Parenting Arrangements of Young Mothers and Fathers in South Africa: How Important are Consanguineous and Conjugal Ties?

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Abstract
This paper takes a close look at the parenting arrangements of young mothers and fathers in urban South Africa, paying special attention to the relative importance of consanguineous versus conjugal ties in determining where children live and the support they receive from their fathers. Drawing on rich longitudinal data, we find that conjugal bonds between parents have very little impact on whether young mothers live with their children. Instead, consanguineous ties between the child's mother and maternal grandmother have the strongest effect, substantially increasing the chances that young mothers live with their children. In contrast, conjugal relationship status almost entirely determines whether young fathers live with their children. Co-residence with paternal grandparents has little, even a slightly negative, effect on the likelihood that young fathers will live with their children. However, when we consider father's contact with and financial support of their non-residential children a different pattern emerges. Fathers' relationship with the child's mother plays a much less important role. Rather young fathers who live with their parents are more likely to visit their child regularly and fathers who are working and relatively well-off are more likely to make financial contributions. These findings confirm the importance of matrilineal ties in determining children's residence, but also challenge assumptions about so-called "absent" fathers and their relationships with their non-residential children.

Introduction

For decades anthropologists have observed that throughout sub-Saharan Africa consanguineous bonds tend to be stronger than conjugal ones (Fortes 1958). In other words, ties between natal kin, especially vertical intergenerational ties, are more permanent and lasting than horizontal conjugal bonds between mothers and fathers. The relative strength of these bonds may be of critical importance to children's well-being as they largely determine where children live, who cares for them, and the type of economic support they receive. Indeed, evolutionary anthropologists are engaged in a long-standing debate about the relative importance of fathers and maternal grandmothers in providing protection and ensuring the survival of young children, with several arguing that maternal grandmothers play a more central role (Hawkes et al. 1998; Sear et al. 2002; Hill 1993). One study in the Gambia, which purports to support this theory, found that while having a living father had no beneficial effects on the survival chances of young children, having a living maternal grandmother did (Sear et al. 2002). Demographers have also observed the low rates of father's co-residence with their children and the high rates of maternal grandmothers living with their grandchildren in many parts of sub-Saharan Africa (McDaniel and Zulu 1996). Although this general pattern remains common—in response to widespread internal migration, increases in women's education and employment opportunities, rising age of marriage, and (in some countries) an on-going severe HIV/AIDS epidemic—family structures and the bonds connecting mothers, fathers, and extended kin to young children may be changing.

In South Africa, the bonds to maternal grandmothers are traditionally strong, while the ties between parents are relatively fragile. Much has been written about the importance of grandparents, especially maternal grandmothers, helping to raise young children in South Africa (Schatz 2007; Chazan 2008). The importance of their role was magnified by the system of apartheid in South Africa, which spurred extensive male labor migration and generated many three-generation households in rural areas consisting of grandmothers, mothers, and children. The AIDS epidemic, which swept through South Africa in the 1990s and is still on-going, resulted in a large number of "missed" generation households comprised only of grandmothers and children. Both of these factors tended to increase the importance of matrilineal kin, particularly maternal grandmothers. Yet, there are signs that support from extended kin is under considerable strain and in many cases breaking down (Mtika 2001). Moreover, the end of apartheid did not mark the end of internal migration. Instead, not only has male migration continued, but there has also been a sharp rise in female migration (Posel and Casale 2003: Collinson et al 2006). As women move away from their natal home areas, support from maternal kin is likely to decline. Lastly, increases in women's education and, hence, employment opportunities may also afford young mothers the ability to choose to live on their own rather than with their parents.

Male labor migration-- both during and after apartheid-- had a profound impact on men's relationship with their children, dramatically reducing rates of co-residence and contact. This has lead to what Goody (1972) refers to as the peripheralization of men in the family. However, migratory fathers are likely to send back remittances and, thus, fulfill one of the important roles of fatherhood as a breadwinner (Lu and Treiman 2011). Indeed, qualitative evidence suggests that young fathers are often more reluctant to take on the role of fatherhood if they are unemployed (Swartz and Bhana 2009). Another factor, namely the precipitous decline in formal

unions among black South Africans, may have an even more disruptive effect on father's relationship to their children (Hosegood, McGrath, and Moultrie 2009). Several studies conducted in North America show that mothers play a mediating role in the relationship between fathers and their children (Amato and Gilbreth 1999; Allen and Hawking 1999) and that the quality of the relationship between mothers and non-residential fathers also impacts how often fathers see their children (Coley and Chase-Lansdale 1999). These studies raise concerns that as unions become less formal and fewer couples cohabit fathers will become less engaged in their children's lives. Indeed, overall there is growing concern about the apparent absence of fathers during childhood and the potential negative effect this may have on child development and well-being (Richter and Morrell 2006).

Countervailing these trends, however, are changes in the ways that unions are formed and in new roles of fatherhood. While rates of formal union have declined, unions are typically no longer arranged by parents and kin, although kin may voice objections or approval. Instead, the decision to form a union or enter into a relationship is generally made by the couple on the basis of attraction and affection. These ties of affection between parents may be quite strong even if the parents do not live together and mothers often welcome fathers' attachment to their children (Madhavan and Roy 2012). An emerging body of research argues that although many fathers do not co-reside with their children, non-residential fathers in South Africa often provide considerable financial support and establish regular contact with their children (Madhavan, Townsend, and Garey 2008; Swartz and Bhana 2009). Although most of these studies are based on observational or small non-random samples, they point out that these types of contributions are generally missed by standard demographic and health surveys, which only collect data on co-residence (Posel and Devey 2006). One study, using rare longitudinal quantitative data from the Birth to Twenty project in Johannesburg gathered information not only on father-child co-residence, but also on contact with and provision of financial support from non-residential fathers (Madhavan et al. 2012). They found that over three-quarters of very young children (ages 0 to 2) had contact with their fathers, although this proportion fell to less than half among children ages 12 to 18. Similarly, two-thirds of children ages 0 to 2 received financial support from their fathers compared to only 38% of children aged 12 to 18 (Madhavan et al. 2012). Although this study is groundbreaking in many respects, it faces critical data limitations. Most importantly, information about contact with and support from fathers is primarily reported by mothers and the majority of this information is collected retrospectively when the child was 18. Nonetheless, it offers strong evidence that many non-residential fathers play an important role in their children's lives even if their involvement declines over time.

The role of paternal kin has received little attention compared to either maternal kin or fathers. However, as Madhavan and Roy (2012) demonstrate, in both the U.S. and South Africa, care of children is often a negotiated process between the biological parents and their respective kin. Young unmarried mothers may actively seek recognition from the child's paternal kin as acknowledgement of the child's lineage, which is often signified by giving the child the father's surname (Madhavan 2010). Moreover, paternal kin are typically directly involved in negotiating and paying the lobola (brideweath) or isisu (damages), which are paid if the young father does not intend to marry the child's mother. Some fathers, especially young fathers, may decide to co-reside with their parents (i.e. the child's paternal grandparents), while they are saving sufficient resources to establish an independent household for their child and the child's mother

(Madhavan et al. 2008). In the case of very young men, the role that paternal grandmothers play in raising young children may even supersede that of fathers (Swartz and Bhana 2009).

Our paper expands on this growing area of research by drawing on exceptionally rich longitudinal data collected in Cape Town. These data allow us to overcome several of the main challenges in the previous research. First, and perhaps most importantly, our data contains reports *from men* about their birth histories, living arrangements, frequency of contact with their children, and financial support of their non-residential children. Viewing the father-child relationship through father's eyes rather than mother's provides not only a fresh perspective, but also potentially a more accurate one. Second, most quantitative studies in sub-Saharan Africa, with the few exceptions described above, continue to use co-residence in the household as a proxy for involvement in child-rearing. In this study, we assess involvement from non-residential fathers. Third, we will examine the role of paternal grandparents to assess the extent to which they may encourage or discourage young fathers from living with their children, seeing their children, or providing financial assistance. Fourth, our research focuses on urban children and youth, providing an interesting contrast to the majority of past research centering on rural sub-Saharan Africa. Lastly, by using longitudinal data, rather than cross-sectional data, we can examine how key circumstances *at the time of the pregnancy*, including their relationship to the other parent, their household wealth, employment and schooling status, and household composition, may influence the child's living arrangements and paternal involvement as the child grows up. Thus, we will be able to address two main questions. First, we will assess how the strength of conjugal ties (between biological parents) and the closeness of consanguineous bonds (between parents and grandparents) influence where children live. Second, we will investigate whether conjugal ties and consanguineous residence effects how frequently fathers see their children or provide financial support.

Data and Methods

For our analyses, we employ data from the Cape Area Panel Study (CAPS). CAPS was designed using a two-stage probability sample of households, with an oversampling of African and white households in order to obtain samples large enough to make meaningful comparisons across groups. The baseline wave of CAPS surveyed 4,751 young adults (aged 14 to 22) in 3,304 households located in the metropolitan Cape Town area of South Africa. As in most South African household surveys, response rates were high in African and Coloured areas and low in white areas, largely because whites disproportionately live in gated communities to which interviewers have limited access.

A second, third and fourth round were conducted in 2003/2004, 2005, and 2006 respectively. In the fourth round (Wave 4), 3,438 young adults (1,561 men and 1,877 women), who are now aged 18 to 26, were interviewed representing approximately 72% of the original sample.[1] Attrition rates differ significantly by race. Coloured youth have the lowest attrition rates, followed by Africans and whites. Most attrition by black Africans is due to back-migration to the rural Eastern Cape province, the main sending region for Africans living in Cape Town. Attrition rates for whites include both migration out of Cape Town (including out of South Africa) and a

[1] Less than 2% of our sample in Wave 4 falls outside of this age range due to slight age misreporting. However, we removed one woman who reports a very large age difference (13 years) across waves.

significant number of refusals. Given CAPS's target sample of highly mobile adolescents making the transition to adulthood, these attrition rates are reasonable for both Africans and Couloured youth, although these rates should be kept in mind when interpreting our results. However, because of both high attrition rates and initial response rates, we exclude whites from our analyses presented below. Lam et al. (2008) provides a full description of the details of the CAPS study design, response rates, and attrition across the first four waves.

By wave 4, nearly 40% of these women and 17.5% of these men had had at least one child, yielding a total of 311 children reported by young fathers and 901 children reported by young mothers.[2] These children constitute our primary analytic sample. Our analyses focus on three main outcomes: 1) whether young mothers or fathers co-reside with their children, 2) whether young mothers or fathers see their child at least once a week, and 3) whether fathers provide financial assistance to their non-residential children. Our first outcome simply indicates whether the child normally lives with the young mother or father.[3] However, since in many parts of sub-Saharan Africa, co-residence is a poor proxy for child care and support, our second outcome variable extends beyond the walls of the household and examines how often the parent sees the child. This categorical variable captures whether parents see their child "every day," "several times a week," "several times a month," "several times a year," or "never." We collapse these categories into a dummy variable, where "1" indicates that the parent sees the child "every day" or "several times a week" and "0" otherwise. All parents who report co-residing with their children are coded as "1". In our final set of analyses, we limit our sample of young fathers to those who do not co-reside with their children and of young mothers who report that the child's father does not co-reside with them to assess both men's and women's reports of father's financial support to non-residential children. Young fathers who do not reside with their child are asked "Do you provide any financial support to anyone to look after [child's name]?" and young mothers who do not reside with the child's father are asked "Does [child's name] other parent provide any financial support to you for [child's name]?".

Our two key independent variables focus on indicators of the quality of the parent's relationship to each other and the intergenerational ties between the young parent and his/her parents. Our primary measure of relationship status uses the question "How would you describe your relationship with him/her [the child's other parent] at the time the pregnancy occurred?". We code these responses as "1" = spouse/married, "2" = co-residential girl/boyfriend, "3" =non-cohabiting girl/boyfriend, and "4"= ex-spouse, former girl/boyfriend, or never a steady relationship. Although information is also collected on the relationship status at the time of the survey (wave 4), we focus primarily on the status during pregnancy to establish temporal order and reduce the potential for reverse causality. Nonetheless, we use information on current relationship status to examine changes in the relationship over time. Specifically, we assess whether the relationship status stayed the same between the time of pregnancy and Wave 4, deteriorated (i.e. became less close or less formal), or improved (i.e. became closer or more

[2] These numbers exclude 2 children with missing birth dates and 15 children who died before Wave 4. Since we are interested in assessing parental involvement of non-orphans, we have also excluded 20 children who have lost a biological parent (18 fathers and 2 mothers).

[3] The handful of young mothers or fathers who reported that their children "sometimes" reside with them are coded as not co-residing.

formal). Although these changes are potentially endogenous, they reveal interesting associations between the dynamic processes of parental relationships and parent-child bonds.

To reduce endogeneity, we assess the young (soon-to-be) mothers' and fathers' living arrangements at the time of the pregnancy rather than at the time of the survey. We are fortunate in that the CAPS survey not only collected information about whether the young adult lived with his or her mother at each round, but the first wave also included a retrospective life history calendar, which recorded whether the young adult co-resided with his or her mother or father for each previous year. Using the date each child was born, we can therefore determine whether the young adult 1) did not live with either their mother or father, 2) lived only with their mother, 3) lived only with their father, or 4) lived with both their mother and father during the pregnancy.

For the indicators of our time-varying control variables, we are similarly concerned about establishing the correct temporal order and, thus, we exploit the longitudinal nature of these data to best approximate indicators at the time of the pregnancy. For example, our indicators of school enrolment and educational attainment use both retrospective and longitudinal data to establish the parent's status at the time of pregnancy. Our indicators, such as whether the parent was working, the overall economic status of the household, and whether anyone went hungry in the household were measured at Wave 1 or at the Wave immediately preceding the child's birth. Our indicators for race, child's sex, and age are treated as time constant and taken from data gathered in Wave 4.

One of the primary advantages of the CAPS data is that it gathered information about fertility and children from men as well as women. These data offer us a rare glimpse into parenting from men's perspective. However, the sample of children reported by young men in our sample is likely to be different, but potentially overlapping, with the sample of children reported by young women in our sample. Thus, we run all analyses separately for young mothers and fathers. All of our multivariate analyses employ logistic regression and cluster by mother or father to account for the correlations between children who share the same parent.

Results

Before examining the characteristics of the children in our sample, we briefly examine the characteristics of young adults by whether or not they became young parents. Table 1 provides clear evidence of selection effects into parenthood for both men and women as well as important gender differences. More than twice as many women (40%) than men (18%) reported having at least one child. Mothers tend to be slightly younger than fathers (even among this relatively young sample, 20.7 vs 21.1 years) and mothers are more likely to be in school and less likely to work compared to fathers. However, for both men and women race is strongly associated with becoming a young parent. No young Indian men or women or white men report being a parent and only two white women are mothers. [4] In contrast, among young mothers and fathers roughly half are African and the other half are Coloured. Both mothers and fathers are significantly less likely to be in school than their counterparts without children and men with children are more likely to be working than men without children. Young mothers and fathers are less likely to describe their household economic status as comfortable or very comfortable than young adults

[4] The children of these two white mothers are consequently dropped from our multivariate analyses.

without children; and young mothers are more likely young women without children to report that someone in their household went without food at least one day in the last month. Not surprisingly, compared to young adults who do not have children, young fathers and mothers are less likely to live with either their mother or father and are more likely to have ever been married.

(insert Table 1 about here)

Table 2 explores the living arrangements of children of young mothers and fathers. Children are strikingly less likely to live with their young fathers (26%) than with their young mothers (90%). Moreover, among children who co-reside with their fathers almost 88% also live with their mothers. In contrast, only 33% of children who live with their mothers also co-reside with their fathers. Among children who live apart from their fathers or mothers, there are also clear differences. The vast majority of children who do not live with their fathers live with their mothers (85%), while over 90% of children who do not live with their mothers live with a grandparent or other relative and only 8% live with their fathers. However, differences between mothers and fathers become much less stark, although still significant, when we consider regular contact with children rather than residence. Although only one-quarter of young fathers live in the same household as their children, three-quarters report seeing their child at least once a week. In comparison, while 90% of young mothers live with their children and presumably see them regularly, including regular contact with non-residential mothers increases the proportion of children who see their mothers at least weekly to only 92%. Furthermore, there are no significant differences in the percentage of young fathers and young mothers who report giving financial support for their non-residential children (61% vs. 56%, respectively). Lastly, consistent with previous research in the U.S. suggesting that mothers consistently underestimate non-residential fathers' contributions and involvement (Coley and Morris 2002), we find that young mothers are less likely to report that non-residential fathers provide financial support (53%) than non-residential fathers report giving financial support (61%) (although it is important to bear in mind that these are not matched couples).

(insert Table 2 about here)

Other differences between young mothers and young fathers and by residence status are largely in the expected directions. Mothers tend to be younger than fathers and their partners tend to be older. Older parents (both fathers and mothers) are more likely to live with their children. Child's age is strongly associated with whether mothers co-reside with their child, but not with father's residence. Moreover, while there are no differences in race between mothers and fathers, black African parents are significantly less likely to live with their children than are Coloured parents. A Coloured father, for example, is nearly 2.5 times more likely to live with his child than an African father. There are relatively few noticeable differences with respect to parent's education. However, not only are young fathers more likely to be working than young mothers, but if a father is working he is more likely to live with his child. Interestingly, although there are no significant gender differences in the overall poverty level of young mothers and fathers, both mothers and fathers are significantly less likely to live with their children if at the time of the pregnancy they lived in a poor or very poor household or if their household experienced episodes of acute hunger. Receiving a child support grant from the government is also associated with

living apart from children. Importantly, mothers are much more likely to receive this grant than fathers, although receipt is contingent on overall household poverty.

Lastly, we consider the bivariate association between children's living arrangements and ties between parents, on the one hand, and co-residence with grandparents, on the other. We find no significant differences in the union status of young mothers and fathers during pregnancy. Approximately a quarter of young mothers and fathers are married or living with their partner during pregnancy. However, for young fathers, their relationship status with the other parent is strongly correlated with whether they co-reside with their children. Over 40% of young fathers who live with their children are married compared to less than 2% who live apart from their children. Moreover, 80% of fathers who live apart from their children report that they do not live with their girlfriend compared to under a third of men who live with their children. In contrast, relationship status has little bearing on whether young mothers reside with their children. Roughly equal portions of women report being married to (about 17%) or having a non-residential boyfriend (about 63%) regardless of whether she lives with her child. The opposite holds for young parents' relationships with the child's grandparents at the time of pregnancy. Again, we find no overall differences in the proportion of young men and women who live with the child's paternal or maternal grandparents, respectively. The largest proportion of young parents live with both grandparents (48% of young men and 41% of young women) with very few parents living with just the child's grandfathers (about 3%) and around one-fifth living with only the child's grandmothers.[5] For young fathers, whether he lives with his child's paternal grandparents is not strongly associated with whether he lives with his child. However, for young mothers, there are several important differences. Most notably, mothers who live with the child's maternal grandmothers are over four times as likely to live with their child compared to young mothers who do not co-reside with maternal grandmothers.

Turning to our multivariate logistic regressions in Table 3, we find that similar patterns emerge. Whether or not young fathers live with their children is almost entirely mediated by their relationship with the child's mother at the time of the pregnancy. As fathers' ties to their partners become looser and less formal, the likelihood that they live with their children declines both monotonically and precipitously. Even young fathers who live with their partners during the pregnancy experience a roughly 80% decline in the odds that they will live with their child at the time of the survey compared to fathers who are married to the child's mother at the time of the pregnancy. Fathers who report that they did not live with their girlfriend or who had already ended their relationship with their partners during the pregnancy rarely report living with their child later on. Changes in parents' relationship between pregnancy and the time of the last survey are also strongly correlated with whether fathers live with their children. Compared to relationships that stay the same, relationships that deteriorate (for example, relationships that transitions from living together to living apart) result in significantly lower chances of father-child co-residence. In contrast, when parental relationships improve (specifically when fathers either move in with the child's mother or marry her), fathers are vastly more likely to live with

[5] Given the small proportion of parents who live only with the child's grandfathers, we combine residence with grandfathers only and with neither grandparent in all of our regressions. Statistical tests reveal no significant differences between these categories with respect to our outcome measures. Similarly, in Table 5 which examines the role of non-cohabiting fathers, small sample sizes compel us to combine parents who are married with those who are cohabiting with their partners.

their children. Perhaps even more surprising, while our bivariate analyses found no significant association between young fathers' residence with paternal grandparents, our multivariate analyses show that young men who live with both paternal grandparents during the pregnancy are significantly less likely than men who live with neither grandparent (or only grandfathers) to subsequently reside with their children, indicating that few fathers invite both mother and child to live with the child's paternal grandparents.

The reverse is found for young mothers. Mothers' relationship status to the child's father during the pregnancy has little impact on mother-child co-residence. However, there is some indication that when mother's relationship with the child's father deteriorates, women are less likely to live with their children. In contrast to young fathers, mothers who reside with the child's maternal grandmothers (only) during the pregnancy are significantly more likely than mothers who lived on their own during pregnancy to subsequently live with their child. It is interesting to note that the effect of co-residing with maternal grandmothers is much diminished when mothers live with both maternal grandparents.

(insert Table 3 about here)

Consistent with our bivariate results (Table 2), we find that child's age is strongly associated with residence with young mothers but not with young fathers. Similarly, there is a very strong difference in co-residence by race as very few young Coloured mothers report not living with their children. Fathers who are working during the pregnancy are marginally more likely to live with their children. However, unlike our bivariate results, we find no effects of household economic status during pregnancy in these multivariate models; there is some indication that young mothers who receive the child support grant are more likely to live with their children (significant at $p<0.10$).

Table 4 examines the factors associated with whether mothers and fathers have regular contact with their children. The results for whether young mothers regularly see their children are very similar to whether they reside with their children (Table 3), which is not surprising given that nearly all women who have regular contact with their children live with them. For young fathers, however, there are very pronounced differences between the results in Tables 3 and 4. Although father's relationship status with the child's mother during pregnancy was a strong determinant of whether he lived with his children, it has very little impact on how often he sees his child. Similar to Table 3, Table 4 shows that when father's relationship with the child's mother deteriorates he is less likely to see his child, although the effect of relationship improvement on frequency of visits is much less pronounced (and insignificant) compared to its effect on co-residence. Furthermore, while young men who lived with both paternal grandparents during the pregnancy were less likely to live with their child, they are more likely to have regular contact with their child than men who did not live with paternal grandmothers. Lastly, fathers are more likely to see their child if the child receives a child grant, even though this grant rarely goes to non-residential fathers.

(insert Table 4 about here)

In our final set of analyses presented in Table 5, we limit our respective samples to non-residential fathers and to mothers who do not co-reside with the child's father to assess correlates of whether fathers provide financial support to their non-residential children. In Models 1 through 3, we examine young father's relationship with the child's mother during the pregnancy, between pregnancy and Wave 4, and during Wave 4, respectively. For young fathers, there are very few either time-constant predictors or those measured during the pregnancy that appear to be significantly associated with whether or not he provides financial assistance to his child at the time of the survey (Model 1). Notably, neither his relationship with the child's mother nor his co-residence with paternal grandparents are significantly correlated with payment of child support. The results from Model 2 are similar to those found in Model 1. However, Model 3 shows a strong association between father's current economic conditions (whether he is working and his overall household economic status) and his financial support, suggesting that whether fathers provide financial support to non-residential children may be highly dependent on whether or not they can afford to provide this type of support.

(insert Table 5 about here)

Turning to women's reports that fathers offer financial support, we again find very few correlates with their characteristics at the time of pregnancy. However, Model 1 does suggest that young women who are in school at the time of pregnancy and who have at least finished secondary school are more likely to receive support from the child's father. We also find a monotonic decline in the likelihood that fathers provide financial support by the quality of the relationship during pregnancy, but these effects are not significant. However, Model 2 shows that mothers whose relationship with the child's father deteriorates are less likely to report receiving financial help. Similarly, Model 3 shows that compared to mothers who are still married to or in a relationship with the child's father, those whose relationships have ended are far less likely to report receiving support from the child's father. Lastly, mothers living in poorer households are less likely to receive support from non-residential fathers as are mothers who receive a child support grant (significant at $p<0.10$). Finally, mothers who receive child support grants are significantly less likely to also receive support from the child's father.

Discussion

These findings paint a more detailed understanding of the complex unions and intergenerational relationships that govern where children live and who supports them. Our emphasis on the roles of fathers and grandparents draws attention to the fact that while rates of single motherhood in South Africa (and other countries in sub-Saharan Africa) may be high, many of these mothers and their children receive considerable support from both non-residential fathers and co-residential grandparents. Although only a quarter of children live with their young fathers, 75% of non-residential fathers report seeing their children at least once a week and 61% report providing recent financial support. In addition, nearly two-thirds of young mothers co-reside with maternal grandmothers, who presumably provide valuable assistance in raising their grandchildren.

These ties, however, both to partners and to grandparents have very distinct and rather divergent implications for fathers versus mothers. Although young mothers and fathers are equally likely

to be married or cohabiting at the time of the pregnancy, conjugal relationship status has a very strong effect on whether fathers live with their children and a negligible effect on whether mothers reside with their children. Young mothers and fathers are equally likely to be living with the child's maternal and paternal grandparents, respectively, at the time of pregnancy. However, young mothers who live with the child's maternal grandmothers only are significantly more likely to subsequently live with their children, while young fathers who live with the child's paternal grandparents are somewhat less likely to live with their children at the time of the survey. These findings strongly suggest matrilineal consanguineous ties dominate over conjugal relationship bonds in determining where children live in South Africa.

Moreover, co-residence with maternal grandmothers only, rather than both maternal grandparents, is the strongest predictor of child residence. Additional analyses further indicate that co-residence rather than the quality of relationship between mothers and maternal grandmothers is most important. Drawing on a battery of questions in Waves 1 and 3, which assess whether mothers and grandmothers spend time together or talk regularly, we found the closeness of these matrilineal bonds did not significantly impact where children lived.

However, these findings of strong maternal co-residence with respect to child residence should not be taken as *prima fascia* evidence of limited involvement from fathers or paternal kin. Our finding that 75% of fathers see their children regularly irrespective of their relationship status with the child's mother highlights the inherent limitations of using simple household indicators of co-residence or union status as proxies for father's involvement in the lives of their children. This finding is also substantiated by ethnographic research on young fathers in Cape Town, which shows high levels of engagement with their children (Swartz and Bhana 2009). Moreover, while the majority of our fathers report making regular financial contributions for their children, less than 2% (see Table 2) of non-residential fathers are married, suggesting that surveys that simply capture remittances from migrant husbands are likely missing critical financial support obtained from nearby, but not cohabiting, fathers. Consistent with Madhavan et al.'s (2012) finding in Johannesburg, we find that whether mothers receive support from non-residential fathers is not contingent on her economic status. Indeed, mothers who receive a child support grant report that they are less likely to receive assistance from the child's father. However, when we examine financial support from the perspective of fathers, we find that whether non-residential fathers provide financial support appears to be more determined by whether they have the current economic means to do so rather than by the nature and quality of their relationship to the child's mother. Finally, although paternal grandparents are especially unlikely to live with their grandchildren, young fathers who live with paternal grandparents are significantly more inclined to maintain regular contact with their children, potentially suggesting that paternal grandparents too have an interest in establishing ties to non-residential grandchildren.

Future analyses

We note that at the moment these analyses are preliminary and we intend to examine several other unique aspects of the CAPS longitudinal data as well as make important statistical adjustments. First, we need to adjust for attrition across waves and for selection into parenthood. Second, in Waves 3 and 4, CAPS collected several indicators of children's well-being (overall health, illness in the last month, and whether they are in school or a crèche). In

addition, in Wave 4, all children co-residing with their mothers (n=831) provided additional health indicators, including their weight, height, weight at birth, and immunization status. Preliminary results yielded few significant differences in health outcomes by parents' union status or residence. Yet, as we have seen, the process of becoming a parent and decisions about co-residence are highly selective. Thus, methods such as propensity score matching and fixed effects, which could reduce some of this selection effect, may allow us to better explore and understand the potential relationships between family structures and child health and well-being outcomes.

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Table 1. ***Characteristics of young fathers and mothers.***

	Men	Women	Sig.
Ever pregnant or got partner pregnant (%)	20.2	43.6	***
Ever had live birth (%)	17.5	39.7	***
Total number of children (mean)	0.20	0.50	***
Total number of children, if any (mean)	1.16	1.25	**
N	1,561	1,877	

	Fathers	Non-fathers	Sig.	Mothers	Non-mothers	Sig.	Fathers v. Mothers Sig
Age	21.1	23.4	***	20.7	22.8	***	***
Race			***			***	
African	48.0	43.9		52.6	44.7		
Coloured	52.0	45.9		47.2	44.0		
Indian	0.0	0.4		0.0	0.5		
White	0.0	9.8		0.3	10.7		
Currently in-school/university	4.4	31.5	***	8.7	39.5	***	*
Highest level of education							
Primary or less	6.2	6.4		5.5	2.3	***	
Some secondary	61.2	54.4		61.0	47.0		
Matriculated from secondary or higher	32.6	39.3		33.5	50.7		
Currently working	80.2	60.3	***	54.0	50.5		***
Household economic status			***			***	**
Comfortable or very comfortable	23.7	34.2		22.8	36.7		
Getting by	61.3	46.8		53.2	45.4		
Poor or very poor	15.0	19.0		23.9	18.0		
Went hungry in last month	18.4	18.2		23.7	16.4	***	†
Young adult resides with parent(s)			***			***	†
Neither mother or father	37.4	21.5		42.4	23.9		
With mother	29.3	31.7		32.2	32.1		
With father	4.4	6.4		3.1	4.2		
Both mother and father	28.9	40.4		22.4	39.9		
Marital status at survey			***			***	*
Never married	82.8	98.3		76.4	97.4		
Ever married	17.2	1.7		23.6	2.7		
N	273	1,288		746	1,131		

Significance: ***p<=0·001, **p<=0·01, *p<=0·05, +p<=0·10

Table 2. ***Characteristics of children of young parents by co-residence.***

	Children of Young Fathers				Children of Young Mothers				Mother v. father	Co-reside mother v. father	Live apart mother v. father
	Total	Co-reside	Live apart	Sig.	Total	Co-reside	Live apart	Sig.	Sig.	Sig.	Sig.
Child co-resides with parent (%)	26.4	na	na	na	90.3	na	na	na	***	na	na
Child co-residency (%)				na				na	***	***	***
Both parents	23.2	87.8	0.0		29.4	32.6	0.0				
One parent only (respondent)	3.2	12.2	0.0		60.9	67.4	0.0				
Other parent only	62.7	0.0	85.2		0.8	0.0	8.1				
Grandparent/relative only	10.9	0.0	14.9		8.9	0.0	92.0				
Parent sees child at least weekly	75.2	100.0	66.4	na	92.3	100.0	20.7	na	***	na	***
Parent provides support for non-residential child[a]	na	na	61.1	na	na	na	56.3	na	na	na	
Other non-residential parent provides support for child[b]	19.3	20.0	19.3		49.7	52.9	21.9	***	***	*	
Child Characteristics											
Child age (mean)	2.7	2.4	2.8		3.2	3.0	5.0	***	***	*	***
Female child	49.8	48.8	50.2		50.5	50.3	52.9				
Young Parent Characteristics											
Age at birth	21.3	22.1	21.0	***	20.2	20.3	19.1	***	***	***	***
Other parent's age at pregnancy[c]	19.7	20.9	19.2	***	24.1	24.1	23.4		***	***	***
Race											
African	47.3	28.1	54.2	***	52.4	48.2	92.0	***		***	***
Coloured	52.7	72.0	45.9		47.6	51.8	8.1				
In-school/university during pregnancy	22.5	6.1	28.3	***	32.6	31.0	48.3	***	***	***	***
Highest level of education during pregnancy				*				*			***
Primary or less	13.2	19.5	10.9		16.7	15.6	26.4				
Some secondary	64.3	53.7	68.1		63.8	64.0	62.1				
Matriculated from secondary or higher	22.5	26.8	21.0		19.5	20.4	11.5				
Working during pregnancy	43.7	68.3	34.9	***	21.9	22.9	12.6	*	***	***	***
Household economic status during pregnancy				**				***		**	**
Comfortable or very comfortable	19.3	28.1	16.2		15.5	16.3	8.1				
Getting by	44.4	47.6	43.2		43.4	44.7	31.0				
Poor or very poor	36.3	24.4	40.6		41.1	38.9	60.9				
Hungry in household during pregnancy	37.3	29.3	40.2	†	38.5	36.9	54.0	**			*
Receives child grant (wave 4)	32.8	24.4	35.8	†	55.4	54.1	67.8	*	***	***	***
Family ties of young parents											
Relationship to other parent during pregnancy				***				*		***	***
Spouse	12.5	42.7	1.8		17.2	18.1	17.2				
Girl/boyfriend (co-residential)	13.2	23.2	9.6		8.1	13.8	8.1				
Girl/boyfriend (live apart)	68.2	32.9	80.8		63.2	63.5	63.2				
Ex-partner	6.1	1.2	7.9		11.5	4.7	11.5				
Parent's residency during pregnancy								***			***
Neither grandmother or grandfather	27.7	34.2	25.3		33.1	31.9	43.7				
Grandmother only	21.5	24.4	20.5		23.4	25.3	5.8				
Grandfather only	3.2	2.4	3.5		2.9	2.8	3.5				
Both grandmother and grandfather	47.6	39.0	50.7		40.6	39.9	47.1				
N	311	82	229		901	814	87				

Significance: ***p<=0·001, **p<=0·01, *p<=0·05, +p<=0·10

a: Limited to 233 fathers and 88 mothers, who do not co-reside with their child.

b: Limited to 235 fathers and 610 mothers, who do not co-reside with the other parent.

c: Limited to 271 fathers and 740 mothers, who are not missing information on their partner's age.

Table 3. ***Predictors of whether young fathers and mothers co-reside with their children (logistic regression).***

	Fathers								Mothers							
	At Pregnancy				Over Time				At Pregnancy				Over Time			
	OR	Coef.	Std. Error	Sig.	OR	Coef.	Std. Error	Sig.	OR	Coef.	Std. Error	Sig.	OR	Coef.	Std. Error	Sig.
Relationship to other parent during pregnancy																
Spouse (ref)	1.00	0.00	---		na	na	na		1.00	0.00	---		na	na	na	
Girl/boyfriend (co-residential)	0.18	-1.74	0.84	*	na	na	na		1.99	0.69	0.54		na	na	na	
Girl/boyfriend (live apart)	0.02	-3.89	0.74	***	na	na	na		0.91	-0.10	0.40		na	na	na	
Ex-partner	0.01	-4.76	1.37	***	na	na	na		0.56	-0.58	0.56		na	na	na	
Changes in parent's relationship																
Remains the same (ref)	na	na	na		1.00	0.00	---		na	na	na		1.00	0.00	---	
Deteriorates	na	na	na		0.22	-1.50	0.6	**	na	na	na		0.48	-0.73	0.30	*
Improves	na	na	na		27.39	3.31	0.6	***	na	na	na		1.76	0.56	0.62	
Parent's residency during pregnancy																
Grandmother absent (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Grandmother only	0.48	-0.73	0.50		0.79	-0.24	0.4		3.90	1.36	0.50	**	4.42	1.49	0.53	**
Both grandmother and grandfather	0.43	-0.86	0.39	*	0.46	-0.77	0.4	+	1.53	0.43	0.32		1.64	0.50	0.30	
Child's age (Wave 4)	1.26	0.23	0.32		1.63	0.49	0.3	+	0.56	-0.58	0.16	***	0.61	-0.49	0.17	**
Child's age squared	0.97	-0.03	0.05		0.94	-0.06	0.0		1.03	0.03	0.02	+	1.02	0.02	0.02	
Child's sex																
Male (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Female	0.66	-0.42	0.35		0.84	-0.17	0.3		0.86	-0.15	0.25		0.86	-0.15	0.25	
Parent's age at birth																
<= 18 (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
19-21	0.49	-0.71	0.60		1.53	0.42	0.6		1.42	0.35	0.36		1.40	0.33	0.35	
22-30	0.73	-0.32	0.67		3.48	1.25	0.7	+	1.18	0.16	0.43		1.28	0.25	0.42	
Race																
African (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Coloured	2.73	1.00	0.57	+	2.53	0.93	0.5	*	15.79	2.76	0.47	***	15.50	2.74	0.47	***
In school/university at pregnancy	0.49	-0.72	0.64		0.74	-0.31	0.7		0.91	-0.10	0.29		0.92	-0.08	0.29	
Highest level of education at pregnancy																
Primary or less (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Some secondary	0.56	-0.58	0.52		0.29	-1.25	0.5	**	1.26	0.23	0.33		1.29	0.25	0.33	
Matriculated from secondary or higher	0.57	-0.56	0.58		0.40	-0.92	0.6		0.82	-0.20	0.49		1.30	0.26	0.49	
Working during pregnancy	2.01	0.70	0.42	+	2.25	0.81	0.3	*	1.09	0.09	0.46		1.03	0.02	0.46	
Household economic status during pregnancy																
Comfortable or very comfortable (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Getting by	0.89	-0.12	0.49		0.74	-0.31	0.4		1.32	0.27	0.58		1.28	0.25	0.55	
Poor	0.65	-0.43	0.62		0.76	-0.28	0.5		1.04	0.04	0.58		0.94	-0.06	0.54	
Hungry in household while pregnant	1.19	0.18	0.45		0.69	-0.37	0.4		0.93	-0.08	0.29		1.10	0.10	0.29	
Receives child grant	0.82	-0.20	0.47		0.57	-0.56	0.4		1.73	0.55	0.30	+	1.65	0.50	0.31	
n		311				311				901				901		

Significance: ***p<=0·001, **p<=0·01, *p<=0·05, +p<=0·10

Models adjusted for clustering within parent.

Table 4. ***Predictors of whether young fathers and mothers see their children at least once a week (logistic regression).***

	Fathers								M			
	At Pregnancy				Over Time				At Pregnancy			
	OR	Coef.	Std. Error	Sig.	OR	Coef.	Std. Error	Sig.	OR	Coef.	Std. Error	Sig.
Relationship to other parent during pregnancy												
Spouse (ref)	1.00	0.00	---		na	na	na		1.00	0.00	---	
Girl/boyfriend (co-residential)	0.87	-0.14	0.76		na	na	na		1.92	0.65	0.53	
Girl/boyfriend (live apart)	0.45	-0.80	0.62		na	na	na		1.23	0.21	0.40	
Ex-partner	0.15	-1.93	1.02	+	na	na	na		1.51	0.41	0.68	
Changes in parent's relationship												
Remains the same (ref)	na	na	na		1.00	0.00	---		na	na	na	
Deteriorates	na	na	na		0.34	-1.08	0.38	**	na	na	na	
Improves	na	na	na		2.32	0.84	0.79		na	na	na	
Parent's residency during pregnancy												
Grandmother absent (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Grandmother only	1.64	0.50	0.50		1.89	0.64	0.50		3.30	1.19	0.51	*
Both grandmother and grandfather	1.98	0.68	0.38	+	2.34	0.85	0.41	*	2.08	0.73	0.35	*
Child's age (Wave 4)	0.63	-0.47	0.25	+	0.58	-0.54	0.27	*	0.59	-0.53	0.17	**
Child's age squared	1.01	0.01	0.03		1.03	0.03	0.03		1.03	0.03	0.02	
Child's sex												
Male (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Female	0.84	-0.18	0.31		0.85	-0.16	0.32		0.84	-0.17	0.27	
Parent's age at birth												
<= 18 (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
19-21	1.27	0.24	0.55		1.78	0.58	0.50		1.68	0.52	0.38	
22-30	1.52	0.42	0.67		2.60	0.96	0.66		1.46	0.38	0.46	
Race												
African (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Coloured	5.37	1.68	0.49	***	5.89	1.77	0.49	***	13.50	2.60	0.49	***
In school/university at pregnancy	1.26	0.23	0.47		1.45	0.37	0.44		1.05	0.05	0.32	
Highest level of education												
Primary or less (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Some secondary	0.59	-0.52	0.48		0.56	-0.58	0.48		1.05	0.05	0.37	
Matriculated from secondary or higher	1.51	0.41	0.64		1.31	0.27	0.61		0.79	-0.23	0.51	
Currently working	1.34	0.29	0.38		1.09	0.09	0.38		1.18	0.16	0.47	
Household economic status during pregnancy												
Comfortable or very comfortable (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Getting by	1.17	0.16	0.48		1.24	0.22	0.50		1.73	0.55	0.59	
Poor	0.99	-0.01	0.55		1.26	0.23	0.57		0.95	-0.05	0.57	
Hungry in household while pregnant	2.05	0.72	0.43	+	1.67	0.51	0.42		1.20	0.18	0.31	
Receives child grant	3.00	1.10	0.38	**	2.66	0.98	0.39	*	1.71	0.54	0.33	+
n		311				311				901		

Significance: ***p<=0·001, **p<=0·01, *p<=0·05, +p<=0·10

Models adjusted for clustering within parent.

Table 5. ***Factors associated with father's financial assistance to their non-residential children as reported by fathers and mothers (logistic regression).***

	Father's reports of financial assistance												Mother's reports of father's financial assistance											
	Model 1				Model 2				Model 3				Model 4				Model 5				Model 6			
	At Pregnancy				Over Time				At Survey				At Pregnancy				Over Time				At Survey			
	OR	Coef.	Std. Error	Sig.	OR	Coef.	Std. Error	Sig.	OR	Coef.	Std. Error	Sig.	OR	Coef.	Std. Error	Sig.	OR	Coef.	Std. Error	Sig.	OR	Coef.	Std. Error	Sig.
Relationship to other parent																								
Married/living together (ref)	1.00	0.00	---		na	na	na		1.00	0.00	---		1.00	0.00	---		na	na	na		1.00	0.00	---	
Girl/boyfriend (live apart)	1.20	0.18	0.53		na	na	na		1.45	0.37	0.89		0.95	-0.05	0.33		na	na	na		1.12	0.11	0.52	
Ex-partner	0.46	-0.77	0.70		na	na	na		0.79	-0.24	0.87		0.42	-0.87	0.52	+	na	na	na		0.16	-1.81	0.53	***
Changes in parent's relationship																								
Remains the same (ref)	na	na	na		1.00	0.00	---		na	na	na		na	na	na		1.00	0.00	---		na	na	na	
Deteriorates	na	na	na		0.63	-0.46	0.34		na	na	na		na	na	na		0.22	-1.52	0.21	***	na	na	na	
Improves	na	na	na		0.49	-0.72	1.04		na	na	na		na	na	na		1.36	0.31	0.78		na	na	na	
Parent's residency during pregnancy																								
Grandmother absent (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Grandmother only	1.32	0.28	0.49		1.27	0.24	0.48		1.13	0.12	0.45		0.84	-0.17	0.25		0.89	-0.11	0.26		1.13	0.12	0.24	
Both grandmother and grandfather	1.25	0.22	0.39		1.32	0.28	0.39		0.60	-0.51	0.45		0.83	-0.19	0.23		0.91	-0.10	0.24		0.80	-0.22	0.27	
Child's age (Wave 4)	1.58	0.46	0.24	+	1.51	0.41	0.24	+	1.12	0.12	0.26		0.83	-0.19	0.13		0.44	-0.82	0.14		1.05	0.05	0.15	
Child's age squared	0.94	-0.06	0.03	+	0.95	-0.06	0.03	+	0.97	-0.03	0.03		1.00	0.00	0.01	+	0.99	-0.01	0.02		0.98	-0.02	0.02	
Child's sex																								
Male (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Female	1.31	0.27	0.30		1.37	0.31	0.30		1.27	0.24	0.32		1.35	0.30	0.17	+	1.38	0.32	0.18	+	1.40	0.33	0.19	+
Parent's age at birth																								
<= 18 (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
19-21	1.06	0.06	0.44		1.14	0.13	0.45		1.43	0.36	0.51		1.00	0.00	0.23		1.01	0.01	0.24		0.85	-0.17	0.23	
22-30	1.60	0.47	0.60		1.90	0.64	0.61		1.54	0.43	0.61		0.61	-0.49	0.32		0.71	-0.35	0.33		0.52	-0.66	0.32	+
Race																								
African (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Coloured	0.52	-0.66	0.45		0.57	-0.56	0.43		0.27	-1.32	0.54	*	0.96	-0.04	0.23		1.20	0.19	0.24		0.85	-0.17	0.25	
In school/university	1.00	0.00	0.42		1.09	0.09	0.41		0.33	-1.11	0.80		1.69	0.53	0.21	*	1.73	0.55	0.21	*	1.29	0.25	0.37	
Highest level of education																								
Primary or less (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Some secondary	1.44	0.36	0.53		1.59	0.47	0.51		0.24	-1.41	0.94		1.42	0.35	0.30		1.29	0.26	0.32		1.90	0.64	0.47	
Matriculated from secondary or higher	2.30	0.84	0.62		2.51	0.92	0.60		0.37	-0.99	0.95		1.84	0.61	0.36	+	1.97	0.68	0.38	+	2.28	0.82	0.51	
Currently working	1.38	0.32	0.35		1.26	0.23	0.35		7.01	1.95	0.43	***	1.10	0.09	0.26		0.85	-0.16	0.26		0.94	-0.07	0.22	
Household economic status																								
Comfortable or very comfortable (ref)	1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---		1.00	0.00	---	
Getting by	0.70	-0.36	0.45		0.78	-0.25	0.47		0.22	-1.49	0.53	**	0.80	-0.23	0.29		0.79	-0.23	0.30		0.77	-0.26	0.28	
Poor	0.50	-0.69	0.53		0.61	-0.50	0.54		0.14	-1.95	0.75	**	1.13	0.12	0.32		1.04	0.04	0.32		0.54	-0.63	0.34	+
Hungry in household	0.91	-0.10	0.35		0.88	-0.13	0.34		0.82	-0.20	0.50		0.86	-0.15	0.22		0.96	-0.04	0.23		0.85	-0.16	0.26	
Receives child grant (W4)	0.63	-0.47	0.34		0.60	-0.52	0.34		0.56	-0.59	0.35	+	0.77	-0.26	0.21	+	0.65	-0.43	0.22	*	0.65	-0.44	0.22	*
n	229				229				229				610				610				610			

Significance: ***p<=0·001, **p<=0·01, *p<=0·05, +p<=0·10

Models adjusted for clustering within parent.