people's educational and sexual development in late adolescence. Although research on developed countries has documented the negative implications of family instability for young people above and beyond differences in family structure (Wu 1996; Cavanagh and Huston 2008; Fomby and Cherlin 2007; Lee and McLanahan 2015), it is unclear whether South African children who experience changes in parent-child coresidence are disadvantaged, and if so, whether this disadvantage is felt equally by young people across racial groups. Our first goal, therefore, is to document changes in parent-child coresidence during childhood and early adolescence within a contemporary cohort of adolescents in the Cape Town metropolitan area.

Our second objective is to consider the linked lives of parents and their children by examining the implications of instability in parent-child coresidence for adolescents' educational and sexual experiences. While some instability can translate into greater income and educational opportunities for young people and their families (Townsend et al. 2002)—particularly given the prevalence of labor migration (Gaydos 2015) and child fostering in South Africa (Akresh 2009; Serra 2009)—on average children living apart from their biological parents fare worse than those living with at least one parent (Case and Ardington 2006; Case, Paxson, and Ableidinger 2004; Townsend et al. 2002). Changes in residence can disrupt parent-child bonds and create ambiguity in household rules, family relationships, and expectations about behavior. Residential changes may also imply significant changes in the amount of resources available to children.

We examine whether the association between instability in child-parent coresidence and adolescent development differs across three groups of young people in Cape Town: blacks, whites, and coloureds—a group with diverse ancestral links that include Europeans, Malays, and Indonesians. Are all children affected similarly by changes in parent-child coresidence or might the salience of coresidential instability differ for children raised under different cultural expectations and economic constraints that shape household structure? In the process, we consider whether paternal and maternal instability are equally consequential to South African youth.

## **THEORETICAL LINKS BETWEEN INSTABILITY IN CORESIDENCE AND ADOLESCENT DEVELOPMENT**

Young people's development is shaped, in part, by the experiences and circumstances of their parents and related significant others. Whether the normative family is nuclear or

extended, parents influence how their children grow and develop through the choices they make (Furstenberg et al. 1999; Zimmerman 2003). Children and adolescents rely on parental resources, including financial resources, as well as on parental time, care, and support, to develop into successful adults. We expect that changes in parent–child coresidence disrupt the flow of resources and introduce stress into young people’s lives (Anderson 2005). This hypothesis is based on findings on divorce, residential mobility, and cumulative family change.

First, the literature on divorce suggests this disruption can undermine children’s access to valued resources, disrupt a child’s sense of security, and create ambiguity in household rules, family relationships, and expectations about behavior (Amato 2010; McLanahan and Sandefur 1994; Wu and Martinson 1993). Although we do not explicitly measure divorce and additional factors that create instability in parent–child coresidence in South Africa, we expect that when a parent and child live apart, even when these separations are related to labor migration or fostering in more economically advantaged households, the household environment is disrupted, parental monitoring is diminished, and stress and uncertainty are introduced. These disruptions, in turn, can be linked with young people’s educational progress and sexual experiences. For example, changes in household routines can make it easier for students to get off track academically. At the same time, the departure of a parent may make monitoring young people’s sexual relationships more difficult (McLanahan and Sandefur 1994; Thompson, McLanahan, and Curtin 1992).

Second, research on residential mobility suggests that moves can diminish social capital in families. Specifically, residential moves can disrupt the relationships that bind parents and children to the broader community. By disrupting these ties, children, at least initially, have fewer interpersonal anchors to guide their development. This, in turn, can have implications for young people’s relationships and for their performance at school (Haynie, South, and Bose 2006). Of course, we are not measuring joint parent–child moves, but we expect that when parents and children live apart, children lose access to important relations outside the parent–child dyad that promote positive social development.

These examples highlight how children’s separation from parents can introduce stress into children’s lives. We also expect that reunification with a biological parent can be stressful, particularly in a context where labor migration is common. Children may have difficulty reestablishing close ties with parents. They may also view parental migration as abandonment (Glasgow and Gouse-Sheese 1995) and may feel resentful when reunited (Smith, Lalonde, Johnson 2004), as has been documented in studies in the Caribbean. Furthermore, separation from the interim caregiver may also be difficult. For these reasons, we expect that all disruptions—both transitions that separate parents and children and those that bring them back together—constitute major stressors in a child’s life.

Finally, drawing on the literature on cumulative family instability (e.g., Osborne and McLanahan 2007), we recognize that separations and reunifications in parent–child coresidence are repeatable, with some young people exposed to multiple changes. Thus, the stress associated with these disruptions can accumulate over time. Bringing together insights from these perspectives, we expect that each additional disruption will translate

into worse outcomes for young people (Teachman 2003). As noted above, children are at risk of experiencing disruptions in parent–child coresidence with both fathers and mothers. Building on evidence regarding divorce and residential instability in the United States (e.g., Heard 2007), transnational parenthood in Southeast Asia (e.g., Jordan and Graham 2012), and orphanhood in South Africa (e.g., Case and Ardington 2006), we expect that mother–child residential instability may be more consequential than father–child instability. Because separation from mothers is less common than separation from fathers in South Africa, and mothers and fathers often provide different kinds of support to children (Madhavan et al. 2012), we expect that coresidential separations from mothers will have more pronounced implications than separations from fathers.

## RACE AND CHILDREN'S LIVING ARRANGEMENTS IN SOUTH AFRICA

A snapshot of South African children's living arrangements suggests distinct family lives for contemporary blacks, whites, and coloureds (Sibanda 2011). Black children are most likely to live in extended households, reflecting a culture based on collectivism and interdependence as well as poverty and a legacy of legal restrictions on movement. White children, on the other hand, are more likely to live in nuclear family households (Amoateng, Heaton, and Kalule-Sabiti 2007). Although coloureds are the largest racial group in Cape Town, much less research has focused on their living arrangements (e.g., Madhavan et al. 2012; Ford and Hosegood 2005). The limited evidence suggests that the living arrangements of coloureds fall in between those of blacks and whites (Amoateng, Heaton, and Kalule-Sabiti 2007).

These racial patterns in living arrangements reflect differences in union formation, dissolution, and childbearing, along with different patterns of labor migration and socioeconomic conditions. Overall, marriage rates are lower in South Africa than in other sub-Saharan African countries and have been declining (Hosegood, McGrath, and Moultrie 2009); marriage is least common among blacks, slightly higher among coloureds, and almost universal among whites (Amoateng 2004). Not surprisingly, then, childbearing often begins before marriage for large proportions of blacks (Madhavan and Thomas 2005; Madhavan 2010) and coloureds (Marteleteo, Lam, and Ranchlod 2008). Consequently, black and, to a lesser extent, coloured children are significantly less likely than white children to coreside with their fathers at an early age.

Union dissolution through divorce or death also leads to changes in parent–child coresidence. The level and type of dissolution vary by race. Although divorce rates in general have been increasing, they are highest among whites, followed by coloureds and blacks (Amoateng 2004). Death, often tied to the HIV/AIDS epidemic, is the primary driver of dissolution for blacks and coloureds (*ibid.*). Although these differences may reflect different cultural practices across groups, they also result from persistent socioeconomic inequalities. Post-Apartheid South Africa has yielded modest changes in employment for blacks and coloureds, but blacks remain overrepresented among the poor and unemployed (Leibbrandt, Woolard, and Woolard 2009). Black men and, to a lesser degree, coloured men continue to migrate in search of employment. More recently, a rise in female migration

has also contributed to parent–child separation (Brockerkhoff and Eu 1993; Madhavan et al. 2012).

## PARENT–CHILD CORESIDENCE AND ADOLESCENT DEVELOPMENT

Taken together, the factors discussed above produce considerable household fluidity in South Africa, particularly for blacks and coloureds. We expect that multiple changes in coresidence with parents will have important implications for two indicators of adolescent development—educational status and sexual initiation—both measured in late adolescence. These behaviors have significant short- and long-term implications for young people’s lives.

Our first indicator is young people’s educational status at age 17. Unlike other countries in the region, school enrollment rates in South Africa are universal at the primary level but variable during secondary school. At the same time, a large proportion of black and coloured adolescents have repeated at least one grade (Lam, Ardington, and Leibbrandt 2011). Whites, on the other hand, advance nearly one grade a year (*ibid.*). Because grade repetition is widespread among black and coloured youths, our indicator measures grade repetition separately from school dropout. It is important to note that the academic trajectories of blacks are poorly linked with ability, reflecting a random component in their educational experience (*ibid.*). Blacks also remain in school longer than do coloureds, and the latter have higher rates of school dropout than the former (*ibid.*). These trends highlight the persistent racial differences in the educational experiences of South African youth.

The relationship between parents’ residence and children’s schooling has been the focus of several studies in South Africa. Children’s biological ties to the household head partially determine their school enrollment (Case, Paxson, and Ableidinger 2004), although, for some, having a non-residential, migrant father increased school enrollment, presumably through remittances (Townsend et al. 2002). Nonetheless, adolescents with absent fathers performed significantly worse on achievement tests than adolescents who coresided with their fathers (Mboya and Nesengani 1999). Additional research suggests that maternal orphans and double orphans are more likely to fall behind in school or leave school altogether (Case and Ardington 2006; Evans and Miguel 2007; Operario et al. 2008).

The timing of sexual initiation, the second indicator we consider, is important because early entry into sexual life is associated with pregnancy, early childbearing, abortion, and acquiring and passing on sexually transmitted diseases (STDs), including HIV/AIDS (Harrison et al. 2005; Kaestle et al. 2005; Pettifor et al. 2004). Although sexual initiation occurs before marriage for most South African youth, blacks become sexually active earlier than their coloured and white peers (Anderson, Beutel, and Maughan-Brown 2007; Marteleteo, Lam, and Ranchlod 2008). Equally important, given the gendered nature of sexual initiation, many studies (e.g., Anderson, Beutel, and Maughan-Brown 2007; Marteleteo, Lam, and Ranchlod 2008) examine boys and girls separately, with the understanding that gender and race intersect in ways that shape sexual behavior.

In general, adolescents who live with both parents tend to delay sexual initiation longer than those who live with one or neither parent (Kabiru and Ezech 2007; Karim et al. 2003; Ngom,

Magadi, and Owuor 2003), although some studies find that current parental composition is not a significant predictor of adolescent sexual behavior (Biddlecom, Awusabo-Asare, and Bankole 2009; Kumi-Kyereme et al. 2007). A handful of studies, however, have found that parental instability is linked with adolescents' sexual behavior. For example, multiple caregiver changes early in the life course are strongly related to early sexual initiation in Kenya (Goldberg 2013a). Another study suggests that changes in parent-child coresidence accelerated the transition to early parenthood among South African males and females (Goldberg 2013b).

## METHODS

### Data and Analytical Sample

We use data from the Cape Area Panel Study (CAPS), a longitudinal study of approximately 4,800 randomly selected 14–22-year-olds living in metropolitan Cape Town, South Africa, in 2002. The sample was selected using a stratified two-stage sample, first selecting sample clusters and then selecting households within these clusters (Lam et al. 2008). Study participants were first interviewed in 2002 (wave 1), with follow-up interviews in 2003 (wave 2a)/2004 (wave 2b), 2005 (wave 3), and 2006 (wave 4) (Lam et al. 2008). In addition to collecting information on respondents' current household, schooling, health, and employment, retrospective data were collected at baseline on schooling, sexual behavior, and living arrangements at each year of the respondent's life.

Our analytical sample includes data from the retrospective life-history calendar collected during the first wave as well as the other three waves. Because we focus on adolescent development by age 17 and respondents were aged 14–22 at wave 1, it is important to note that 67 percent of adolescents were 17 or older at wave 1 and hence had complete information on family histories and outcomes at that time. For the remaining third of the sample, we relied on multiple waves of data.

Overall, only 7 percent of our sample had missing information on the outcome measures. These data, along with missing control variable data, were imputed using *mice* to produce 100 fully imputed data sets and the *mi estimate* commands to analyze the imputed datasets in the multivariate analyses (StataCorp 2011). The sample used for descriptive analyses is composed of 4,743 black, coloured, and white youth. The sample used for multivariate analyses is composed of 4,144 black and coloured respondents. We drop the 599 white respondents since ancillary power analyses (findings available upon request) indicated insufficient statistical power to estimate reliably multivariate models for whites. Because of small sample size, 40 respondents identified as Indian or "other" were also excluded. To account for clustering of respondents within families, we estimated all models with a robust cluster estimator in Stata (StataCorp 2011).

### Variables

Our first outcome is educational status at age 17, a trichotomous measure of academic status (enrolled and on track, enrolled but off track, and dropout). Thus, we can distinguish school dropout from the ideal state of being enrolled in school and on track for their age. This is

an important distinction in the South African context because grade repetition is widespread. We considered those who are enrolled and two or more grades behind their appropriate grade given their age to be off track. A combination of retrospective and prospective longitudinal data was used to construct education histories. In wave 1, respondents were asked about their school enrollment and the outcome of that schooling for each year starting at age 6. In each follow-up interview, younger respondents were asked about their current and previous years' enrollment and outcome.

Our second outcome measure is sexual initiation by the median age at first sex—age 17 for girls and age 16 for boys. At wave 1, respondents were asked whether they have ever had sexual intercourse and, if so, their age at first sex. Respondents who had not had sex by wave 1 were asked these questions again in subsequent waves. A dummy variable was created to identify respondents who reported sexual initiation by the median age at first sex.

Our primary independent variable is instability in coresidence with parents. Similar to school experience, respondents were asked whether they lived with their biological mother, biological father, a grandparent, and/or guardian from birth until wave 1, for every age. Our measure of coresidence is based on episodes of living with and without parents collected through a life-history calendar. We created counts of the number of separations (i.e., living with a parent in one year, but not in the next) and reunifications (i.e., parent absent in one year and present in the next) with mothers and fathers up to and including age 13.<sup>1</sup> We created a total count of parental separations and reunifications, combining maternal and paternal residential transitions. We also created counts of total maternal separations/reunifications and total paternal separations/reunifications.<sup>2</sup>

We include controls for family and adolescent characteristics, including family structure, maternal and paternal characteristics, early schooling experience, and migration history. For family structure, we include two binary variables—one for mother and one for father—to indicate whether the respondent lived with his or her parents during the first year of life.<sup>3</sup> Living without a biological parent in the first year of life may be particularly salient for adolescent adjustment because such status may undercut attachment and early socialization and can set the stage for later, more risky, development (Wu and Martinson 1993). This also serves as a proxy for the different economic contexts into which a child is born as well as unmeasured selection factors (e.g., parental and child factors) that contribute to greater instability in childhood and early adolescence (Fomby and Cherlin 2007). We also include a measure of family structure at age 10 to reflect respondents' living arrangements at a time closer to the outcomes we consider. This measure consists of five categories:

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<sup>1</sup>The CAPS data contain information on whether young adults were living with their father, mother, and grandparents up to age 14. These data are collected through a life-history calendar at baseline. After age 14 we only have additional information on living arrangements for years in which respondents are interviewed. The information from follow-up interviews does not provide a complete account of coresidence with parents after baseline.

<sup>2</sup>We tested multiple specifications of coresidential changes, including categorical specifications (i.e., no transition, 1 transition, and 2 or more transition), polynomial, and log transformations. Overall, however, these did not lead to appreciable differences in the model fit, hence we settled on counts of transitions, which was most consistently and significantly predictive of the outcomes.

<sup>3</sup>We have no explicit measure of whether the respondent *never* lived with the mother or father after age 14. Still, using the life-history calendar data, we assume that children who did not live with either mother or father in the first year of life and who reported no subsequent exits or entries of that parent have never lived with that parent. Correlation coefficients between no subsequent entries or exits until age 14 and living with mother or father at birth (−0.60 for black mothers and −0.70 for coloured mothers; −0.88 for black fathers and −0.82 for coloured fathers) provide support for this assumption.

mother and father (reference category), father only, mother only, mother or father only with grandparents, and other family structure. This measure is constructed at age 10 and is therefore exogenous to the outcomes we examine. Although only a small proportion of respondents experienced parental death, we control for whether the respondent's mother or father died before he or she reached age 13. We also include control variables for whether biological parents were ever married, as a way to gauge the kinds of resources available to respondents.

We include continuous measures of years of both maternal and paternal education. In addition, we control for the number of full biological siblings the respondent has at wave 1 and whether the respondent was the oldest child in the home at wave 1. We also control for maternal age at the respondent's birth to reflect maternal stress and other circumstances of the mother at the child's birth. Additional controls include whether the respondent started school by age 6 and birthplace—and hence, possible migration effects that may increase the chance of coresidential change.

### Analytical Plan

We begin by describing patterns in parent–child coresidential instability separately for blacks, coloureds, and whites. Next, using logistic and multinomial regressions, we examine the associations between instability in parent–child coresidence and sexual initiation and educational outcomes for black and coloured respondents, controlling for other family and demographic characteristics. Given the gendered and racial pathways to adulthood, we modeled sexual initiation separately by race and gender. Ancillary analyses using interaction effects provided support for this analytic approach.<sup>4</sup>

## RESULTS

Table 1 presents key analytic measures, with significant differences between race and gender groups noted in the text discussion. Beginning with family structure history, over 90 percent of respondents, regardless of race or gender, lived with their mother during their first year of life. There was, however, large variation in coresidence with fathers in the first year of life. Overall, significantly lower proportions of black adolescents lived with their fathers during infancy (55.7 percent for girls; 56.9 percent for boys) compared to their coloured (70.3 percent for girls; 72.5 percent for boys) and white (91.3 percent for girls; 91.7 percent for boys) peers. Interestingly, there was no statistically significant difference between blacks and coloureds on whether they experienced maternal or paternal death by age 14. Very few whites experienced parental death during childhood.

By age 13, a smaller proportion of black adolescents continually resided with a parent, and a significantly higher proportion experienced two or more changes in coresidence with parents (35.5 percent of blacks versus 15.3 percent of coloureds and 8.1 percent of whites). Considering coresidential changes with fathers and mothers separately, just under half of black youth continually lived with their mother compared with nearly 90 percent of white

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<sup>4</sup>Chow tests with fully interacted models for both gender and race were statistically significant for the models with both educational outcomes and sexual initiation.



youth and 75 percent of coloured youth. Importantly, 17.5 percent of black respondents experienced two or more maternal transitions. Coloured and white youth reported lower levels of instability in coresidence with mothers—6.7 percent and 3.2 percent, respectively, experienced two or more transitions. Although changes in coresidence with fathers were common for all, blacks experienced more instability with fathers. For example, 41.0 percent of blacks experienced at least one paternal transition, compared to 25.7 percent of coloureds and 23.7 percent of whites.

Figure 1 shows coresidence between respondents and their parents at each year from ages 0 to 13. Several patterns emerge. First, coresidence with parents declines with age, with marked differences across racial groups. For example, although more than 90 percent of children in all groups lived with their mothers at birth, by age 13 only 73 percent of blacks lived with their mothers, compared to 85 percent of coloureds and 94 percent of whites. Second, coresidence with fathers also declines throughout children's lives, though with marked differences in the proportions living with fathers starting at birth. Blacks showed the lowest levels of father's coresidence at birth and by age 13, followed by coloureds and whites.

Racial differences were also seen for our two outcome measures. Beginning with educational status at age 17, around 75 percent of white respondents were enrolled in a grade appropriate for their age, compared to less than a third of black and coloured adolescents. Dropout rates were also substantially higher for blacks and coloureds than for whites. Not surprisingly, whites were also more likely to have started school by age 6 and to have parents with higher levels of education, followed by coloureds and blacks, highlighting the marked socioeconomic differences across these groups. In all, these data illustrate that whites are the most successful in navigating the educational system throughout childhood, while coloured and black youths are disadvantaged.

There are also significant differences in the timing of sexual initiation across racial groups. Higher proportions of blacks reported having had sex by age 16 (for males) and 17 (for females) compared with coloureds and whites. A higher proportion of black females reported being sexually active compared with coloured and white females (64.6 percent of blacks, 30.3 percent of coloureds, and 25.0 percent of whites). The racial differences in sexual initiation by age 16 among males were even greater (66.0 percent of blacks, 37.6 percent of coloureds, and 13.6 percent of whites). These differences were statistically significant. It is also noteworthy that, while black and coloured females initiate sex at older ages than males, both the mean and the median age of sexual initiation among whites are lower for females than for males.

### **Coresidential Instability and Sexual Initiation**

Turning to our second objective, we examine whether the patterns of parent-child coresidence highlighted above are associated with young people's sexual initiation and school experience. For this analysis, we focus on coloured and black adolescents only. Table 2 presents odds ratios predicting sexual initiation by age 17 among girls separately by race: Panel A shows the results for blacks and Panel B for coloureds. Table 2 shows only the coefficients representing the aspects of instability in parent-child coresidence we consider

in addition to measures of family structure. The full models are included in supplementary materials (see Table A1<sup>5</sup>). In addition, whereas we model males and females separately because of the strong gendered pathways to sexual initiation, we do not present the results for boys because very few variables predicted sexual initiation (see Table A2).

Model 1 includes a cumulative count of changes in parent–child coresidence. For both black and coloured girls, each transition in parent–child coresidence increases the odds of early sexual initiation by 15 percent for blacks and 17 percent for coloureds. Models 2 and 3 include the cumulative counts separately for mothers and fathers, respectively. For both coloureds and blacks, maternal and paternal transitions are consequential for girls' sexual initiation. For coloured girls, for example, each maternal transition is associated with an increased odds of early sexual initiation by 29 percent, each paternal transition by 24 percent. For black girls, numbers of both maternal and paternal transitions are also significantly related to higher odds of early sexual initiation: 19 percent and 23 percent for each maternal and paternal transition, respectively. Thus, contrary to our expectations, maternal transitions appear no more consequential for girls' sexual initiation than paternal transitions, but both are significantly associated with increased risk for both black and coloured girls. Still, when paternal and maternal transitions are modeled together (results available upon request), maternal transitions appear more consequential for young coloured girls than paternal transitions. This is not true for black girls. For black adolescents, modeling maternal and paternal change in coresidence together appears to offset the association between coresidential instability and girls' sexual initiation. Analysis of the data suggests that for black girls who lived with their father at birth, nearly 20 percent experienced both maternal and paternal instability; this is not the case for coloured girls, for whom the level of instability is much lower. Thus, for black girls, this effect in the multivariate model with maternal and paternal instability in coresidence modeled together highlights the strong correlation between these sources of instability.

An important additional set of findings from Table 2 concerns more traditional measures of family structure during childhood. Overall, father's presence during adolescents' first year of life is associated with delays in sexual initiation for black girls but not for coloured girls. In contrast, father's death before age 14 is associated with a higher probability of sexual initiation among coloured girls but not among black girls. Interestingly, living in a single-mother family at age 10 is associated with a lower probability of sexual initiation for black girls and a higher probability for coloured girls.

### **Coresidential Instability and Education**

We next turn to the multinomial results examining the relationship between instability in parent–child coresidence and school experience. Table 3 presents the odds ratios of being off track or having dropped out of school versus being on track at age 17 for both boys and girls. Again, Panel A presents results for blacks and Panel B for coloureds.

None of the specifications of instability in parent–child coresidence was significantly associated with school outcomes at age 17 for blacks. In other words, changes in parent–

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<sup>5</sup>Appendix tables are available at the supporting information tab at [wileyonlinelibrary.com/journal/sfp](http://wileyonlinelibrary.com/journal/sfp).

child coresidence did not distinguish between black youth who were on track, dropped out, or repeated a grade. For coloureds, parent–child transitions appear to have a much stronger relationship with school experiences. For coloured youth, each change in coresidence with parents was associated with an increased odds of being behind in grade by 21 percent relative to those on track. Similarly, each change in coresidence was associated with an increased odds of dropout by 21 percent (Model 1). Models 2 and 3 suggest that the relationship for coloureds is driven by changes in both maternal and paternal coresidence: each maternal transition is correlated with 43 percent and 49 percent higher odds of being off track and out of school, while each paternal transition is correlated with 28 percent and 22 percent higher odds. When modeled together (results available upon request), only maternal transitions remained statistically significant, net of paternal transitions. Each change in coresidence with mother was associated with an increased odds of being off track and out of school relative to those on track.

Also noteworthy are the findings regarding associations between family structure and being off track or a school dropout versus in school and on track. In line with the findings for sexual initiation, results from Table 3 suggest that father’s presence has negative implications for black adolescents and positive implications for coloured adolescents. For example, black adolescents with a father present during their first year of life have a 40 percent greater probability of being off track than their peers with an absent father during this period. Coloured adolescents with a father present during their first year of life, on the other hand, have a 41–47 percent lower probability of being off track than their peers with an absent father. Taken together, these findings highlight the importance of examining mothers’ and fathers’ instability in coresidence separately and their different implications by race for South Africans.

## CONCLUSIONS AND DISCUSSION

The widespread concern over the living arrangements and well-being of HIV/AIDS orphans in sub-Saharan Africa (Case, Paxson, and Ableidinger 2004) has revealed the diversity of South African families and highlighted our limited knowledge about the implications of instability in parent–child coresidence for young people in general. Using retrospective reports of household composition on a contemporary cohort of Cape Town youth, we document the considerable fluidity in maternal–child and paternal–child coresidence. Consistent with research in North America and emerging work in sub-Saharan Africa, we find that coresidential instability is associated with adolescent development above and beyond the direct effects of family structure or orphanhood status. In other words, it is not simply the absence of a parent at a particular moment in children’s development, but rather *changes* in coresidence resulting from a wide range of factors—separation, migration, death, fostering, and reunification—that influence adolescents’ development. Yet, our findings underscore that the relationship between instability in parent–child coresidence and adolescent development is context specific and, even within a country, varies by race and gender.

Beginning with our description of parent–child coresidential histories, we find that blacks are less likely to live with both biological parents at key points in early and middle

childhood than either coloureds or whites. Moreover, blacks experience considerably more coresidential instability with both their mother and father. Over a third of blacks lived separately from their mothers by age 13, compared to 15 percent of coloureds and 6 percent of whites. Similarly, a third of blacks *never* lived with their fathers and an additional 41 percent experienced at least one paternal disruption during childhood. Given persistent socioeconomic inequality following Apartheid and cultural practices based on collectivism, this fluidity is not surprising. Yet, because our data allow us to document the movements of children and parents over time, we can better measure the remarkable exposure of *most* black youth in Cape Town—as opposed to orphans only—to parent–child instability in coresidence.

Of course, we should not conflate paternal residence with fathers' financial and emotional support of their children (Clark, Cotton, and Marteletto 2015; Madhavan, Townsend, and Garey 2008). Black families have long been separated by geographic distance, and qualitative research in rural South Africa suggests that paternal coresidence is neither a necessary nor a sufficient indicator of paternal involvement. Families, especially those with limited economic resources, often span several households, and financial support continues to flow from fathers to children (Clark, Cotton, and Marteletto 2015; Madhavan et al. 2012). Future research that incorporates dynamic indicators of financial support with coresidential transitions can broaden our understanding of the linked lives of parents and children and the meaning of coresidence for children in urban South Africa.

Our analyses also reveal significant parent-child instability for coloured children, an ethnic group often overlooked in studies of South African youth. Although these young people are more likely than blacks to coreside with both mother and father at age 13, more than 20 percent experienced at least one mother–child coresidential transition during childhood. Further, although coloured respondents were over four times more likely than whites to have never lived with their biological fathers, equal proportions of whites and coloureds experienced one or more paternal transitions up to age 13.

In all, coloured youth reside in more stable households than blacks but have significantly less stable households than whites. Although our findings are consistent with research on the structure of coloured families, there is limited research documenting the factors driving the experiences of these families. Employment restrictions and other forms of segregation play a role, but so too might cultural values and expectations about family formation and stability. These differences in the overall rates of instability between black, white, and coloured adolescents likely reflect different cultural, social, and economic forces that shape family life in South Africa (Amoateng 2004).

We also considered whether cumulative parent–child instability shapes two aspects of adolescent development: sexual initiation and educational outcomes. The following patterns emerge. First, both maternal and paternal instability in coresidence are significantly associated with the timing of sexual initiation for both coloured and black girls. Separations from parents may affect parental monitoring and closeness in ways that have negative consequences for women's sexual lives. Contrary to our expectations, when modeled separately, instability in both paternal and maternal coresidence was associated with earlier

sexual initiation among coloured girls, which is consistent with some studies that find fathers' current residence and residence at time of birth to be strongly associated with girls' earlier sexual initiation (Babalola, Awasum, and Quenum-Renaud 2002; Babalola, Tambashe, and Vondrasek 2005; Ngom, Magadi, and Owuor 2003). Although the drivers and consequences of maternal–child and paternal–child transitions likely differ, our results indicate that their implications for this aspect of adolescent development do not. Still, when modeled together, maternal instability in coresidence appeared to remain more consequential for coloured girls' sexual initiation and school experience than paternal instability.

Cumulative maternal–child and paternal–child disruptions in coresidence were also associated with the educational progress of coloureds but not of blacks. Disruptions in coresidence with both mothers and fathers are associated with higher odds of dropping out of school and being off track for coloured males and females. However, despite experiencing significantly more mother–child and father–child coresidential instability throughout childhood than coloured or white youth, these aspects of the home environment were not linked with black adolescents' educational progress.

The lack of association between parental instability in coresidence and blacks' academic standing is consistent with previous studies demonstrating large differences in school quality by race (Fiske and Ladd 2004) and the random nature of the educational performance of young black South Africans (Lam, Ardington, and Leibbrandt 2011). The lives of black adolescents are often unstable in several respects, including family income and earnings. In the context of broader instability, changes in parent–child coresidence may be less consequential for the educational outcomes of young blacks. At the same time, coresidence alone might not be predictive of young people's educational attainment. As noted above, economic and social support might continue to flow to children who do not coreside with a parent in ways that positively affect educational attainment. Moreover, because changes in parent–child coresidence are more normative among blacks, black families may have developed support systems to deal with the implications of instability in parent–child coresidence.

Another plausible explanation for why parental transitions may not influence blacks' educational progress and may influence coloureds' progress could reflect differences in why children are separated from and reunited with their parents. For both black and coloured fathers, paternal instability is likely to be driven by labor migration, which could benefit children in some instances. A recent study has shown that father's absence due to migration is beneficial to the schooling of black South Africans because most parents send remittances (Lu and Treiman 2011). Black parents may also be separated from their children because of child fostering,<sup>6</sup> which is potentially beneficial to young people's education (Akresh 2009; Anderson 2005). Without being able to distinguish disruptions caused by divorce, fostering, or labor migration, for example, the lack of an association might reflect the offsetting impact of different kinds of transitions. In short, why parents enter and exit their children's lives

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<sup>6</sup>In the context of concentrated poverty and economic uncertainty, child fostering—placing some or all children in a family with grandparents, aunts, uncles, or nonrelatives for a period of months or years—can represent a flexible response “to the risks and challenges in resource-poor environments” (Zimmerman 2003). As such, children may move away from parents in an effort to reduce parents' economic distress and improve children's life chances (Akresh 2009; Serra 2009).

varies for black and coloured adolescents and may be as important as how often they make these transitions.

Although this study is among the first to examine the dynamic relationship between changes in parent–child coresidence and adolescent development in South Africa, it has several limitations. First, much of the data on coresidence with parents was collected retrospectively. The ability of respondents to recollect coresidence with parents in particular years may lead to imprecision in our counts of parental transitions. We attempted to minimize discrepancies by measuring overall instability in coresidence during childhood, as opposed to changes in coresidence at specific ages. Given the overall consistency of our results, we believe that despite some imprecision our main findings are robust.

At the same time, we fail to measure the entry and exits of parents' romantic partners in the home. Although estimates of remarriage and cohabitation in South Africa are difficult to locate (Hosegood, McGrath, and Moultrie 2009), we expect that some portion of our sample was exposed to additional sources of coresidential instability. In additional analyses using the younger members of our sample, for whom we have more detailed household information from the panel data, approximately 11 percent reported living with a stepmother or stepfather at wave 1. Future research should incorporate instability in these alternate relationship types.

Third, we count both separations and reunifications equally in our measures of coresidential instability, the standard practice in research on family instability in the US (e.g., Cavanagh and Huston 2008; Fomby and Cherlin 2007; Wu 1996). We also explored alternative specifications that measured separations and reunifications separately. After we controlled for coresidence at age 1, however, our results were similar and we opted for the more parsimonious model. Fourth, all of our measures pertain to disruptions of household membership and coresidence. In South Africa, as elsewhere, families typically extend beyond the household walls and non-residential support may be quite important. As we discussed above, non-residential fathers may play a particularly important role in supporting and mentoring their children. If fathers move or start a new family, however, these ties may weaken and children may experience the equivalent of a “separation” even though they did not previously coreside with their father. Similarly, extended kin, like grandparents, even if they do not reside in the same household, may be actively involved in children's lives.

Lastly, although this is a representative sample of young adults in Cape Town, their experiences may be different from those of adolescents in Johannesburg or in rural South Africa. The country's regional differences are important, particularly given Cape Town's unique racial distribution. In sum, although our data capture considerably greater detail about the living arrangements of children and adolescents than most comparable studies, there is a pressing need for new research with more detailed questions on family dynamics in sub-Saharan Africa. Nonetheless, our results reveal some important patterns and point to promising future areas of study.

Most importantly, our results highlight the value of considering not only static measures of family structure but also dynamic indicators of family change, especially in contexts like

South Africa where children are likely to experience multiple family disruptions during childhood. Yet, our findings also caution researchers not to assume that the implications of parent–child coresidential instability are universally negative. For example, some of these transitions are deliberately sought to increase economic opportunities of parents and children through labor migration or child fostering. The lack of association between coresidential instability and the educational status of black adolescents suggests that some groups might benefit from certain interruptions to family stability.

There is little evidence that the key drivers of parent–child coresidential instability in South Africa—labor migration, non-marital childbearing, union dissolution, and adult mortality—will change any time soon. Future studies should therefore focus on the mechanisms by which disruptions shape the course of adolescent development. Here, we point to stress, disrupted routines, lack of monitoring, and economic changes as possible mechanisms producing negative outcomes. Future research, examining families prospectively, needs to measure the ways changes in coresidence alter the home environment. At the same time, special attention to the type of coresidential change—union dissolution, fostering, or labor migration—needs to be considered, identifying family changes that are harmful as well as those that could be beneficial for adolescent development.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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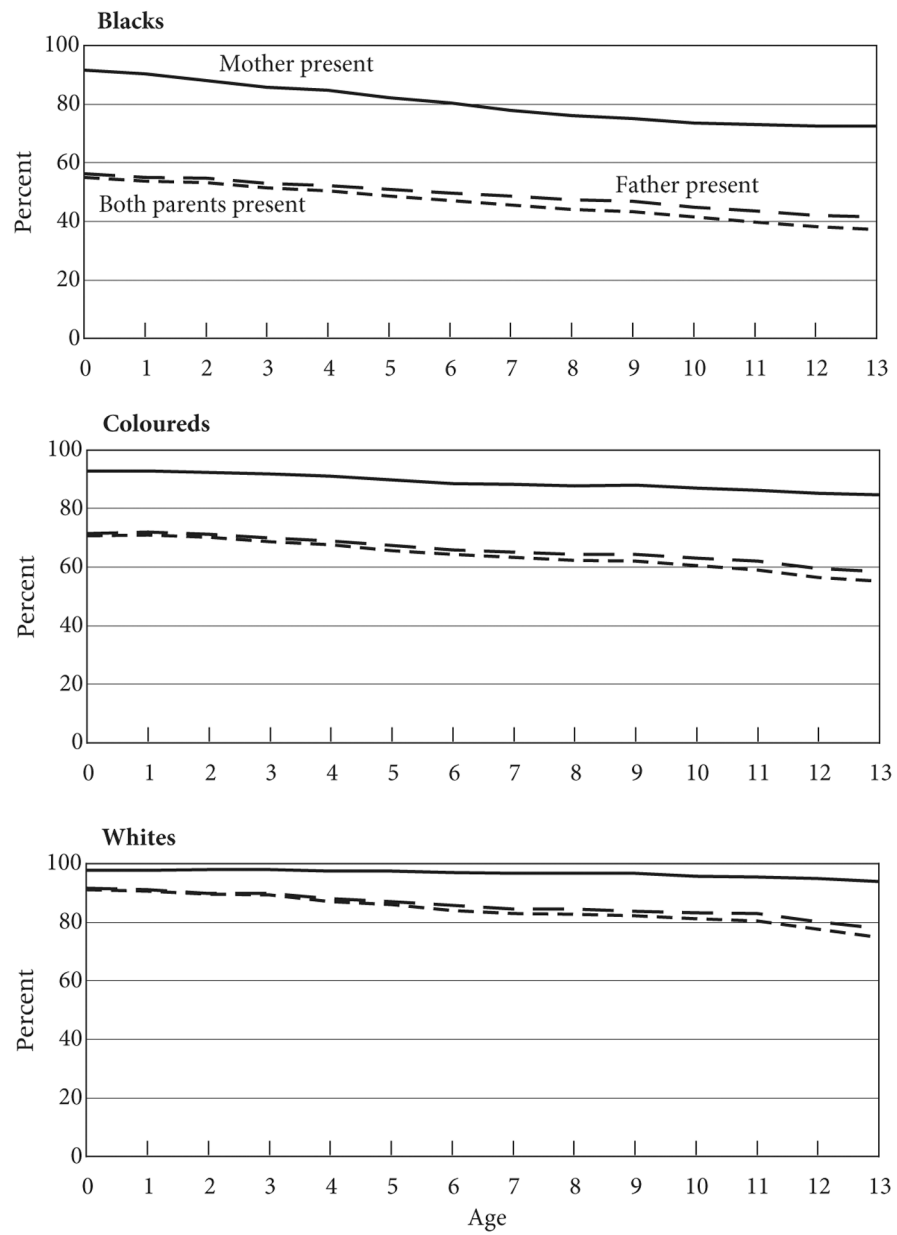
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**FIGURE 1.** Family member coresidence between ages 0 and 13 years

TABLE 1

Sample characteristics, Cape Town area South African young adults (percent except as noted)

	Black		Coloured		White	
	Female	Male	Female	Male	Female	Male
<b>Parental transitions</b>						
Changes in parent–child coresidence						
Always with at least one parent	34.8	39.1	59.7	62.5	73.1	70.7
One transition	26.5	24.2	20.7	20.3	16.9	20.9
Two or more transitions	35.6	35.4	15.6	15.0	7.9	8.4
Never with any biological parent	3.1	1.3	3.9	2.1	2.1	0.0
Mean number of parental transitions	1.26	1.22	0.67	0.59	0.42	0.52
Changes in mother–child coresidence						
Always with mother	47.7	53.2	73.3	76.3	89.7	88.8
One transition	30.7	27.5	14.8	14.9	5.5	7.3
Two or more transitions	17.6	17.4	7.6	5.7	2.5	3.9
Never with mother	4.1	1.0	4.3	3.2	2.3	0.0
Mean number of maternal transitions	0.72	0.67	0.33	0.27	0.12	0.19
Changes in father–child coresidence						
Always with father	23.8	27.1	48.5	52.6	71.4	69.1
One transition	31.6	29.5	20.1	20.0	17.2	20.4
Two or more transitions	9.6	11.0	6.0	5.4	5.2	4.9
Never with father	35.0	32.3	25.4	22.0	6.2	5.7
Mean number of paternal transitions	0.54	0.55	0.34	0.32	0.30	0.34
<b>Outcomes</b>						
Sex by age 16 (males)/17 (females)	64.6	66.0	30.3	37.6	25.0	13.6
Mean age at sexual initiation (years)	16.5	15.5	17.6	16.5	17.6	17.7
Median age at sexual initiation (years)	17	16	17	16	17	18
<b>Educational status at age 17</b>						
On track at 17	30.2	25.1	33.2	23.5	76.8	74.5
Off track at 17	49.5	53.9	29.1	31.1	18.4	15.3
Drop out at 17	20.3	21.0	37.7	45.5	4.9	10.2
<b>Controls</b>						
Presence during first year of life						
Mother present	90.4	93.5	92.4	93.2	95.8	100.0
Father present	55.7	56.9	70.3	72.5	91.3	91.7
Parental death						
Mother died before child turned 14	1.8	1.9	2.1	2.4	0.5	0.7
Father died before child turned 14	5.1	5.9	5.5	6.8	1.3	1.8
Family structure at age 10						
Mother and father	41.7	41.2	58.6	62.5	81.9	80.2
Mother only	22.5	24.3	19.2	18.5	12.7	13.9
Father only	1.9	3.0	2.2	2.0	0.6	2.4

	Black		Coloured		White	
	Female	Male	Female	Male	Female	Male
Mother or father only and grandparent	10.1	9.8	7.9	8.4	2.2	1.7
Other	23.8	21.7	12.2	8.6	2.5	1.8
Maternal age at respondent's birth	26.7	26.9	25.7	25.9	27.6	27.4
Biological parents ever married	68.2	70.9	76.8	79.3	96.4	97.4
Was oldest sibling at wave 1	67.3	66.2	70.1	68.6	68.2	76.4
Mean maternal education (years)	8.0	8.2	8.5	8.7	12.7	12.8
Mean paternal education (years)	7.3	7.3	9.1	8.9	13.2	13.1
Mean maternal age at birth (years)	26.7	26.9	25.7	25.9	27.6	27.4
Mean number of full siblings	2.6	2.6	1.9	1.9	1.4	1.3
Started school by and including age 6	48.2	39.4	83.5	81.8	92.7	87.4
Birthplace						
Cape Town	38.4	43.1	92.3	93.0	62.3	62.7
East Cape	51.3	48.1	0.6	0.7	2.7	3.4
Other	10.2	8.8	7.1	6.4	35.0	33.9
Sample <i>N</i>	1,217	933	1,073	921	313	286

NOTES: All values are weighted. Results for T-tests and Chi2 tests available on request.

TABLE 2

Odds ratios from logistic regression models predicting sexual initiation by age 17 among black and coloured girls (black  $n = 1,217$ , coloured  $n = 1,073$ )

	Model (1)	Model (2)	Model (3)
<b>Panel A – Black</b>			
Total maternal and paternal transitions	1.15 <sup>**</sup>		
Total maternal transitions		1.19 <sup>*</sup>	
Total paternal transitions			1.23 <sup>*</sup>
Mother present during first year	1.17 <sup>*</sup>	1.16	1.23
Father present during first year	0.61 <sup>**</sup>	0.66 <sup>*</sup>	0.59 <sup>**</sup>
Family structure at age 10 (ref: Mother and father)			
Mother only	0.58 <sup>**</sup>	0.61 <sup>*</sup>	0.58 <sup>**</sup>
Father only	1.28	1.37	1.32
Mother or father only, with grandparent(s)	0.67	0.71	0.68
Other family structure (no mother or father)	0.76	0.80	0.86
Mother died before child turned age 14	0.80	0.79	0.79
Father died before child turned age 14	0.78	0.79	0.77
Pseudo R-squared	0.040	0.047	0.048
<b>Panel B – Coloured</b>			
Total maternal and paternal transitions	1.17 <sup>**</sup>		
Total maternal transitions		1.29 <sup>**</sup>	
Total paternal transitions			1.24 <sup>*</sup>
Mother present during first year	1.47	1.42	1.53
Father present during first year	1.01	1.09	0.98
Family structure at age 10 (ref: Mother and father)			
Mother only	1.60 <sup>*</sup>	1.72 <sup>*</sup>	1.56 <sup>*</sup>
Father only	0.83	0.82	0.89
Mother or father only, with grandparent(s)	1.02	1.07	1.01
Other family structure (no mother or father)	1.01	0.99	1.15
Mother died before child turned age 14	2.04	2.00	2.15
Father died before child turned age 14	1.85 <sup>*</sup>	1.94 <sup>*</sup>	1.78 <sup>*</sup>
Pseudo R-squared	0.061	0.064	0.062

\* Significant at  $p < 0.05$ ;

\*\*  $p < 0.01$ ;

\*\*\*  $p < 0.001$ .

NOTE: Controls for birthplace, maternal education, paternal education, maternal age at child's birth, started school by and including 6 years old, number of full biological siblings, whether biological parents were ever married, whether respondent was the oldest at baseline, and whether outcome information was collected retrospectively.

**TABLE 3**

Odds ratios from multinomial logistic models predicting school experience by age 17 among black and coloured males and females (reference: on track and enrolled in school) (black  $n = 2,150$ , coloured  $n = 1,994$ )

	Off track			Dropped out		
	Model (1)	Model (2)	Model (3)	Model (1)	Model (2)	Model (3)
<b>Panel A – Black</b>						
Total maternal and paternal transitions	0.98			1.04		
Total maternal transitions		0.95			1.01	
Total paternal transitions			1.03			1.12
Mother present during first year	1.38	1.40	1.38	1.08	1.03	1.03
Father present during first year	1.40*	1.40*	1.39*	1.10	1.20	1.15
Family structure at age 10 (ref: Mother and father)						
Mother only	1.18	1.18	1.16	1.22	1.14	1.11
Father only	0.87	0.90	0.83	0.99	0.97	0.89
Mother or father only, with grandparent(s)	1.58	1.57*	1.54	1.21	1.14	1.11
Other family structure (no mother or father)	1.47	1.54*	1.44	1.04	1.00	0.97
Mother died before child turned age 14	1.17	0.84	0.85	2.82	2.79	2.87
Father died before child turned age 14	0.92	0.92	0.92	1.09	1.10	1.10
Pseudo R-squared	0.033	0.031	0.031	0.033	0.031	0.031
<b>Panel B – Coloured</b>						
Total maternal and paternal transitions	1.21**			1.21*		
Total maternal transitions		1.43***			1.49**	
Total paternal transitions			1.28*			1.22*
Mother present during first year	1.24	1.20	1.30	1.11	1.19	1.17
Father present during first year	0.54*	0.59***	0.53*	0.56**	0.62*	0.55**
Family structure at age 10 (ref: Mother and father)						
Mother only	0.94	1.12	0.93	1.44	1.62	1.43
Father only	0.76	0.68	0.86	1.39	1.37	1.58
Mother or father only, with grandparent(s)	1.12	1.27	1.13	1.33	1.45	1.34
Other family structure (no mother or father)	1.00	1.08	1.17	0.82	0.79	0.98
Mother died before child turned age 14	0.63	0.61	0.69	1.52	1.47	1.65
Father died before child turned age 14	1.54	1.69	1.28	1.71	1.87*	1.64
Pseudo R-squared	0.074	0.090	0.091	0.074	0.090	0.091

\* Significant at  $p < 0.05$ ;

\*\*  $p < 0.01$ ;

\*\*\*  $p < 0.001$ .

NOTE: Controls for birthplace, maternal education, paternal education, maternal age at child's birth, started school by and including 6 years old, number of full biological siblings, whether biological parents were ever married, whether respondent was the oldest at baseline, and whether outcome information was collected retrospectively.