

## **Single Motherhood and Stress in a Kenyan Slum:**

### **The Importance of Paternal and Kin Support**

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#### **Abstract**

This study examines factors underlying single mothers' stress in an African slum. Using survey data from 1,221 mothers in a Kenyan informal settlement, this study examines 1) whether single mothers experience more stress due to their demographic and socioeconomic characteristics; 2) whether financial and child care support from kin offsets limited support from fathers; and 3) whether variation in the type and source of support explains stress differentials across marital status. The results suggest that lower socioeconomic status does not explain single mothers' elevated stress. Rather, despite receiving greater assistance with child care and financial support from kin, single mothers receive substantially less support of either kind from the child's father. These differences in support, particularly financial assistance, accounts for single mothers' elevated stress. These findings highlight the comparatively weak social support available for single mothers residing in precarious urban environments and its importance for their psychological wellbeing.

**Keywords:** maternal stress, marital status, social support, sub-Saharan Africa, kin, fathers, mental health, informal settlements

# **Single Motherhood and Stress in a Kenyan Slum: The Importance of Paternal and Kin Support**

## **Introduction**

Across sub-Saharan Africa, over 200 million people reside in informal settlements, colloquially referred to as slums (UNICEF, 2012). Estimates suggest that as many as one-third to one-half of these residents are children (Emina et al., 2011; UNFPA, 2007). These children grow up in a context characterized by pervasive poverty, food insecurity, overcrowding, inadequate housing, and widespread violence and crime (UNFPA, 2007; UNICEF, 2012). Numerous studies document the detrimental effects of informal settlements on children's health, education, and overall well-being (Clark, Madhavan, et al., 2018; Ernst et al., 2013; Olack et al., 2011). Curiously, less attention is given to the stress and psychological strain mothers likely experience as they endeavor to protect, nurture, and care for their young children in this challenging setting.

Raising children under these conditions may be especially taxing for single mothers. Emerging evidence from non-slum areas in sub-Saharan Africa indicates that single mothers experience poorer overall mental health and lower life satisfaction levels than married mothers (Adeyemi, 2017; Clark, 2020; Husain et al., 2016). Many of these studies implicitly or explicitly contend that single mothers face greater psychological stress because of their demographic characteristics (i.e., younger age) or lower socioeconomic status (Stewart et al., 2010; Uzobo et al., 2017). However, most studies in both Africa and elsewhere find that mental health disparities by marital status persist even after controlling for demographic and socioeconomic characteristics (Deyessa et al., 2008; Manuel et al., 2012).

These findings suggest that other factors or processes may compromise single mothers' psychological wellbeing. In particular, lower levels of instrumental assistance with child care and

financial help may place considerable strain on single mothers who have to juggle dual roles as both the primary caregiver and economic provider (Clark, De Almada, et al., 2018). Prior studies suggest that single mothers in sub-Saharan Africa receive little, if any, financial support or child care assistance from the child's father (Mjwara and Maharaj 2018; Ntinda, Thwala, and Dlamini 2016; Richter and Morrell 2008; Weinreb 2002). However, in sub-Saharan Africa other kin may step in to assist single mothers with both their financial needs and child care responsibilities to offset these losses. Traditionally, kin, including the child's grandparents, aunts, uncles, and even older siblings, play an active role in helping mothers raise children in sub-Saharan Africa (McGadney-Douglass et al. 2005; Sear & Mace 2008). Whether kin give more support to single mothers than married mothers and if such support helps alleviate their stress is largely unknown. A lack of kin support may be a particularly salient issue for mothers residing in slums, where high rates of mobility weaken the family support systems single mothers need to raise their children (Beguy et al., 2010; Clark et al. 2017).

In order to better understand the factors that contribute to unmarried mothers' elevated stress, this study addresses three main questions: 1) whether single mothers experience more stress due to their demographic and socioeconomic characteristics; 2) whether kin offer single mothers more financial and child care support to compensate for limited support from fathers; and 3) whether variation in the type (child care or financial) and source (fathers or other kind) of support explains differences in maternal stress by marital status. With these findings, this research aims to shed light on the experiences of African mothers raising children in challenging urban environments.

## **Background**

### **Maternal Stress and Marital Status**

A large body of research from Western countries finds that marriage confers psychological benefits for women (for a review, see Umberson et al. 2013). Research on mental health or psychological well-being by marital status in sub-Saharan Africa is more limited, even though single motherhood is common in many parts of sub-Saharan Africa where roughly half of women experience at least one episode of single motherhood by age 45 (Clark & Hamplová, 2013). A handful of studies conducted in non-slum areas of Africa typically find that single mothers report more psychological distress than their married counterparts (Husain et al., 2016; Uriyo et al., 2013). For example, a hospital-based survey of Kenyan mothers with children under age five finds that single mothers are almost twice as likely to be at risk of a common mental disorder than married mothers (Husain et al., 2016). Studies from both high and low-income settings generally find that psychological wellbeing is worse for formerly-married (either widowed or divorced) than never-married mothers of reproductive age (Clark et al. 2020; Coleman et al. 2006; Deyessa et al. 2008; Uriyo et al. 2013).

Demographic and economic disparities between single and married mothers may partially explain why single mothers experience heightened distress. Never-married single mothers are typically younger and less educated than women who have married (Afifi et al., 2006; Sarkisian & Gerstel, 2008), whereas formerly-married mothers are generally older and less educated (Afifi et al., 2006; Colton et al., 2015). Further, married couples have, on average, more economic resources than households headed by single mothers (Burstrom et al. 2010; Leopold 2018), and single-mother homes are more likely to experience poverty (Adeyemi, 2017; Rousou et al., 2013). In some studies, controlling for these demographic and economic factors explains disparities in psychological well-being between married and unmarried mothers (Cooper et al.,

2009; Dziak et al., 2010). In most, however, disparities are attenuated but persist, even after controlling for socioeconomic conditions (Colton et al., 2015; Deyessa et al., 2008).

### **Social Support from Fathers and Kin**

Beyond differences in demographic characteristics and socioeconomic status, social support may play a vital role in improving mental health. Mounting evidence from high-income countries demonstrates the importance of social support for maternal health and well-being (Berkman and Glass 2000; Meadows 2009; Rousou et al. 2016; Widan & Greeff 2019). This research finds that fathers play a primary role in providing mothers financial support and child care help irrespective of marital status, and that their support mitigates maternal stress (Edin & Nelson, 2013; Mallette et al., 2020). Kin generally plays a more tertiary role in supporting mothers in high-income countries (Bronfenbrenner, 1987), which may explain why their support has a less conclusive relationship with maternal well-being (Baxter & Alexander, 2008; Radey, 2018). Nonetheless, social support from kin appears to be higher and potentially more critical for low-income, single mothers in the U.S. (Mazelis & Mykyta, 2011).

Research on social support and maternal well-being in sub-Saharan Africa is comparatively sparse. Still, there are important reasons why findings from Western contexts may not be generalizable to informal settlements in sub-Saharan Africa. First, against a backdrop of rapid urbanization and struggling economies, governments in Africa are often incapable or unwilling to provide basic health, education, and social services for residents of informal settlements (Bah et al., 2018). Extreme poverty coupled with a very limited public safety net may make African mothers' mental health and well-being particularly dependent on the social support they receive from fathers and other kin.

Second, there are notably different familial configurations and expectations of support from both fathers and other kin. Studies suggest that father involvement in sub-Saharan Africa is generally limited to financial support, with limited expectations for child care, even within marriage (Richter & Morrell, 2008). Although fathers are expected to assume a financial provider role, some research finds that they provide little or even no economic support when they are not in a union with the child's mother (Mjwara & Maharaj, 2018; Ntinda et al., 2016; Richter & Morrell, 2008). Kin, in contrast, have historically played a more active role in helping both single and married mothers raise children, including providing a substantial amount of economic assistance and child care (McGadney-Douglass et al., 2005; Mjwara & Maharaj, 2018; Ntinda et al., 2016; Sear & Mace, 2008). As in the U.S., it is likely that African kin offer greater support to single mothers, particularly never-married mothers, although evidence substantiating this expectation is limited.

Despite these traditional practices, research suggests that fatherhood roles are changing and that even fathers who are not in a union with their child's mother are becoming more engaged (Richter & Morrell, 2008). For example, some studies from South Africa find that fathers regularly see and care for their children even if they are not married to the mother (Clark et al., 2015; Madhavan et al., 2016; Richter & Morrell, 2008; Swartz & Bhana, 2009). Further, as child maintenance laws proliferate in several sub-Saharan African countries, fathers are increasingly expected to take financial responsibility for their children regardless of their marital status (Laird, 2011). Research from South Africa correspondingly shows that many children continue to receive some financial support from their fathers after marital dissolution (Madhavan et al., 2014). At the same time, much of the prior research on the importance of kin support for child well-being was conducted in rural areas (Gibson & Mace, 2005; Sear et al., 2002; Sear & Mace,

2008). Kin support systems for women residing in poor urban centers may be more fragile, even for single mothers (Clark et al., 2017). For example, one recent study from a Kenyan slum finds that although kin do help single mothers, one-fifth of single mothers do not receive any financial or instrumental help from family members (Clark et al., 2017). Furthermore, kin may be more likely to provide help to younger, single mothers who may even co-reside with the child's grandparents (Mjwara & Maharaj, 2018), than to older mothers who are divorced or widowed.

## **Data and Methods**

### **Analytic Sample**

More than half of Nairobi's residents live in informal settlement areas (UN Habitat, 2014). We conducted our study in one of these areas, Korogocho, where the Nairobi Urban Health and Demographic Surveillance System regularly collects demographic information on all residents. Using these data as a sampling frame, we identified and interviewed 1,222 mothers with at least one child under the age of five. Interviews were conducted in September and October of 2015. For more details of this study, see Clark et al. (2019). Mothers were surveyed about their demographic, social, and economic conditions and their experiences of symptoms of stress. One woman was omitted from the final analysis as she did not provide information on her marital status. The resulting analytic sample includes 1,221 women. In addition, mothers provided information about both economic support and child care assistance they received for each child under age five. We randomly selected one child for the analyses if the mother had two or more children under age five. Sensitivity analyses, which included information on support for all children under the age of five and were clustered at the mother level, yielded similar findings (results available in the Appendices). Data and programming files in Stata 16.0 are provided for all the analyses presented in this study as online supplemental materials.

## Variables

Our dependent variable is a measure of maternal stress created from four survey items aimed to assess mothers' emotional and psychological well-being. On a four-point scale ranging from 'never' to 'often', participants were asked to indicate how frequently they had recently 1) lost sleep over worry, 2) felt under strain, 3) felt unhappy or depressed, or 4) lost confidence in themselves. These survey items come from the General Health Question 12 (GHQ-12) (Goldberg & Hillier, 1979). After pilot testing the GHQ-12, these questions were selected and adapted to improve their suitability and comprehension when translated into local languages. Globally, the GHQ-12 is one of the most extensively used self-report instruments for assessing mental well-being and has been validated in several different populations (Werneke et al., 2000).

Correlations between these four items were positive and ranged from 0.46 to 0.82. Given that these are typical symptoms of generalized psychological stress, we refer to our summary measure as stress. This summary measure was created by first taking the average response score across all four indices with scores ranging from 1 (no stress) to 4 (high stress). We then standardized these scores to reflect deviation around the mean reported level of stress. No observations were missing from any of the four survey items. In addition, we executed a polychoric principal component analysis to assess the data's internal structure for the four survey items used for our summary measure. The data from all items load onto a single component (based on an eigenvalue greater than one), accounting for about 82% of the data's total variation. The principal component analysis results support our decision to combine the four survey items into a single measure representing maternal stress. We also extracted a component score from the analysis and compared the coefficients from the multivariate models using the standardized mean. There were no marked differences between the two measures for maternal stress. For ease

of interpretation, we present the models with standard means in the main text. Although they yield similar results, tables using the component score are shown in the Appendices.

Women's marital status is classified as currently married, never-married, and formerly-married. Women's current marital status does not necessarily reflect their relationship with the child's biological father. However, most currently married women (99%) were in a union with the biological father at the time of the survey.

Measures of child care and financial support were generated separately for fathers and other kin. With respect to assistance with child care, respondents were queried about who acted as a primary or secondary caregiver over four periods of the day (morning, daytime, evening, and night). For our measure of fathers' child care assistance, biological fathers listed as the primary or secondary caregiver at any point of the day were coded as "1". In contrast, fathers who were not caregivers at any time of day were coded "0". The majority of fathers who provided any child care did so as secondary caregivers (93%). We created a similar variable for kin support, which included grandmothers, grandfathers, aunts, uncles, or older siblings. Having any of these family members as a primary or secondary caregiver at any time of day received a value of "1" and were coded as "0" otherwise. Note that all questions about support from fathers specifically refer to the child's biological father, regardless of the mother's current marital status. Step-fathers were also included as kin, but only 2 children (0.15%) were cared for by their step-fathers. Among kin, older siblings were the most common source of child care assistance (11.1%), followed closely by grandmothers (9.8%).

Similar measures were created to capture financial support from fathers or kin. A separate question was asked for whether the biological father regularly gives money specifically for the child's care. Additional questions probed whether anyone else living inside or outside the

household regularly provides money for the child's care and, if so, who. Respondents who received money from the child's grandmothers, grandfathers, aunts, uncles, older siblings, or step-fathers were coded as receiving financial support from kin.

In addition, our models control for demographic characteristics known to be correlated with psychological well-being. Demographic factors include the mother's age, number of children under age five, ethnicity, and village. Village names have been suppressed to maintain confidentiality. To capture the mother's socioeconomic status, we rely on several indicators. Following Filmer & Pritchett (2001), we used principal component analysis to create a household wealth index based on household amenities and ownership of 21 common household assets. For the 6 % of households ( $n = 73$ ) that were missing information on at least one of these items, we imputed the mean wealth asset score. We also include women's educational attainment measured as no education, some primary education, completed primary education, and some secondary or higher. Mothers' work and earnings are measured by a composite indicator of a mother's employment status and monthly income. Women who engaged in no paid work (and hence had no monthly income) were grouped into a single category. Mothers engaged in paid work are categorized as earning less than 6,000 KSH (roughly \$60 USD), 6,000 to less than 12,000 KSH, 12,000 to less than 18,000 KSH, and 18,000 or more KSH per month.

### **Analysis Plan**

Our first analysis focuses on differences in maternal stress levels experienced by married, never-married, and formerly-married women. Bivariate analyses rely on t-tests and chi-squared tests to identify differences in mothers' demographic and socioeconomic characteristics by marital status. We then employed ordinary linear regressions (OLS) to determine whether differences in demographic and socioeconomic characteristics account for variation in stress by

marital status. Specifically, we regress maternal stress on marital status (currently, formerly, and never married). Subsequent models include controls for demographic characteristics and socioeconomic status, respectively.

Our second set of analyses explores the role of social supporting alleviating maternal stress and explaining elevated stress among single mothers. We first explore how child care and financial support from fathers and kin differ for married, never-married, and formerly-married mothers. Linear regressions next examine the relationship between the source and type of social support and maternal stress. In addition, we assess whether controlling for social support helps explain variation in maternal stress by marital status.

## **Results**

### **Differences in Demographic and Socioeconomic Status by Marital Status**

Table 1 provides descriptive characteristics of our overall sample, disaggregated by marital status. Mothers in our sample are, on average, about 29 years old, and never-married mothers are younger than either currently married or formerly married mothers. The majority (60.8%) of mothers have only one child under five, with married mothers having more children than unmarried children. Consistent with other studies, we find that single motherhood is associated with economic disadvantage. Although single mothers are more likely to be engaged in paid work than married mothers, they are also overrepresented in the lower wealth quintiles. In fact, formerly-married mothers are twice as likely as married mothers to earn an income. These higher rates of employment coupled with lower household wealth draw attention to the challenges single mothers face in providing economic support and care for their children. Furthermore, although never-married mothers are more likely to have some secondary schooling than married

and formerly-married mothers, this higher educational attainment mainly reflects their younger age and the rapid expansion of secondary schooling across Kenya.

(insert Table 1 about here)

### **Marital Status and Maternal Stress**

Table 2 presents results from linear regression analyses, which examine differences in maternal stress among married, never-married, and formerly-married mothers. Model 1 of Table 2 indicates that formerly-married mothers experience more maternal stress than married mothers. More specifically, formerly-married mothers experience 0.43 standard deviations more stress than their married counterparts. In contrast, never-married mothers experience the same level of stress as married mothers. Post-estimation tests (not shown) further indicate that never-married mothers report less stress than formerly-married mothers ( $p=0.00$ ). Adjusting for demographic characteristics in Model 2 lowers the coefficient on formerly married mothers to 0.35, although formerly married mothers continue to experience more stress than married mothers. In contrast, controlling for sociodemographic covariates, notably age, increases the difference in stress between never-married and married mothers.

Model 3 shows that adjusting for differences in socioeconomic status further lowers the coefficient for formerly-married mothers, but formerly-married mothers still report more stress than married women by approximately 0.29 standard deviations. Moreover, socioeconomic status does not help explain elevated stress among never-married mothers. In fact, while never-married mothers report less stress than formerly-married mothers in Model 1, these differences disappear after controlling for socioeconomic factors in Model 3. Turning attention to the coefficients on the socioeconomic variables, as may be expected, mothers who live in wealthier households report less stress than mothers in poorer ones. However, differences are only

observed between the lowest quintile and the two highest quintiles. Similarly, compared to unemployed women, maternal stress is lowest among women who earn at least 12,000 KSH per month (approximately \$112 USD). However, mothers earning less than 6,000 KSH report somewhat higher stress levels relative to mothers who are not engaged in paid work, potentially suggesting that low-paid work itself may be a source of stress.

(insert Table 2 about here)

### **Marital Status and Social Support**

The findings from Table 2 suggests that factors beyond single mothers' demographic and socioeconomic characteristics may contribute to their elevated stress. Here, we turn our attention to the role of social support. In Figures 1 and 2, we first examine whether single mothers receive less assistance with child care or financial support and how the source of support (fathers or other kin) differs by marital status. Interestingly, never-married mothers (54.2%) are more likely than either married (41.4%,  $p=0.005$ ) or formerly-married (38.2%,  $p=0.007$ ) mothers to receive any help with child care. Married and formerly-married are equally likely to receive child care support. Nonetheless, the source of support differs across marital status. Kin provides all or nearly all child care assistance for both never-married and formerly-married mothers, who receive minimal child care support from the child's biological father ( $\leq 1.2\%$ ). Conversely, almost a fifth of married mothers (20.5%) receive child care support from the fathers but are less likely to receive help from other kin.

(insert Figure 1 about here)

Financial support by marital status exhibits a strikingly different pattern (Figure 2). Virtually all married mothers (93.8%) report receiving financial support from the child's father. In contrast, never-married (3.8%) and formerly-married (8.7%) are equally unlikely to receive financial

assistance from the child's father. As with child care, kin are more likely to provide financial support to never-married mothers (51.9%) than married (0.9%) or formerly-married mothers (27.2%,  $p=0.000$ ). Yet, despite the increased financial assistance from kin, single mothers are more likely than married mothers to bear the economic burden of raising children alone. This deficit in financial support is especially pronounced among formerly-married mothers; nearly two-thirds of formerly-married (61.9%) mothers do not receive economic support from either the child's father or their kin.

(insert Figure 2 about here)

### **Social Support and Maternal Stress**

Our next set of analyses examine the role of social support in mitigating maternal stress and explaining differences in stress levels by marital status. Model 1 of Table 3 shows that the source of assistance with child care matters. Receiving child care assistance from fathers (and in rare instances both fathers and kin) lowers maternal stress by roughly a third of a standard deviation. In contrast, receiving help with child care from kin alone has no effect on maternal stress. Adjusting for differences in child care assistance by source substantially reduces the difference in stress between never-married and married mothers. These findings suggest that despite receiving more support from kin, deficits in paternal child care support explains never-married mothers' higher stress levels. In contrast, adjusting for help with child care only slightly reduces the coefficient for formerly-married mothers, who report experiencing almost a quarter of standard deviation more stress than married mothers.

(insert Table 3 about here)

Model 2 shows that irrespective of where it comes from, financial support is associated with lower levels of maternal stress. Controlling for financial support substantially diminishes stress

differentials across marital status. In other words, for both never-married and formerly-married mothers, lower levels of financial support appear to largely explain their higher levels of stress. In the final model (Model 3), we control for both child care and financial support. Interestingly, controlling for both has little impact on the magnitude of their respective coefficients, suggesting that the beneficial effects of both child care and financial support operate independently of one another. After controlling for differences in both the level and source of child care and financial support, there are no appreciable differences in maternal stress by marital status.

### **Discussion and Conclusions**

This paper examines factors that may alleviate or exacerbate the stress experienced by single mothers raising young children in informal settlements in sub-Saharan Africa. We pay particular attention to differences in maternal stress by marital status as previous studies suggest that single mothers often experience elevated risks of psychological strain but offer few insights into the factors that contribute to their stress (Clark et al. 2020; Husain et al. 2016; Uriyo et al. 2013). First, we examine whether higher levels of stress among single mothers is attributed to their demographic characteristics and lower socioeconomic status. We find that demographic and economic factors only partially explain why formerly married mothers experience more stress than married mothers. In contrast, after adjusting for these factors, never-married mothers become relatively more likely to experience stress compared to married mothers, suggesting that never-married mothers are partially protected from stress by their younger age and potentially by their higher education level.

Second, we explore differences in the level and source of both child care and financial support by marital status. Concerning help with child care, fathers essentially only provide child care if they are in a union with the child's mother. In contrast, kin help both married and single

mothers with child care. Kin assistance with child care is particularly high for never-married mothers, resulting in never-married mothers being the most likely to have help with child care. A different pattern emerges with respect to financial support. Married mothers are 1.6 times as likely as never-married mothers and 2.6 times as likely as formerly-married mothers to receive financial support. While married mothers depend almost exclusively on fathers for financial support, only about 15% of never-married and 11% of formerly-married mothers receive economic support from the child's father, either alone or in combination with support from kin. Thus, although kin are more likely to provide financial support to single mothers, financial support nonetheless falls short for these women, highlighting the economic precarity of single motherhood.

Third, we assess whether these differences in social support explain differences in maternal stress by marital status. Receiving financial support from either fathers or kin lowers maternal stress by about a third of a standard deviation. Further, when fathers help with child care, either alone or in addition to kin assistance, mothers also report lower levels of stress. Interestingly, however, receiving help with child care from kin alone does not appear to reduce maternal stress. Lower levels of child care and financial assistance from fathers account for the elevated stress level experienced by never-married mothers. In contrast, lower levels of financial support from both fathers and kin are largely responsible for the greater stress found among formerly-married mothers.

There are several limitations to be noted when considering the findings. The first relates to the direction of the relationship between maternal stress and support. While our study generally finds support mitigates mothers' stress, it is also possible that fathers and kin are responding to mothers' distress by providing more help, which would result in a positive association. These

potential countervailing effects may explain why we failed to find an association between kin child care support and maternal stress. Further, if the relationships between maternal stress and support is bidirectional, our estimates of the beneficial effects of social support are likely conservative. A second limitation of this study is that it relies on self-reported indices of stress derived from the GHQ-12. As with all self-reported measures of mental well-being, our measure of stress reflects self-perceptions and may be biased.

Limitations notwithstanding, this study makes three main contributions. First, it highlights the psychological strain single mothers face when raising children in informal settlements by demonstrating that single mothers, like their children (Clark and Hamplová, 2013), have poorer health outcomes than their married counterparts. Second, our results suggest that single mothers' higher stress is not primarily driven by their age, education, or lower household wealth. Third, it expands prior research conducted primarily in Western contexts by examining the relationship between social support and stress among mothers raising children in an informal settlement in Africa. Perhaps nowhere is this inquiry more critical than in the burgeoning slum areas, where many mothers leave behind close kin networks in search of work and have virtually no compensatory institutional support. Yet, to our knowledge there are no prior studies which examine differences in social support by marital status in this context. Nor has previous research investigated the role of child care and financial support from both fathers and kin in exacerbating or alleviating stress among married and single mothers.

Taken together, these contributions offer novel insights into how policies and programs may help counterbalance for the weaker support available to single mothers in urban slums. Policies aimed at strengthening institutional safety nets for single mothers in slum settings, principally those that improve single mothers' financial security, would be of most benefit. Offsetting the

cost of living through targeted subsidies, particularly as it pertains to housing, has been a central focus in slum policy, but few of these policies specifically target single mothers who are overrepresented in the most inadequate shelter (Bah et al., 2018; UN Habitat, 2010). Providing affordable child care in slums is a newer and potentially promising policy direction. One recent study found a high demand among slum-dwelling mothers for center-based child care, but that costs of formal care were a deterrent for their use (Clark, De Almada, et al., 2018). Several mothers noted that having access to safe and reliable child care substantially reduced their daily experiences of worry and anxiety.

The study also points to the importance of enforcing laws requiring fathers to financially support their children, regardless of their relationship status with their children's mother. Although many African countries, including Kenya, have family maintenance programs, the programs have had limited success due to weak institutional implementation structures and paternal poverty (Abdullah et al. 2020; Laird 2011). Enforcing paternal support would require a focus on these structural stumbling blocks. Another promising avenue may be to put money directly into mothers' hands through child care grants. South Africa's child support grants are a promising example of how social assistance alleviates poverty and protects households from economic shocks, and have been especially beneficial for single mothers (CASE 2000; Triegaardt 2005). Improving single mothers' financial security through grants or family maintenance, or by indirectly offsetting their housing or child care costs could be essential in reducing the psychological burden of raising young children in challenging urban environments.

## References

- Abdullah, A., Manful, E., Cudjoe, E., & Boateng, L. K. (2020). How did I know when to report physical neglect? Ghanaian mothers' views on delinquent child maintenance. *Practice*, 1–17. <https://doi.org/10.1080/09503153.2020.1730780>
- Adeyemi, O. E. (2017). Diverse family forms and quality-of-life in sub-Saharan African countries. *Development Southern Africa*, 34(6), 682–693. <https://doi.org/10.1080/0376835X.2017.1405797>
- Afifi, T. O., Cox, B. J., & Enns, M. W. (2006). Mental health profiles among married, never-married, and separated/divorced mothers in a nationally representative sample. *Social Psychiatry and Psychiatric Epidemiology*, 41(2), 122–129. <https://doi.org/10.1007/s00127-005-0005-3>
- Bah, E. M., Faye, I., & Geh, Z. F. (2018). Slum upgrading and housing alternatives for the poor. In E. M. Bah, I. Faye, & Z. F. Geh, *Housing market dynamics in Africa* (pp. 215–253). Palgrave Macmillan UK. [https://doi.org/10.1057/978-1-137-59792-2\\_6](https://doi.org/10.1057/978-1-137-59792-2_6)
- Baxter, J., & Alexander, M. (2008). Mothers' work-to-family strain in single and couple parent families: The role of job characteristics and supports. *Australian Journal of Social Issues*, 43(2), 195–214. <https://doi.org/10.1002/j.1839-4655.2008.tb00098.x>
- Beguy, D., Bocquier, P., & Zulu, E. M. (2010). Circular migration patterns and determinants in Nairobi slum settlements. *Demographic Research*, 23, 549–586. <https://doi.org/10.4054/DemRes.2010.23.20>
- Bronfenbrenner, U. (1987). *Ecology of the family as a context for human development: Research perspectives*. 20.

- Broussard, C. A. (2010). Research regarding low-income single mothers' mental and physical health: A decade in review. *Journal of Poverty*, *14*(4), 443–451.  
<https://doi.org/10.1080/10875549.2010.518003>
- Burstrom, B., Whitehead, M., Clayton, S., Fritzell, S., Vannoni, F., & Costa, G. (2010). Health inequalities between lone and couple mothers and policy under different welfare regimes – The example of Italy, Sweden and Britain. *Social Science & Medicine*, *70*(6), 912–920.  
<https://doi.org/10.1016/j.socscimed.2009.11.014>
- Clark, S. (2020). The psychological benefits of marriage and children in rural Malawi. *Population and Development Review*.
- Clark, S., Cotton, C., & Marteleto, L. J. (2015). Family ties and young fathers' engagement in Cape Town, South Africa. *Journal of Marriage and the Family*, *77*(2), 575–589.  
<https://doi.org/10.1111/jomf.12179>
- Clark, S., De Almada, M., Kabiru, C. W., Muthuri, S., & Wanjohi, M. (2018). Balancing paid work and child care in a slum of Nairobi, Kenya: The case for centre-based child care. *Journal of Family Studies*, 1–19. <https://doi.org/10.1080/13229400.2018.1511451>
- Clark, S., & Hamplová, D. (2013). Single motherhood and child mortality in sub-Saharan Africa: A life course perspective. *Demography*, *50*(5), 1521–1549.  
<https://doi.org/10.1007/s13524-013-0220-6>
- Clark, S., Kabiru, C. W., Laszlo, S., & Muthuri, S. (2019). The impact of childcare on poor urban women's economic empowerment in Africa. *Demography*, *56*(4), 1247–1272.  
<https://doi.org/10.1007/s13524-019-00793-3>

- Clark, S., Madhavan, S., Cotton, C., Beguy, D., & Kabiru, C. (2017). Who helps single mothers in Nairobi? The role of kin support. *Journal of Marriage and the Family*, 79(4), 1186–1204. <https://doi.org/10.1111/jomf.12404>
- Clark, S., Madhavan, S., & Kabiru, C. (2018). Kin support and child health: Investigating two approaches in an African slum. *Social Science Research*, 76, 105–119. <https://doi.org/10.1016/j.ssresearch.2018.08.001>
- Coleman, R., Morison, L., Paine, K., Powell, R. A., & Walraven, G. (2006). Women's reproductive health and depression: A community survey in the Gambia, West Africa. *Social Psychiatry and Psychiatric Epidemiology*, 41(9), 720–727. <https://doi.org/10.1007/s00127-006-0085-8>
- Colton, T., Janzen, B., & Lavery, W. (2015). Family structure, social capital, and mental health disparities among Canadian mothers. *Public Health*, 129(6), 639–647. <https://doi.org/10.1016/j.puhe.2015.03.023>
- Community Agency for Social Enquiry (CASE). (2000). *Phasing in the child support grant: A social impact study* (p. 157). Department of Welfare.
- Cooper, C. E., McLanahan, S. S., Meadows, S. O., & Brooks-Gunn, J. (2009). Family structure transitions and maternal parenting stress. *Journal of Marriage and Family*, 71(3), 558–574. <https://doi.org/10.1111/j.1741-3737.2009.00619.x>
- Deyessa, N., Berhane, Y., Alem, A., Hogberg, U., & Kullgren, G. (2008). Depression among women in rural Ethiopia as related to socioeconomic factors: A community-based study on women in reproductive age groups. *Scandinavian Journal of Public Health*, 36(6), 589–597. <https://doi.org/10.1177/1403494808086976>

- Dziak, E., Janzen, B. L., & Muhajarine, N. (2010). Inequalities in the psychological well-being of employed, single and partnered mothers: The role of psychosocial work quality and work-family conflict. *International Journal for Equity in Health*, 9(1), 6.  
<https://doi.org/10.1186/1475-9276-9-6>
- Edin, K., & Nelson, T. J. (2013). *Doing the best I can: Fatherhood in the inner city*. University of California Press. <https://www.ucpress.edu/book/9780520283923/doing-the-best-i-can>
- Emina, J., Beguy, D., Zulu, E. M., Ezeh, A. C., Muindi, K., Elung'ata, P., Otsola, J. K., & Yé, Y. (2011). Monitoring of health and demographic outcomes in poor urban settlements: Evidence from the Nairobi Urban Health and Demographic Surveillance System. *Journal of Urban Health*, 88(S2), 200–218. <https://doi.org/10.1007/s11524-011-9594-1>
- Ernst, K. C., Phillips, B. S., & Duncan, B. D. (2013). Slums are not places for children to live: Vulnerabilities, health outcomes, and possible interventions. *Advances in Pediatrics*, 60(1), 53–87. <https://doi.org/10.1016/j.yapd.2013.04.005>
- Filmer, D., & Pritchett, L. H. (2001). Estimating wealth effects without expenditure data—Or tears: An application to educational enrollment in states of India. *Demography*, 38(1), 18.
- Gibson, M. A., & Mace, R. (2005). Helpful grandmothers in rural Ethiopia: A study of the effect of kin on child survival and growth. *Evolution and Human Behavior*, 26(6), 469–482.  
<https://doi.org/10.1016/j.evolhumbehav.2005.03.004>
- Goldberg, D. P., & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine*, 9(1), 139–145. <https://doi.org/10.1017/S0033291700021644>
- Husain, N., Mukherjee, I., Notiar, A., Alavi, Z., Tomenson, B., Hawa, F., Malik, A., Ahmed, A., & Chaudhry, N. (2016). Prevalence of common mental disorders and its association with life events and social support in mothers attending a well-child clinic: Findings from

Mombasa, Kenya. *SAGE Open*, 6(4), 215824401667732.

<https://doi.org/10.1177/2158244016677324>

Laird, S. E. (2011). Enforcing the law on child maintenance in sub-Saharan Africa: A case study of Ghana. *International Journal of Law, Policy and the Family*, 25(2), 220–243.

<https://doi.org/10.1093/lawfam/ebr005>

Leopold, T. (2018). Gender differences in the consequences of divorce: A study of multiple outcomes. *Demography*, 55(3), 769–797. <https://doi.org/10.1007/s13524-018-0667-6>

Madhavan, S., Richter, L., & Norris, S. (2016). Father contact following union dissolution for low-income children in urban South Africa. *Journal of Family Issues*, 37(5), 622–644.

<https://doi.org/10.1177/0192513X14532255>

Madhavan, S., Richter, L., Norris, S., & Hosegood, V. (2014). Fathers' financial support of children in a low income community in South Africa. *Journal of Family and Economic Issues*, 35(4), 452–463. <https://doi.org/10.1007/s10834-013-9385-9>

Mallette, J. K., Futris, T. G., Oshri, A., & Brown, G. L. (2020). Paternal support and involvement in unmarried fragile families: Impacts on long-term maternal mental health. *Family Process*, 59(2), 789–806. <https://doi.org/10.1111/famp.12456>

Manuel, J. I., Martinson, M. L., Bledsoe-Mansori, S. E., & Bellamy, J. L. (2012). The influence of stress and social support on depressive symptoms in mothers with young children. *Social Science & Medicine*, 75(11), 2013–2020.

<https://doi.org/10.1016/j.socscimed.2012.07.034>

Mazelis, J. M., & Mykyta, L. (2011). Relationship status and activated kin support: The role of need and norms. *Journal of Marriage and Family*, 73(2), 430–445.

<https://doi.org/10.1111/j.1741-3737.2010.00816.x>

- Mjwara, N., & Maharaj, P. (2018). Becoming a mother: Perspectives and experiences of young women in a South African Township. *Culture, Health & Sexuality, 20*(2), 129–140.  
<https://doi.org/10.1080/13691058.2017.1334963>
- Ntinda, K., Thwala, S. K., & Dlamini, T. P. (2016). Lived experiences of school-going early mothers in Swaziland. *Journal of Psychology in Africa, 26*(6), 546–550.  
<https://doi.org/10.1080/14330237.2016.1250413>
- Olack, B., Burke, H., Cosmas, L., Bamrah, S., Dooling, K., Feikin, D. R., Talley, L. E., & Breiman, R. F. (2011). Nutritional status of under-five children living in an informal urban settlement in Nairboi, Kenya. *Journal of Health, Population and Nutrition, 29*(4), 357–363.
- Patel, L. (2012). Poverty, gender and social protection: Child support grants in Soweto, South Africa. *Journal of Policy Practice, 11*(1/2), 106–120.  
<https://doi.org/10.1080/15588742.2012.625344>
- Radey, M. (2018). Informal support among low-income mothers post welfare reform: A systematic review. *Journal of Child and Family Studies, 27*(12), 3782–3805.  
<https://doi.org/10.1007/s10826-018-1223-0>
- Richter, L., & Morrell, R. (2008). Fathering: The role of men in raising children in Africa— Holding up the other half of the sky. In *Africa's future, Africa's challenge— Early childhood care and development in sub-Saharan Africa* (pp. 151–166). The World Bank.  
<https://www.researchconnections.org/childcare/resources/15933>
- Rousou, E., Kouta, C., Middleton, N., & Karanikola, M. (2013). Single mothers' self-assessment of health: A systematic exploration of the literature: Single mothers' health. *International Nursing Review, 60*(4), 425–434. <https://doi.org/10.1111/inr.12044>

- Sarkisian, N., & Gerstel, N. (2008). Till marriage do us part: Adult children's relationships with their parents. *Journal of Marriage and Family*, 70(2), 360–376.  
<https://doi.org/10.1111/j.1741-3737.2008.00487.x>
- Sear, R., & Mace, R. (2008). Who keeps children alive? A review of the effects of kin on child survival. *Evolution and Human Behavior*, 29(1), 1–18.  
<https://doi.org/10.1016/j.evolhumbehav.2007.10.001>
- Sear, R., Steele, F., McGregor, I. A., & Mace, R. (2002). The effects of kin on child mortality in rural Gambia. *Demography*, 39(1), 43–63. <https://doi.org/10.1353/dem.2002.0010>
- Stewart, R. C., Bunn, J., Vokhiwa, M., Umar, E., Kauye, F., Fitzgerald, M., Tomenson, B., Rahman, A., & Creed, F. (2010). Common mental disorder and associated factors amongst women with young infants in rural Malawi. *Social Psychiatry and Psychiatric Epidemiology*, 45(5), 551–559. <https://doi.org/10.1007/s00127-009-0094-5>
- Swartz, S., & Bhana, A. (2009). *Teenage tata: Voices of young fathers in South Africa*. HSRC Press. <http://repository.hsrc.ac.za/handle/20.500.11910/4721>
- Triegaardt, J. D. (2005). The Child Support Grant in South Africa: A social policy for poverty alleviation? *International Journal of Social Welfare*, 14(4), 249–255.  
<https://doi.org/10.1111/j.1369-6866.2005.00367.x>
- Umberson, D., Thomeer, M. B., & Williams, K. (2013). Family status and mental health: Recent advances and future directions. In C. S. Aneshensel, J. C. Phelan, & A. Bierman (Eds.), *Handbook of the sociology of mental health* (pp. 405–431). Springer Netherlands.  
[https://doi.org/10.1007/978-94-007-4276-5\\_20](https://doi.org/10.1007/978-94-007-4276-5_20)
- UN Habitat. (2010). *Women watch: Gender equality and sustainable urbanisation* (p. 17).

- UN Habitat. (2014). *The state of African cities 2014: Re-imagining sustainable urban transitions*. UN Habitat.
- UNFPA. (2007). *State of world population 2007: Unleashing the potential of potential urban growth* (pp. 1–99). United Nations Population Fund. /publications/state-world-population-2007
- UNICEF. (2012). *The state of the world's children 2012: Children in an urban world*. United Nations Children Fund. [https://www.unicef.org/publications/index\\_61789.html](https://www.unicef.org/publications/index_61789.html)
- Uriyo, J. G., Abubakar, A., Swai, M., Msuya, S. E., & Stray-Pedersen, B. (2013). Prevalence and correlates of common mental disorders among mothers of young children in Kilimanjaro region of Tanzania. *PLoS ONE*, *8*(7), e69088. <https://doi.org/10.1371/journal.pone.0069088>
- Uzobo, E., Dudafa, J. U., & Boroh, S. E. (2017). Food insecurity and depression among single mothers in Kolokuma/Opokuma Local Government Area of Bayelsa State, Nigeria. *African Research Review*, *11*(1), 75. <https://doi.org/10.4314/afrrrev.v11i1.6>
- Weinreb, A. A. (2002). Lateral and vertical intergenerational exchange in rural Malawi. *Journal of Cross-Cultural Gerontology*, *17*(2), 101–138. <https://doi.org/10.1023/A:1015834300553>
- Werneke, U., Goldberg, D. P., Yalcin, I., & Üstün, B. T. (2000). The stability of the factor structure of the General Health Questionnaire. *Psychological Medicine*, *30*(4), 823–829. <https://doi.org/10.1017/S0033291799002287>
- Widan, R. J., & Greeff, A. P. (2019). Aspects of social support associated with adaptation in middle-class, single-mother families. *The American Journal of Family Therapy*, *47*(3), 148–164. <https://doi.org/10.1080/01926187.2019.1636732>

## Tables and Figures

Table 1. Demographic and socioeconomic characteristics of mothers by marital status

	Total	Married	Never-married	Formerly-married
<b>Demographic characteristics</b>				
Age (mean) <sup>ac</sup>	29.2	29.6	25.0	30.2
Number of children <sup>ab</sup>				
1	60.8	56.9	75.6	69.9
2	30.9	33.0	19.9	27.8
3	8.4	10.0	4.6	2.3
Ethnicity <sup>abc</sup>				
Kikuyu	32.2	28.3	44.3	43.4
Luo	21.9	21.8	30.5	15.6
Luhya	18.7	20.2	14.5	13.9
Kamba	6.7	6.4	7.6	7.5
Somali	16.4	19.4	0.8	11.6
Other	4.3	3.8	2.3	8.1
Residential location <sup>abc</sup>				
Village 1	7.2	5.5	10.7	14.4
Village 2	14.3	13.0	15.3	20.8
Village 3	6.5	5.8	10.7	6.9
Village 4	27.5	29.9	20.6	20.2
Village 5	14.4	15.1	7.6	16.2
Village 6	5.9	6.1	5.3	5.2
Village 7	24.1	24.8	29.8	16.2
<b>Socioeconomic characteristics</b>				
Wealth quintile <sup>ab</sup>				
1st (poorest)	20.4	16.3	28.4	36.4
2 <sup>nd</sup>	21.3	20.6	21.4	24.9
3 <sup>rd</sup>	18.4	19.5	13.7	16.2
4 <sup>th</sup>	20.0	21.4	19.1	12.7
5th (least poor)	20.0	22.3	17.6	9.8
Employment status and income <sup>ab</sup>				
Unemployed/no income	48.0	53.8	35.9	26.0
1-5,999 KSH	10.7	10.4	12.2	11.6
6,000-11,999 KSH	14.2	13.2	13.7	20.2
12,000-17,999 KSH	17.8	15.4	22.9	26.6
18,000+ KSH	9.3	7.3	15.3	15.6
Highest education <sup>abc</sup>				
None/Madrassa	10.6	12.8	1.5	5.8
Some primary	24.3	24.0	13.7	34.1
Completed primary	42.3	42.1	45.8	39.9
Secondary or more	22.9	21.2	38.9	20.2
Total n	1,218	915	131	172

T-tests for continuous variables and chi-squared tests for categorical variables are reported at  $p < 0.05$  and examine differences between <sup>a</sup>married and never-married; <sup>b</sup>married and formerly-married; <sup>c</sup>never-married and formerly-married

Figure 1. Child care assistance by marital status

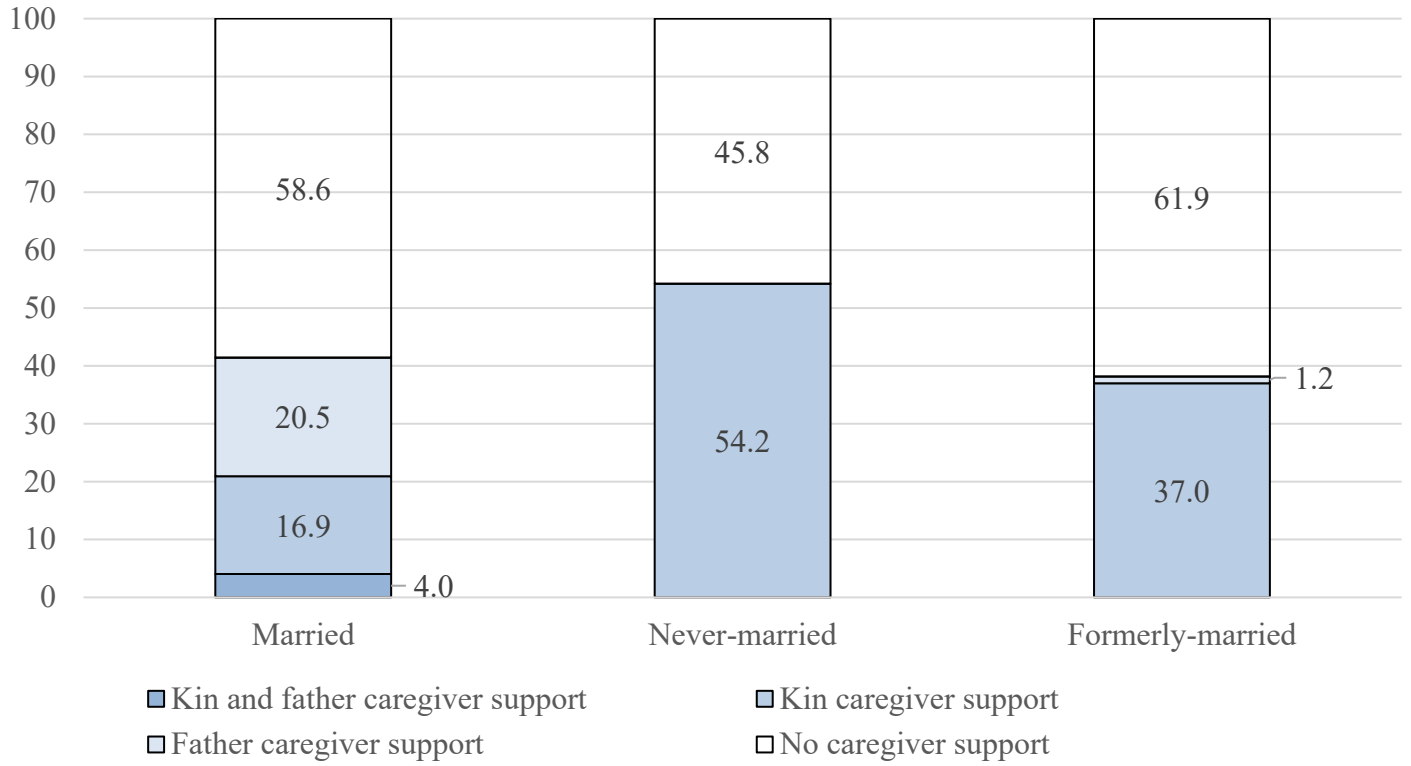


Figure 2. Financial support by marital status

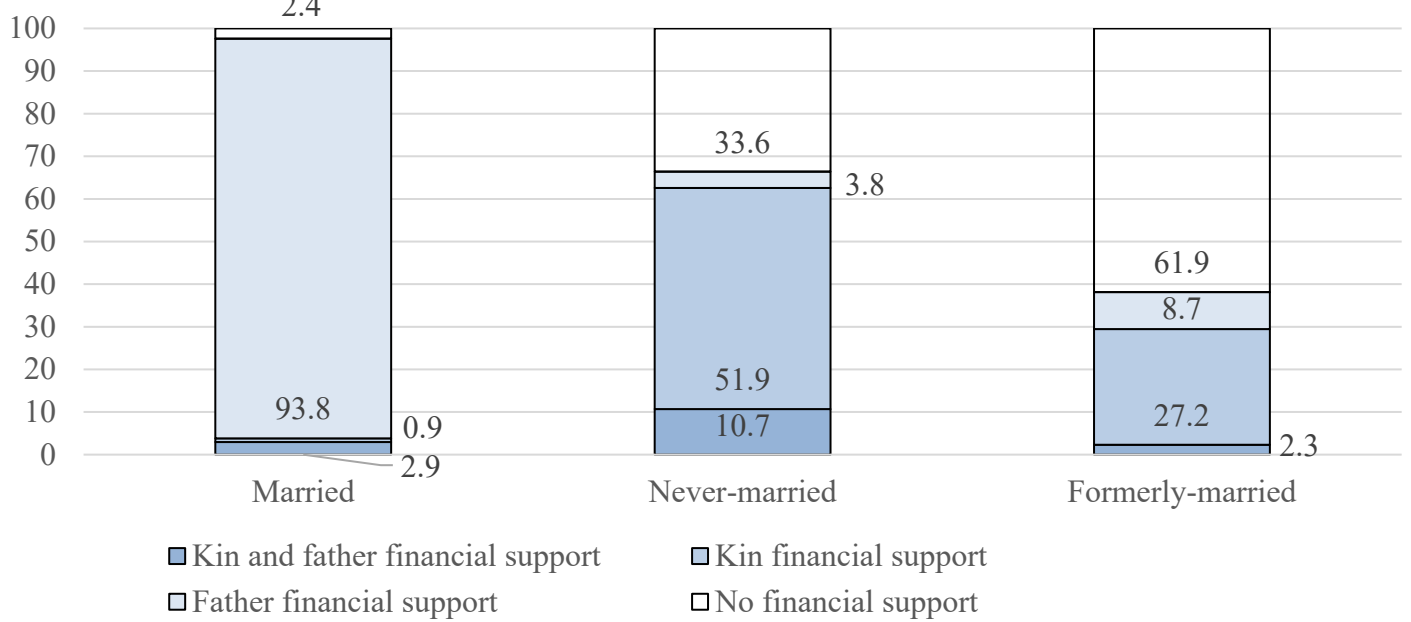


Table 2. OLS regression of maternal stress on marital status, adjusting for demographic and socioeconomic factors.

	Model 1			Model 2			Model 3		
	Coef.	SE	p	Coef.	SE	p	Coef.	SE	p
Marital status (ref: married)									
Never-married	0.00	0.09	0.981	0.17	0.09	0.066	0.18	0.09	0.042
Formerly-married	0.43	0.08	0.000	0.35	0.08	0.000	0.29	0.08	0.000
Age				0.03	0.00	0.000	0.03	0.00	0.000
Number of kids (ref: 1)									
2				0.07	0.06	0.235	0.01	0.06	0.803
3+				-0.02	0.10	0.825	-0.08	0.10	0.421
Ethnicity (ref: Kikuyu)									
Luo				0.23	0.08	0.004	0.13	0.08	0.120
Luhya				0.26	0.08	0.001	0.16	0.08	0.047
Kamba				-0.2	0.11	0.083	-0.30	0.11	0.007
Somali				0.03	0.09	0.735	-0.01	0.10	0.910
Other				0.10	0.14	0.460	0.04	0.14	0.723
Village (ref: village 1)									
Village 2				0.47	0.12	0.000	0.43	0.12	0.000
Village 3				0.00	0.14	0.995	-0.05	0.14	0.746
Village 4				0.01	0.11	0.953	-0.03	0.11	0.823
Village 5				-0.10	0.12	0.416	-0.13	0.12	0.272
Village 6				-0.20	0.15	0.180	-0.12	0.15	0.463
Village 7				-0.65	0.12	0.000	-0.62	0.12	0.000
Household wealth (ref: poorest quintile)									
2nd quintile							-0.13	0.08	0.114
3rd quintile							-0.13	0.09	0.135
4th quintile							-0.34	0.09	0.000
Richest quintile							-0.38	0.09	0.000
Mother's earnings (ref: no income)									
1-5,999 KSH							0.14	0.09	0.132
6000-11,999 KSH							-0.05	0.08	0.520
12,000-17,999 KSH							-0.16	0.08	0.036
18,000+ KSH							-0.31	0.10	0.385
Education (none)									
Some primary							0.11	0.11	0.315
Completed primary							-0.01	0.11	0.898
Secondary or more							-0.10	0.12	0.385
Constant	-0.07	0.03	0.043	-0.97	0.17	0.000	-0.64	0.22	0.003
F test		13.83			16.21			12.39	
n		1,221			1,221			1,221	

Table 3. OLS regression of maternal stress on marital status, adjusting for caregiving and financial support.

	Model 1			Model 2			Model 3		
	Coef.	SE	p	Coef.	SE	p	Coef.	SE	p
Marital status (ref: married)									
Never-married	0.09	0.10	0.380	0.08	0.14	0.512	0.00	0.14	0.930
Formerly-married	0.22	0.08	0.006	0.12	0.13	0.322	0.07	0.13	0.512
Caregiving (ref: none)									
Kin only	-0.04	0.07	0.582				-0.01	0.07	0.850
Father only	-0.35	0.09	0.000				-0.33	0.09	0.000
Kin and father	-0.36	0.16	0.025				-0.34	0.16	0.033
Financial (ref: none)									
Kin only				-0.32	0.12	0.004	-0.31	0.12	0.005
Father only				-0.32	0.13	0.014	-0.29	0.13	0.029
Kin and father				-0.31	0.17	0.093	-0.32	0.17	0.087
Age	0.03	0.01	0.000	0.03	0.00	0.000	0.03	0.00	0.000
Number of kids (ref: 1)									
2	-0.01	0.06	0.891	0.01	0.06	0.821	-0.01	0.06	0.877
3+	-0.11	0.10	0.263	-0.10	0.10	0.343	-0.13	0.10	0.218
Ethnicity (ref: Kikuyu)									
Luo	0.12	0.08	0.139	0.12	0.08	0.128	0.12	0.08	0.147
Luhya	0.14	0.08	0.085	0.15	0.08	0.065	0.13	0.08	0.108
Kamba	-0.31	0.11	0.005	-0.31	0.11	0.005	-0.31	0.11	0.004
Somali	-0.04	0.10	0.681	-0.01	0.10	0.963	-0.04	0.10	0.733
Other	0.03	0.14	0.848	0.06	0.14	0.674	0.04	0.14	0.794
Village (ref: village 1)									
Village 2	0.42	0.12	0.000	0.45	0.12	0.000	0.43	0.12	0.000
Village 3	-0.07	0.14	0.605	-0.05	0.14	0.721	-0.08	0.14	0.586
Village 4	-0.02	0.11	0.872	-0.01	0.11	0.967	0.00	0.11	0.944
Village 5	-0.11	0.12	0.360	-0.12	0.12	0.334	-0.10	0.12	0.416
Village 6	-0.06	0.14	0.698	-0.10	0.15	0.504	-0.05	0.15	0.728
Village 7	-0.48	0.12	0.000	-0.60	0.12	0.000	-0.47	0.12	0.000
Household wealth (ref: poorest quintile)									
2nd quintile	-0.12	0.08	0.129	-0.12	0.08	0.133	-0.12	0.08	0.141
3rd quintile	-0.13	0.09	0.124	-0.12	0.09	0.153	-0.13	0.09	0.135
4th quintile	-0.34	0.09	0.000	-0.33	0.09	0.000	-0.34	0.09	0.000
Richest quintile	-0.38	0.09	0.000	-0.36	0.09	0.000	-0.36	0.09	0.000
Mother's earnings (ref: no income)									
1-5,999 KSH	0.13	0.09	0.190	0.12	0.09	0.197	0.19	0.09	0.275
6000-11,999 KSH	-0.03	0.08	0.716	-0.07	0.08	0.433	-0.04	0.08	0.601
12,000-17,999 KSH	-0.16	0.08	0.037	-0.19	0.08	0.014	-0.19	0.08	0.014
18,000+ KSH	-0.30	0.10	0.001	-0.36	0.10	0.000	-0.35	0.10	0.000
Education (ref: none)									
Some primary	0.10	0.11	0.345	0.11	0.11	0.308	0.11	0.11	0.328
Completed primary	-0.02	0.11	0.874	-0.02	0.11	0.895	-0.02	0.12	0.891
Secondary or more	-0.11	0.12	0.345	-0.09	0.12	0.447	-0.10	0.12	0.408
Constant	-0.49	0.22	0.025	-0.26	0.25	0.305	-0.14	0.25	0.550
F test		11.88			11.58			11.18	
n		1,221			1,221			1,221	