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Measuring extended families over time in informal settlements in Nairobi, Kenya: Retention and data consistency in a two-round survey

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Contents

| | | |
|-----|---|------|
| 1 | Introduction | 1340 |
| 2 | Longitudinal studies of children and families in sub-Saharan Africa | 1341 |
| 3 | Study site, data, and methods | 1343 |
| 3.1 | Single mothers and construction of kinship | 1344 |
| 3.2 | Description of retention process | 1345 |
| 4 | Attrition and its implications | 1346 |
| 5 | Consistency in reporting across waves and implications | 1348 |
| 6 | Discussion and conclusion | 1351 |
| | References | 1353 |

Measuring extended families over time in informal settlements in Nairobi, Kenya: Retention and data consistency in a two-round survey

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Abstract

BACKGROUND

Researchers have increasingly turned to longitudinal data to understand how the family environment of children changes over time and how this change affects their well-being. While the value of such efforts is clear, the inherent challenges of collecting robust data over time may limit or bias our understanding of family complexity.

OBJECTIVE

Drawing on data from an exploratory study on kinship structure and support for low income single mothers and their young children in Nairobi, Kenya, this paper aims to (1) assess the strengths and weaknesses of our approach in reflecting the complexities of kinship dynamics and (2) analyze how methodological issues such as selection and reporting inconsistency can influence our understanding of the role of kin in children's lives.

METHODS

The analysis used data from two waves of the Kinship Support Tree (KST) project. The starting sample consisted of 462 single mothers with at least one child under the age of 7, with data collected on approximately 5,000 resident and nonresident kin. Descriptive statistics and conventional tests of significance were used to analyze selection factors and inconsistencies in reporting across waves.

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RESULTS

The study yielded a 91% retention rate after six months and the analysis provides some assurance that selectivity from attrition and reporting inconsistency are not entirely driven by shifts in support provision by kin. However, the selectivity of the sample underscores caution in generalizing the results.

CONCLUSIONS

While the challenges of conducting follow-up surveys such as the KST are serious, these findings suggest that it is possible to collect consistent data on kinship structure and support from the perspective of children in a mobile population. Tracking kinship structure over time using the KST is not only feasible but more importantly is unlikely to lead to incomplete or biased understanding of kinship.

CONTRIBUTION

After further testing with a wider range of women, we hope to disseminate our results for use in a wide range of contexts both in and out of Africa. We believe this data is vital to designing appropriate interventions to improve the well-being of children growing up in these communities.

1. Introduction

How we understand kinship structure in Africa – or anywhere – is informed as much by conceptual frameworks as it is by the methods that are used to collect the data. Moreover, the methods we employ may be insufficient to capture the extent of complexity and dynamism. Rapid social change in union formation processes is one of the factors that has altered what kinship means and its role in key decisions. Anthropologists have documented a shift from formal to informal unions (Hetherington 2001), including a rise in ‘companionate’ marriage (Hirsch et al. 2009; Smith 2007) and changes in the role of bridewealth and related ceremonies in union formation (Jensen 2015; Hetherington 2001; Silberschmidt 1999). Nonmarital fertility, which is on the rise (Lloyd and Mensch 2008), can affect kinship support to the mother and her children (Madhavan, Harrison, and Sennott 2013) and alter the role of fathers and their kin (Clark, Cotton, and Marteleto 2015; Madhavan et al. 2014; Swartz and Bhana 2009). Finally, factors such as unemployment and overall economic insecurity are affecting the ability of kin, and particularly men, to provide consistent support (Hunter 2007). While it is not yet evident whether such changes are associated with increasing union instability, recent research has found an effect of parental union instability on early initiation of sexual behavior among adolescents in South Africa (Goldberg 2013).

In demographic and public health research, it is well recognized that longitudinal studies offer a wide range of advantages over cross-sectional studies to examine changes over time and their related causal factors. The increasingly sophisticated examination of family structure and children's well-being has benefited from such data collection efforts (Clark, Cotton, and Marteleto 2015; Ford and Hosegood 2005; Madhavan et al. 2012). However, most longitudinal data is limited to the coresidential household. This limits our definition of family to coresidents even in contexts where linkages among nonresidential kin have been seen as critical to children's well-being (Adams, Madhavan, and Simon 2001; Cunningham et al. 2010; Sear and Mace 2008; Sear, Mace, and McGregor 2000) and constrains our ability to understand dynamism of broader social environments for children. In contexts marked by economic insecurity and spatial mobility, it would be expected that the role of kin changes even over short spans of time. Using data from an exploratory two-wave study on kinship structure and support for single mothers and their children in a highly mobile slum population in Nairobi, Kenya, this paper aims to (1) assess the strengths and weaknesses of our approach in reflecting the complexities of kinship dynamics and (2) analyze how methodological issues such as selection and reporting inconsistency can influence our understanding of the role of kin in children's lives. While the need to expand our conceptual frameworks for studying families and children may be widely accepted, there is far less consensus about methods and the extent to which specific approaches are successful in producing robust and reliable measures of kin structure and support over time.

2. Longitudinal studies of children and families in sub-Saharan Africa

There has been a proliferation of longitudinal studies in Africa including the Health and Demographic Surveillance Systems (HDSS) in a number of countries (<http://www.indepth-network.org/>) as well as well-known long-term follow-up studies (e.g., the Rakai Community Cohort Study in Uganda, SLAM project in Mali, and the Malawi Diffusion and Ideational Change Project (MDICP)). In addition, there are a number of birth cohort studies (e.g., Birth to Twenty [BTT], South Africa) and longitudinal studies focused on the transition to adulthood, e.g., the Cape Area Panel Study (CAPS) in South Africa and the Schooling and Adolescent Study in Malawi. Campbell and Rudan (2011) counted 124 birth cohort studies in Africa. Most child/adolescent focused studies collect relationship data from the perspective of the child/adolescent, an improvement over household surveys that use the household head as the point of reference. However, nearly all studies are limited to the residential household, though

the CAPS study collected data on financial transfers to adolescents from outside the household. While practically advantageous, the focus on coresidence limits both the measurement of family and our understanding of how households change over time. For example, if a household member moves away, they are no longer in the study in the subsequent wave, even though they continue having a relationship with members of the former household and possibly even provide support to it. Given how dynamic residential arrangements are, it is critical that we are able to track spatial mobility over time. A related issue that merits attention is the conflation of structure and support. Guided by a Becker (1981) altruistic household framework, studies tend to use the coresidential household structure as a proxy for support. In contexts of economic scarcity and unstable employment, people's ability to provide support is likely to change even over short periods of time. Therefore, direct measures of support should be collected from both residential and nonresidential kin. Finally, reporting in most studies, particularly those concerning infants and young children, is done mostly by mothers. For example, in the BTT study, virtually all reporting was done by mothers when children were young but reports were added directly from children once they turned 14. This is important because the picture we see of extended family, both at any given time and over time, is a construction from the perspective of the person reporting. This is further complicated in data collection on kinship, where accurate reporting on particular kin may depend on the current relationship with the respondent. For example, certain people may be left out of reporting during family disputes, and then may reappear after a reconciliation. This might be further exacerbated by women's union status such that women in dissolved unions are less likely to know much about their ex-partner's kin.

The collection of high-quality data on kinship – residential and nonresidential – over time is difficult because of two key challenges facing any longitudinal data collection effort: attrition of respondents and inconsistencies in reporting between successive interview waves. Attrition can arise from death, change of residence, and failure to follow up (Alderman et al. 2001; Young, Powers, and Bell 2006). For example, attrition in the BTT study was estimated to be around 1.8% annually (Norris, Richter, and Fleetwood 2007) primarily due to people moving out of the area and circular migration between rural and urban communities. Attrition is particularly problematic when it is associated with factors that explain the outcome of interest. For example, in the BTT study, mothers who failed to follow up were generally older, less likely to be married, and less likely to have given birth to their first child (Norris, Richter, and Fleetwood 2007). In the Nairobi Urban Health and Demographic Surveillance System (NUHDSS) there was a significant decline in the total number of deaths recorded in 2004 compared to 2003. This decline was quite likely linked to selective attrition of residents – possibly elderly – who were forced to move because of

the government plan of slum cleanup (APHRC 2007; Beguy et al. 2009). In the case of tracking kin structure and support, it is likely that people who do not have strong connections to their kin, i.e., do not receive or provide support, are more likely to be mobile, resulting in substantial selection bias. Moreover, it is also highly likely that those who lose kin support over time are more likely to leave the study.

Inconsistency in reporting over survey rounds is a common occurrence as a result of recall error, reporting biases, and errors on the part of the interviewers (Beguy et al. 2009; Mensch, Hewett, and Erulkar 2003). For example, data from another study in Nairobi slums indicates that almost half of sexually active adolescents provided inconsistent information on their sexual behavior between two rounds of surveys (Beguy et al. 2009). In rural Kenya and Malawi, evidence suggests a high degree of reporting inconsistency not only between rounds, but also among individual responses (Hewett, Mensch, and Erulkar 2004; Mensch 2003). However, misreporting due to memory is different from inconsistencies that are likely to occur when collecting longitudinal data on kin structure and support. Respondents who are not very connected to their kin would also be less likely to know much about their kin and more likely to provide inconsistent reports across waves.

Taken together, the methodological challenges described here could be seen as symptomatic of the larger task of understanding complexities of kin relationships in contemporary African contexts. We now turn to our data to demonstrate how two issues, selection due to attrition and inconsistency in reporting across waves, may impact the way we come to understand kinship and extended family interactions in a slum community in Nairobi, Kenya.

3. Study site, data, and methods

The study was conducted in Korogocho, one of the two slum areas in Nairobi, Kenya where the African Population and Health Research Center (APHRC) runs the Nairobi Urban Health and Demographic Surveillance System (NUHDSS). Like other informal settlements, Korogocho is characterized by extreme poverty, poor sanitation, inadequate social services, insecurity, social fragmentation, and poor livelihood opportunities. Demographic and health surveys conducted in various Nairobi slums in 2000 and 2012 found that not only are children in slums at higher risk for all major childhood illnesses (fever, cough, diarrhea) compared to children elsewhere in Kenya, but they also have poorer access to healthcare, including immunization, and subsequently face higher mortality rates than even their rural counterparts (APHRC 2002, 2014). The study population is also highly mobile, with annual attrition rate averaging about 20% due to out-migration. Circular migration patterns between this

slum settlement and areas of origin are observed among residents (Beguy, Bocquier, and Zulu 2010). However, compared to the other slum where the NUHDSS is conducted, Viwandani, Korogocho has a more settled population (Emina et al. 2011).

The Kinship Support Tree (KST) is an innovative data collection instrument that our team designed to collect data on kinship structure and support (residential and nonresidential) for single mothers and their young children residing in Korogocho in 2015 and 2016. The sample was drawn from the most recent round of the NUHDSS and consisted of 462 single mothers, i.e., women who were not currently married or cohabiting with a partner, with a child under the age of 7. The instrument (described in detail in Madhavan et al. 2017) included an enumeration of all close kin (dead and alive, coresident and nonresident) from the child's perspective – biological father, siblings, grandparents, aunts and uncles on maternal and paternal sides – and demographic data on each kin including GPS codes for residential location. Because the reports are based on relationship to the child, both half and full siblings of the mother are included. From this group of kin who ever existed (N = 5344), we identified a subset of potential kin defined as those who are alive and over the age of 7 (N = 3453) and, therefore, in a position to be able to provide support. From this group we identified functional kin as those who have provided the mother with financial or emotional support or child care over the past month. In earlier work (Clark et al. 2017a) we provide the distribution of the different types of kin relationships in the potential and functional categories. We also collected data on the physical health status of mother and child, and cognitive development of the child. This survey was administered two times with a six month interval to assess 1) the feasibility of retaining a sample of single mothers in a highly mobile context and 2) the changes in reported kinship support over time.

3.1 Single mothers and construction of kinship

Single mothers in our study include never married, divorced/separated, and widowed women. The decision to limit the sample to single mothers was driven both by resource constraints and substantive interests. Single motherhood is common in many parts of sub-Saharan Africa (Clark and Hamplova 2013). In Korogocho, for example, roughly a quarter of mothers with young children are unmarried (Clark et al. 2017b). However, single mothers have received little scholarly attention. We specifically chose to focus on single mothers because they are likely to be more dependent on kin support than married mothers. Nonetheless, relying on reports from this group has its challenges. To begin with, cultural scripts that govern which kin are supposed to do what for whom (Cliggett 2005) may impact who gets reported on kinship rosters. In other words, a

presumably straightforward enumeration of kin may go against emic understandings of who counts as family and under what conditions. Contact with and support from the child's father and paternal kin are – almost by definition – likely to be very different for married versus unmarried mothers (Madhavan, Richter, and Gross 2015). Thus, we make no claims of generalizability about kin beyond the single mothers in our study. Bearing this restriction in mind, our study aims to provide key insights into how single mothers construct kinship and kinship support. In addition, we made two decisions intended to improve the complete reporting of kin. First, we used the child instead of the mother as the point of reference to collect kinship data. We did this in order to 1) have direct measures of the child's relationship to each kin member instead of relying on reconstructed relationships based on relationship to the mother and 2) reduce the likelihood of the mother selectively leaving out kin based on her assessment of the strength of the relationship to her. Second, we explicitly differentiated structure from support to enable the respondent to enumerate the existence of kin without linking it to support.

Despite these efforts, it is worth noting that every picture of kinship has some element of subjectivity. Contextual knowledge coupled with appropriate statistical methods can help identify these reporting biases and enable researchers to gain a more complete and accurate picture of the complexities of kinship dynamics.

3.2 Description of retention process

Nesting the KST project in a HDSS site has a number of advantages. One of the most important features is the existing rapport between researchers/interviewers and the community. This facilitates not only access to respondents, but also increases retention and reduces loss to follow up. Since HDSS households are interviewed multiple times per year, there was little surprise (though not universal acceptance) when respondents were asked for permission to be recontacted in six months. This was made even more evident when we asked for cell phone numbers. While the collection of phone numbers is now fairly standard practice in many data collection efforts in Africa (Hoogeveen et al. 2014) and the use of mobile phones is ubiquitous in Kenya (KDHS 2014 reported 84% of households owned a mobile phone), it is not without challenges. About 90% of respondents provided their own phone number. However, we only managed to get an additional contact number from 50% of our respondents. Using these phone numbers along with interviewer familiarity with the community, we successfully reinterviewed over 90% of the original sample, out of which seven interviews were conducted over the phone. The phone interview consisted of an abridged questionnaire with the mother, focusing on her current residence, the reasons for her move, the characteristics of her

new residential context, and the residence of the focal child. We did not ask any questions about kinship because it was impractical to conduct a long interview on the phone. However, we were able to capture some data on key outcomes of interest. It should be noted that while scheduling phone interviews proved to be difficult, having a cell number was useful in scheduling face to face interviews within the site. Among the 45 respondents who were not reinterviewed, 31 could not be traced either in their last reported residence or by phone, six refused, and three mothers and three children died in the intervening period.

4. Attrition and its implications

As explained earlier, selective attrition of those who are lost to follow up can bias the data and, as a result, influence our understanding of how extended families look and how they change over time. We examined whether the 43 respondents who were lost to follow up differed from the 419 mothers who were included in both wave on key demographic characteristics, namely age, educational status, ethnicity, employment, place of birth, and relationship status. The choice of these variables is consistent with other studies on attrition, including an analysis of the NUHDSS data (Beguy, Bocquier, and Zulu 2010). Using conventional significance tests, we confirmed that the samples are not significantly different on these attributes as shown in Table 1.

Table 1: Interview status and key characteristics (%)

| | Both rounds | Round 1 only |
|--|-------------|--------------|
| Age group | | |
| 15–19 | 7.5 | 9.3 |
| 20–24 | 30.5 | 20.9 |
| 25–29 | 25.2 | 25.6 |
| 30–34 | 17.2 | 27.9 |
| 35–39 | 12.6 | 0.7 |
| 40+ | 7.5 | 9.3 |
| Ethnic group | | |
| Kikuyu/Meru/Embu | 44.6 | 32.6 |
| Luo | 23.6 | 30.2 |
| Luhya | 14.6 | 25.6 |
| Kamba | 8.5 | 9.3 |
| Other | 8.4 | 2.3 |
| Highest educational status attained | | |
| No formal education | 3.8 | 0.0 |
| Primary | 62.5 | 74.4 |
| Secondary | 32.7 | 20.9 |
| Employment status | | |
| Not employed | 53.0 | 58.1 |
| Employed full time | 14.8 | 16.3 |
| Employed part time | 32.2 | 25.6 |
| Place of birth | | |
| Korogocho | 57.0 | 55.8 |
| Other Nairobi | 7.2 | 2.3 |
| Outside Nairobi | 35.8 | 41.9 |
| Is mother currently in a relationship | | |
| No | 87.8 | 81.4 |
| Yes | 11.5 | 18.6 |
| Don't know | 0.7 | 0.0 |
| N | 419 | 43 |

Note: ***.001; **.01; *.05.

While the absence of selection effects in terms of demographic attributes is encouraging, we need to examine whether our main outcome of interest – kinship support – is, in itself, correlated with attrition of respondent. Table 2 shows differences in potential kin, coresidential kin, and functional kin at wave 1 across the two interview status groups and the results of joint significance tests for both distribution and proportion.

Table 2: Interview status and kinship measures

| | Both rounds | Round 1 only |
|--|-------------|--------------|
| Average size of potential kin group wave 1** | 7.7 | 6.2 |
| Small (1–5) | 27.9% | 51.2% |
| Medium (6–9) | 52.3% | 41.9% |
| Large (10+) | 19.8% | 7.0% |
| Proportion of potential kin who are coresident wave 1 | 0.34 | 0.39 |
| 0–.25 | 47.3% | 46.5% |
| 0.26–0.75 | 40.6% | 34.9% |
| 0.75–1 | 12.2% | 18.6% |
| Proportion of potential kin who are functional kin wave 1 | 0.76 | 0.79 |
| 0–0.50 | 17.7% | 14.0% |
| 0.51–0.99 | 47.7% | 46.5% |
| 1 | 34.6% | 39.5% |
| N | 419 | 43 |

Note: ***.001; **.01; *.05.

The only significant difference noted in the table is in the average size of the potential kin group at wave 1, which is SMALLER for those who were not reinterviewed in wave 2. This suggests that the retained sample may be selected for mothers with larger potential kin groups at wave 1. However, this does not necessarily lead to biased estimates of coresidence or kinship support. In other words, although potential kin group size may be smaller for those who left the study, these women are not any less likely to live with them or receive support from them. This is consistent with Bignami-Van Assche’s (2005) finding of network stability in rural Malawi. However, it is entirely possible that those who were lost in wave 2 had kinship support decreased between the two waves. Given that we only have data from wave 1 for these respondents, the retained sample in wave 2 is likely to be endogenously selected, making any analysis of the impact of kinship support on child well-being biased. However, when we examined the extent of change in functional support for those who remained in both waves, we found that about 33% of respondents reported a decrease in the proportion providing support. This suggests that the retained sample is not selected for those whose support did not decrease.

5. Consistency in reporting across waves and implications

As explained earlier, we collected data on all close kin of the child from the child’s perspective who ever existed: biological father, grandparents on maternal and paternal sides, and aunts and uncles on both sides. Therefore, the number in each of these categories should not be different across waves (e.g., three maternal aunts in wave 1 should remain as three in wave 2). Moreover, each focal child can only have one

biological father, one maternal grandmother, one maternal grandfather, one paternal grandfather, and one paternal grandmother, so there is no possibility of inconsistency. However, aunts and uncles do not have fixed numbers, and Table 3 shows the extent of reporting consistency on numbers of aunts and uncles across waves.

Table 3: Reporting consistency over waves on numbers of aunts and uncles (%)

| | Maternal aunts | Maternal uncles | Paternal aunts | Paternal uncles |
|---------------------------------|----------------|-----------------|----------------|-----------------|
| Extent of consistency*** | | | | |
| Exact match | 69 | 68 | 44 | 43 |
| +/- 1 | 19 | 19 | 7 | 9 |
| +/- 2 | 9 | 7 | 4 | 4 |
| +/- 3 or more | 3 | 6 | 46 | 43 |
| N | 412 | 412 | 412 | 412 |

Note: ***.001; **.01; *.05.

The differences, which are significant, in reporting consistency between maternal and paternal sides are due in large part to our sample, which is comprised of single mothers. Therefore, it is important to consider who is mentioned and who is not. Substantial effort was made during training to ensure that correct terminology in local language was used and that interviewers probed to make sure everyone in the universe of kin was mentioned. Moreover, because data was collected from the perspective of the child, it is less likely that shifting perceptions of half and full sibling relationships would be a major factor. Despite these efforts, it is clear that inconsistent reporting even on numbers is an issue. We were able to find exact matches on numbers of maternal aunts and uncles for about 69% and 68% of respondents, respectively. The figure goes down to 44% and 43% for paternal aunts and uncles. One might expect greater difficulty with reporting consistently with large kin groups but no significant differences by size were evident for any of the relationship categories. Possible reasons for reporting inconsistency include memory lapse particularly pertaining to those kin – i.e., paternal kin – with little connection to the respondent and selective reporting based on subjective assessments of kin support. For example, a respondent may intentionally not count a maternal uncle in wave 2 if that person has stopped providing support in between waves. Therefore, we are left with the possibility of attaining an incomplete picture of a child's kin group as well as having biased estimates in analysis of kin effects on child well-being.

We now move to another dimension of reporting: names. Table 4 shows the extent of consistency in reporting names across waves for the five relationships with fixed numbers. Name inconsistency refers to significant differences and not spelling differences (e.g., Rosie in wave 1 becomes Rosey in wave 2).

Table 4: Reporting consistency over waves on names (%)

| | Biological father | Maternal grandmother | Maternal grandfather | Paternal grandmother | Paternal grandfather |
|---|-------------------|----------------------|----------------------|----------------------|----------------------|
| Extent of consistency*** | | | | | |
| Same names | 52 | 83 | 65 | 13 | 9 |
| Don't know at both waves | 11 | 0 | 10 | 55 | 64 |
| Different names | 26 | 17 | 19 | 23 | 18 |
| Don't know at one wave and actual name in the other | 1 | 0 | 6 | 10 | 9 |
| N | 412 | 412 | 412 | 412 | 412 |

Note: ***.001; **.01; *.05.

The differences shown are significant. For biological fathers, 63% of single mothers provided the same response across waves; 83% did so for maternal grandmothers; 75% for maternal grandfathers; 68% for paternal grandmothers and 73% for paternal grandfathers. We also find very high percentages for “don’t know” at both waves for the paternal side (55% for grandmothers and 64% for grandfathers). Given that our sample is comprised of single mothers, it is not surprising that the respondents do not know very much about their child’s paternal kin or even father including names. However, most respondents are at least consistent over waves. It is also possible that we have underestimated the proportion of name matches given the common practice of having multiple names and using them at different times in many African contexts. Therefore, we might have even done better than these figures indicate. For biological fathers, we suspect that for women with multiple partners, there may have been genuine confusion on the part of both interviewer and respondent about matching a child with his/her father.

We examined the relationship between selected attributes of mother and kin at wave 1 and the odds of reporting names inconsistently across waves using logistic regression models (not shown). We found that women who have been formerly married or in a cohabiting relationship with the biological father are less likely to inconsistently report names of the biological father over waves than women who were never married or in a relationship with the child’s father. Women who are recent arrivals in Korogocho are much more likely to inconsistently report names of maternal grandmothers over waves. The number of potential kin decreases the likelihood of reporting inconsistency for biological fathers and maternal grandfathers but has a marginal positive effect for paternal grandfathers. This is interesting because the effects are only found for male kin but in different directions. We speculate that single mothers with large potential kin are least likely to turn to paternal grandfathers and, therefore, more likely to report inconsistently. On kin attributes, neither survival status nor functional kin status has a bearing on reporting inconsistency.

6. Discussion and conclusion

We set out in the paper to determine whether it is possible to capture the complexity and dynamism of kinship structure and support in a contemporary urban African context. Specifically, we address both the benefits and limitations of a longitudinal approach to measuring kinship structure and support from the perspective of children and reported by single mothers. One of the key innovative features of the KST is the enumeration of all close kin regardless of their residence or their roles as support providers. This enables us to measure family connectivity directly rather than use the household as a proxy and distinguish functional from nonfunctional kin. Second is the linking of kinship data to children rather than adults which offers two advantages: direct measures of child-adult relationships (rather than a derived measure through household head) and decreases the likelihood of mothers using their perceptions of functional support as a precondition for enumeration. Taken together, these features contribute to ensuring greater completeness in the reporting of kinship structure. Moreover, we are cautiously optimistic that our approach in tracking kinship structure over time is not only feasible but, more importantly, will not lead to incomplete or biased understanding of kinship.

In terms of limitations, there are two that merit discussion. First is the sample which is limited to single mothers whose reporting of kin was likely incomplete because they were not able to/chose not to provide information on selected kin particularly the paternal kin of the child. This may have resulted in erroneous information about kin and an incomplete picture of kinship structure. Future research should consider ways to cross check information provided by one respondent with that of others in the kin group (de Weerd, Genicot, and Mesnard 2015). Moreover, there may be ways to attain some estimate of 'missing kin' using simulations modelling expected vs. actual enumerated kin. It should be noted that while we should try to attain as complete a picture as possible of kinship structure, all reporting of family relationships even in conventional household surveys is influenced by some level of subjectivity on the part of the respondent. Therefore, the quest for completeness should be undertaken judiciously by assessing the potential value added relative to the cost of eliciting the information. The second issue that needs attention is selection when assessing the role of kinship support on child outcomes. While we were able to use available diagnostics to test for attrition related selection, it is possible that women who left the study after wave 1 were those who had lost kinship support. Therefore, the remaining sample in wave 2 may be selected for high levels of support which, in turn, can produce biased estimates of trends in support over time. However, it is not clear how bias would work if we are examining the relationship between kinship support and child health. Future work should consider innovative ways to use cell phones to

increase retention. Tracking migrants and conducting interviews using mobile phones have proven successful in other contexts, such as in Bangladesh (Barham and Kuhn 2014). Additionally, we might consider using periodic SMS notifications to 1) keep communication open and 2) facilitate locating respondents for the subsequent round. The use of SMS has become increasingly popular in public health research (Berkman et al. 2011; Betjeman, Soghoian, and Foran 2013; Farabee et al. 2016) but SMS use is still lagging in social science.

In closing, the study of kin dynamics and complexity is as daunting in Africa as it is anywhere else. Conceptual models are slowly catching up with the profound transformations in family life currently underway in many African contexts. Methodological innovations have been slower still and we continue to rely on tools that provide a static/incomplete picture of extended kin at best. This greatly limits our ability to understand how extended kin relationships shift in response to shocks such as income loss or death and the effects of these changes on children's well-being. Beyond the academic sphere, such innovations can be used to guide the development of multi-component health interventions that include relevant gatekeepers in health care decision-making, alongside individual behavior change approaches.

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