The Stability of Child Fostering in Sub-Saharan Africa: The Case of Senegal

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In sub-Saharan Africa, child out-fostering is a traditional social practice, and research suggests stable levels of out-fostering over time, yet the underlying demographic and socioeconomic factors driving this stability have remained largely unexplored. To gain insight into the prevalence and associations of child out-fostering and mothers' individual and household characteristics, we analyzed nine rounds of Demographic and Health Survey (DHS) data of Senegalese mothers of children aged 0–14, collected between 1986 and 2019. Child out-fostering has remained stable, with nearly one-third of mothers of children aged 0–14 living apart from at least one child. Our findings indicate that at the macro-level, counteracting fertility and child mortality dynamics contribute to this stability. At the micro-level, out-fostering is influenced by a complex interplay of maternal demographic, socioeconomic, and household characteristics. The role of demographic macro-level factors demands further research attention in the context of persisting child fostering across sub-Saharan Africa. The results further suggest that changes, such as postponement of motherhood, as well as further declines in fertility and infant mortality, could affect fostering arrangements in the future.

INTRODUCTION

Child fostering is a common practice in sub-Saharan Africa, broadly defined as children living separately from their biological parents, either temporarily or indefinitely (Cotton 2021, 2024). Extensive literature documents child fostering across and within various countries and cultural contexts (Akresh 2009; Bachan 2014; Beck et al. 2015; Cotton, Clark, and Madhavan 2022; Grant and Yeatman 2012; Madhavan 2004). This literature primarily focuses on the implications and motivations of sending and receiving households, and the characteristics of children and mothers associated with fostering (Beck et al. 2015; Hedges et al. 2019; Lachaud, LeGrand, and Kobiané 2016; Lloyd and Desai 1992; Serra 2009; Verhoef and Morelli 2007). Macro-level studies show that the practice of child fostering has remained stable in many

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sub-Saharan African countries in recent decades (Cotton 2021). The aim of this work is to understand, from a demographic perspective, the determinants of this stability in the context of Senegal, a country that has experienced significant demographic and socioeconomic transformations in recent years.

A number of authors highlight the changing living arrangements of children and their parents as societies evolve, with significant socioeconomic consequences (Beegle et al. 2010; Cotton 2021; Foster 2000; McDaniel and Zulu 1996). However, the continued prevalence of child fostering (Cotton 2021) indicates that certain practices and living arrangements remain in place. To gain a deeper understanding of this stability in the context of change, it is essential to examine the underlying demographic factors and determinants of fostering. At the macro-level, core demographic factors are closely linked to the prevalence of out-fostering: Fertility and child mortality dynamics affect the number of children available to be out-fostered, with potential changes over time and space. At the micro-level, these determinants are likely to be moderated by individual socioeconomic and demographic profiles of mothers. The living arrangements of mothers and their position in the household can also affect the prevalence of non-coresidence among mothers and their biological children.

To address our research aims, we leverage nine samples of Demographic and Health Survey (DHS) data from Senegal, collected between 1986 and 2019, to examine mothers' propensity to out-foster a child. First, we analyze the stability in the prevalence of child out-fostering in Senegal amidst changes, such as fertility declines, survival improvements, and educational expansion. Second, we analyze the relationship between out-fostering and mothers' socioeconomic characteristics as well as the less studied role of household composition on the non-coresidence of mothers and children.

In Senegal, as in other sub-Saharan African countries, child fostering is a common traditional practice (Cotton 2021). By focusing on one country with available data for three decades, we can study demographic factors associated with out-fostering as well as analyze mothers' characteristics and their household environments. Senegal is a suitable case for an in-depth study of child out-fostering in sub-Saharan Africa: Similar to other countries in the region, Senegal has embarked on the first demographic transition and is witnessing fertility and mortality changes, urbanization, and educational expansion. In line with broader regional trends, the total fertility rate in Senegal decreased from 6.4 in 1986 to 4.7 in 2019 (STATcompiler 2024). The average household size in Senegal remains relatively large at 8.4 in 2019 (Esteve et al. 2024). While the first demographic transition is progressing relatively slowly in sub-Saharan Africa (Bongaarts 2017; Bongaarts and Casterline 2013; Casterline 2017; Eastwood and Lipton 2011), the individual-level demographic and socioeconomic characteristics of mothers and their living arrangements may have evolved over time. Therefore, our objective is to contribute to the existing literature by examining aspects of the complex interplay between continuity and change that shapes families and living arrangements in the African demographic context.

BACKGROUND

Child Fostering in Sub-Saharan Africa

The practice of child fostering is a long-standing tradition whereby children are reared by people, mostly relatives, who are not their biological parents. Within the literature and the sub-Saharan African context, the practice is generally "understood as a transfer of parental rights and obligations that is reversible and limited in time, and in this sense very different from adoption" (Serra 2009, 157). Although foster children can remain in the host family for extended or indefinite periods of time, the time children spend away from their mother differs substantially across sub-Saharan African countries (Lloyd and Desai 1992). Fostering has been characterized as a distinctive feature of the extended family system in Africa, which does not share the common assumptions of the Western family system that links child welfare to residence with parents (McDaniel and Zulu 1996; Serra 2009).

The literature distinguishes between voluntary and crisis fostering. The latter is understood to be a response to a crisis, such as the death of one or both parents, often linked to the effects of the HIV/AIDS epidemic, divorce, and economic hardship (Cotton 2024; Foster 2000). The former refers to voluntary decisions made by one or both parents to support a child's or family's human capital accumulation and well-being or to strengthen the kinship system (Cotton 2021). Crisis fostering and voluntary fostering constitute different types of foster arrangements. In crisis fostering, for example, following divorce, death of a parent, or socioeconomic issues (Lloyd and Desai 1992; Foster 2000), children may be placed with distant relatives or nonrelatives, with less emphasis on kinship reciprocity (Beegle et al. 2010; Madhavan 2004; Serra 2009). Foster (2000) and Beegle et al. (2010) note that crises like the HIV/AIDS epidemic can place pressure on extended families due to increased adult mortality and orphanhood and lead to unexpected or crisis fostering. Voluntary fostering, however, often depends on kinship and household structures and provides a means to reinforce and leverage kinship networks to share the cost and benefits of childrearing (Madhavan 2004).

In polygynous families, competing adult demands may affect childcare and resource allocation, while uniparental families may have fewer resources. Fostering can compensate for these shortcomings (Lloyd and Desai 1992). Thus, out-fostering may be associated with lower household socioeconomic status, while in-fostering may be associated with higher status (Akresh 2009; Vandermeersch and Chimere-Dan 2002). Fostering is a crucial feature of the intrafamily care provision systems in sub-Saharan Africa. However, it has been argued that the demographic and socioeconomic changes and crises taking place in the region could weaken family support networks with negative implications for care provision (Foster 2000; Mokomane 2013; Zagheni 2011).

The definitions of fostering vary across the literature. Some authors consider only formal foster arrangements, whereas others include any children who do not reside with their mothers (Cotton, Clark, and Madhavan 2022). Cotton (2021) estimates that the share of mothers who out-foster at least one child ranges from 11.5 percent in Burundi to 45.7 percent in Namibia. The author's analysis of DHS data from West Africa indicates that the share ranges from nearly 40 percent of mothers in Côte d'Ivoire to around 20 percent in Nigeria (Cotton 2021). In Senegal, nearly one-third of mothers had at least one nonresident child in the most

recent DHS round. Fostering has been an institutionalized practice in the country for decades (Beck et al. 2015; Evans, Diop, and Kébé 2022; Isiugo-Abanihe 1985), and the Senegalese definition of the family traditionally extends beyond the household, with great importance given to elder kin (Evans, Diop, and Kébé 2022). However, research points to recent changes in family structures and shifts in familial roles and responsibilities, such as reduced cooperation and solidarity as a result of urbanization processes, economic and social transformations, family instability, and increased migration. While the prevalence of fostering in Senegal has remained stable, norms regarding shared parenting within the kinship network appear to shift in favor of an emphasis on parental responsibilities (Evans, Diop, and Kébé 2022).

The heterogeneous settings in which fostering decisions are made, shaped by demographic dynamics, kinship relations, living arrangements, and socioeconomic factors reflect fostering motivations and drivers. In the following section, we briefly present common motivations behind child fostering, before considering demographic determinants of fostering.

What Motivates Child Fostering?

Motivations to foster a child are complex and vary by type of fostering and across sending and receiving households and are often linked to kinship relations (Bachan 2014; Lloyd and Desai 1992; Serra 2009). They can also depend on the child's characteristics such as age and sex (McDaniel and Zulu 1996), the mother's characteristics such as marital status, the availability and characteristics of living relatives, and the household context (Akresh 2009; Beck et al. 2015; Clark et al. 2017; Cotton 2024). Children are often sent to live with a relative who is perceived to be in a better position to facilitate the child's educational attainment (Brown 2011), for instance, because the relative lives closer to a school (Beck et al. 2015). In some countries, such as Senegal, boys in Muslim families are at times sent to Koranic schools to receive a religious education (Evans, Diop, and Kébé 2022; Isiugo-Abanihe 1985). Children are also sent to relatives who need help in the household, either because they do not have enough children or because they rely on additional support. Fostering can also be a cultural custom, such as brides taking a younger relative with them to their new family upon marriage (Vandermeersch and Chimere-Dan 2002).

The interplay between kinship and demographics is important in explaining the motivations for fostering in the sending and receiving households (Mason 2001). Fostering can facilitate the rebalancing of skewed dependency ratios in either participating household (Beck et al. 2015) and may also counteract a perceived reproductive shortcoming of one household. In this case, children balance out fertility differences between households within the same kinship network (Vandermeersch and Chimere-Dan 2002). When women's status is linked to their reproductive success, fostering can help women gain social recognition (Vandermeersch and Chimere-Dan 2002). Other demographic factors that motivate out-fostering include gender imbalances among children within one household (Akresh 2009), a lack of sibling spacing (Lloyd and Desai 1992), or migration of mothers (Cotton and Beguy 2021).

In the case of voluntary fostering, the process is often associated with reciprocity and mutually beneficial relationships between households (Bachan 2014; Serra 2009). The cost of rearing children can be shared by households and systems of exchange can be maintained between rural and urban kin or across generations (Madhavan 2004; McDaniel and Zulu

1996). In the context of Senegal, Vandermeersch and Chimere-Dan (2002, 680) further highlight that the practice of out-fostering "may have allowed households to adapt to economic disruptions primarily in response to the difficulties of the moment." Fostering can be a temporary and flexible means for families to respond to the household needs and capabilities in the household in circumstances where the biological parents are not best suited to raise their child(ren).

Drivers of Child Fostering

Child fostering is driven to some extent by demographic factors. Fertility dynamics, such as the age at transition to motherhood, the number of children, and length of birth intervals, may drive fostering to support the mother, to ensure household well-being, to promote better child outcomes, to allocate labor and resources, and to balance demographic dynamics within the kin network (Beck et al. 2015; Klomegah 2000; Lloyd and Desai 1992; Serra 2009). However, the relationship between fertility and fostering is not linear: in South African countries, such as Namibia, where fostering rates are the highest in Africa, fertility tends to be lower than in other African countries (STATcompiler 2024). Similarly, the high prevalence of out-fostering in the context of fertility transitions across sub-Saharan Africa suggests the importance of confounding factors. One possibility is that mortality dynamics, such as maternal and child survival, which are linked to the availability of the biological mother and her children counteract fertility decline.

At the macro-level, there may be variations in the prevalence of child out-fostering over time. Similarly, there may be spatial differences, such as between regions or between rural and urban areas. Rural residence tends to be positively associated with out-fostering, as mothers in rural areas send children to live with relatives in urban areas as part of rural–urban exchange systems (Cotton 2024; Madhavan 2004) or to other rural households who need labor (Lloyd and Desai 1992; Vandermeersch and Chimere-Dan 2002). The relationship between the type of place of residence and out-fostering could change with urbanization. Mothers in urban areas could face pressure to out-foster a child to participate in the labor market. Mothers who migrate to urban areas may leave children behind, which increases the distance to children and impacts lived experiences (Cotton and Beguy 2021). Eloundou-Enyegue and Stokes (2002) find that economic downturns and urban poverty affect fostering, with implications for the economic mobility of rural children and kinship ties across the rural–urban divide.

At the micro-level, several social, economic, and demographic characteristics of mothers are associated with out-fostering (McDaniel and Zulu 1996). In a study of mothers in Uganda, Cotton (2024) finds that younger age and higher fertility are positively associated with out-fostering, suggesting that women seek out-fostering as a strategy to cope with relatively higher childcare burdens. Using data from several sub-Saharan African countries, McDaniel and Zulu (1996) observe that younger mothers are more likely to out-foster a child. Never-married, widowed, and divorced mothers, as well as those in polygynous unions, are also more likely to out-foster (Cotton 2024; Vandermeersch and Chimere-Dan 2002). This relationship is not causal but indicative of structural factors, such as unmarried mothers potentially facing economic vulnerability or disadvantage, that contribute to out-fostering

decisions. In Malawi, Grant and Yeatman (2014) note that maternal remarriage is positively associated with out-fostering, suggesting family change as a determinant of fostering.

The relationships between age, fertility, marriage, and fostering may be moderated by mothers' educational attainment and labor market participation. Working mothers at older ages could rely more on fostering in the absence of institutional childcare. The evidence on maternal education and fostering is mixed, with studies showing positive and negative associations between mothers' educational attainment and the prevalence of out-fostering (Cotton and Beguy 2021; Isiugo-Abanihe 1985; McDaniel and Zulu 1996). Ethnicity and religion are other possible influences on the relationship between demographic dynamics and out-fostering.

Household size, structure, and the mother's position in the household can also be associated with out-fostering (Evans, Diop, and Kébé 2022; Isiugo-Abanihe 1985). Vandermeersch and Chimere-Dan (2002) argue that female-headed households in Senegal participate in in-fostering to gain social recognition if they do not marry or have children of their own. Female-headed households in sub-Saharan Africa are often associated with poverty and social vulnerability, which could contribute to a reliance on out-fostering, although the evidence suggests a more nuanced picture (Milazzo and Van De Walle 2017). In a study of single mothers in Nairobi slums, Cotton, Clark, and Madhavan (2022) observe a strong reliance on kin for childrearing support and Madhavan et al. (2017) highlight the importance of kin support for single mothers, even when other kin are also experiencing economic precarity. Female headship is often associated with single-parent households (Trias-Prats and Esteve 2024); thus, mothers who head their households may out-foster more often. Similarly, mothers who are only distantly related or unrelated to the household head may face pressure to out-foster a child. Larger households also have to share resources among more members, which could influence out-fostering decisions.

Further research is needed to disentangle the associations between maternal characteristics, living arrangements, and fostering. The study of the Senegalese context can provide insights into the demographic dynamics and determinants of the high prevalence of out-fostering among mothers and children across socioeconomic strata and living arrangements.

RESEARCH CONTRIBUTION

Recent research on child fostering has been conducted by Cotton (2021), who conducted an expansive exploration of DHS data to examine fostering prevalence across time in 36 African countries. She finds that out-fostering prevalence, despite some fluctuations, remained remarkably stable over time in many countries and that fostering remains a common feature of African family systems. These findings provide a crucial basis for further in-depth investigation of the stability in the prevalence of out-fostering in Africa and future work aiming to cast light on the determinants of fluctuation in the number of nonresidential children women have across and within countries. We contribute to this literature on child fostering in sub-Saharan Africa by examining the links between women's individual and household characteristics and child out-fostering in Senegal over three decades.

Moreover, by describing and examining the core demographic dynamics of out-fostering, namely fertility and changes in child mortality, we highlight the important roles of the underlying but previously unexplored demographic dynamics in explaining the stability in out-fostering prevalence over time. We argue that it is reasonable to assume that these dynamics are relevant beyond the Senegalese context and warrant further attention. Rather than focusing on child or household outcomes, which are complex to measure and disentangle from confounding factors, we focus on mothers who engage in out-fostering. This approach allows us to examine foster situations distinct from those involving orphans, while still accounting for socioeconomic stratification within the population.

We are adding a new perspective to the literature by aiming to answer the following research questions: (1) What are the demographic determinants of the prevalence of child out-fostering over time? and (2) How are maternal characteristics and household composition associated with child out-fostering? In addition to the macro-level analysis of demographic factors, we emphasize the importance of individual-level characteristics of mothers as well as their living arrangements and household contexts, in explaining the stability in the prevalence of out-fostering in Senegal and possibly other countries. We test a set of individual-level characteristics chosen on the basis of their links to the macro-level predictors of fostering that are included in the analysis by Cotton (2021). Thus, we contribute an exploratory work that lays the foundation for future comparative research on the stability of child fostering in Africa in the context of changing demographic and socioeconomic dynamics.

DATA AND METHODS

To explore answers to our research questions, we use nine samples of DHS data collected in Senegal between 1986 and 2019. The DHS are standardized, nationally representative cross-sectional surveys, conducted in low- and middle-income countries. They cover a wide range of topics related to the demographic and health characteristics of individuals, families, and households with a focus on women of reproductive age (15-49). Senegal is the only country in Africa, where a continuous version of the survey was implemented in 2012. We follow the approach of Cotton (2021) and focus on mothers of living children aged 0–14. In the DHS, women's birth histories provide information on all children ever born, such as age, sex, dates of birth and death, and coresidence with the mother. We use this variable to create a binary variable that indicates if the child resides with the mother or elsewhere. We aggregate this information for each woman to determine whether she has at least one living nonresident child (1) or not (0). This variable constitutes our dependent variable. The DHS does not provide details on the children's locations, their living arrangements, or the duration and reason for their absence. Thus, we cannot determine with certainty whether the child is being fostered or living with the biological father, although children whose mothers are alive but who live with their fathers are relatively rare in sub-Saharan Africa, and some authors suggest that these children might be treated differently in the household (Cotton 2021). Despite the limited information on children's residence, the DHS provides an opportunity to study child fostering in a context where other data are not available (Cotton 2021).

We rely on the women's files for birth histories and thus include children whose biological mothers are still alive. We restrict our sample to mothers with at least one living child aged 0–

TABLE 1 Sample overview

Survey year	1986	1992–1993	1997	2005	2010–2011	2012–2014	2015–2016	2017	2018–2019
Sample	3094	4285	5639	8864	9689	10,413	10,853	10,295	11,031
Fostering	27.0	27.6	25.4	26.7	23.5	26.4	25.0	25.4	25.6

NOTE: Sample refers to the weighted total number of mothers. Fostering refers to the proportion of mothers who out-foster.

TABLE 2 Sample characteristics

	Sample (%)	Mothers who out-foster (%)	Mothers who do not out-foster (%)
Age group			
15–19	5.1	1.3	6.4
20–24	16.2	8.4	18.9
25–29	21.7	20.9	21.9
30–34	20.1	26.0	18.0
35–39	16.8	21.0	15.3
40–44	12.1	14.1	11.4
45–49	8.2	8.4	8.1
Children	2.8	3.3	2.5
Marital status			
Never married	3.2	2.8	3.3
Currently married	90.8	88.5	91.6
Formerly married	6.0	8.8	5.1
Polygynous			
No	56.8	45.1	60.8
Yes	33.6	43.0	30.4
Don't know	9.6	12.0	8.8
First Union	18.2	17.7	18.3
Educational level			
< Primary	83.5	88.5	81.7
Primary	13.8	10.2	15.1
> Primary	2.7	1.3	3.2
Employment			
No	50.2	45.2	51.9
Yes	49.8	54.9	48.1
Ethnicity			
Wolof	39.0	39.0	39.0
Poular	27.5	26.3	27.9
Serer	15.1	14.7	15.3
Other	18.4	20.1	17.9
Place of residence			
Rural	58.2	62.4	56.8
Urban	41.8	37.6	43.2
Relationship to the household head			
Head	8.1	9.0	7.8
Wife/Co-spouse	41.0	46.3	39.2
Daughter (in law)	28.0	19.2	31.0
Other/Nonrelative	23.0	25.5	22.1
Age of household head	52.8	52.1	53.0
Mean household size	13.4	12.8	13.6
Household structure			
1–2 related adults	12.2	14.8	11.3
3+ related adults	71.1	68.1	72.1
Unrelated adults	16.7	17.1	16.7
N	74,164	18,994	55,170

NOTE: Children refer to the mean living children aged 0–14.

14. While fostering occurs after the age of 14, many children leave the maternal household at this age for marriage, work, or education, and we cannot distinguish these children from those who are fostered out. We also focus on mothers with at least one living child to consider only women who are "at risk" of out-fostering. The total weighted sample size, shown in Table 1, across all surveys is 74,164 mothers, of whom around 26 percent have at least one nonresident child aged 0–14. Table 2 provides an overview of the sample of mothers who out-foster, and of those who do not, pooled for all years.

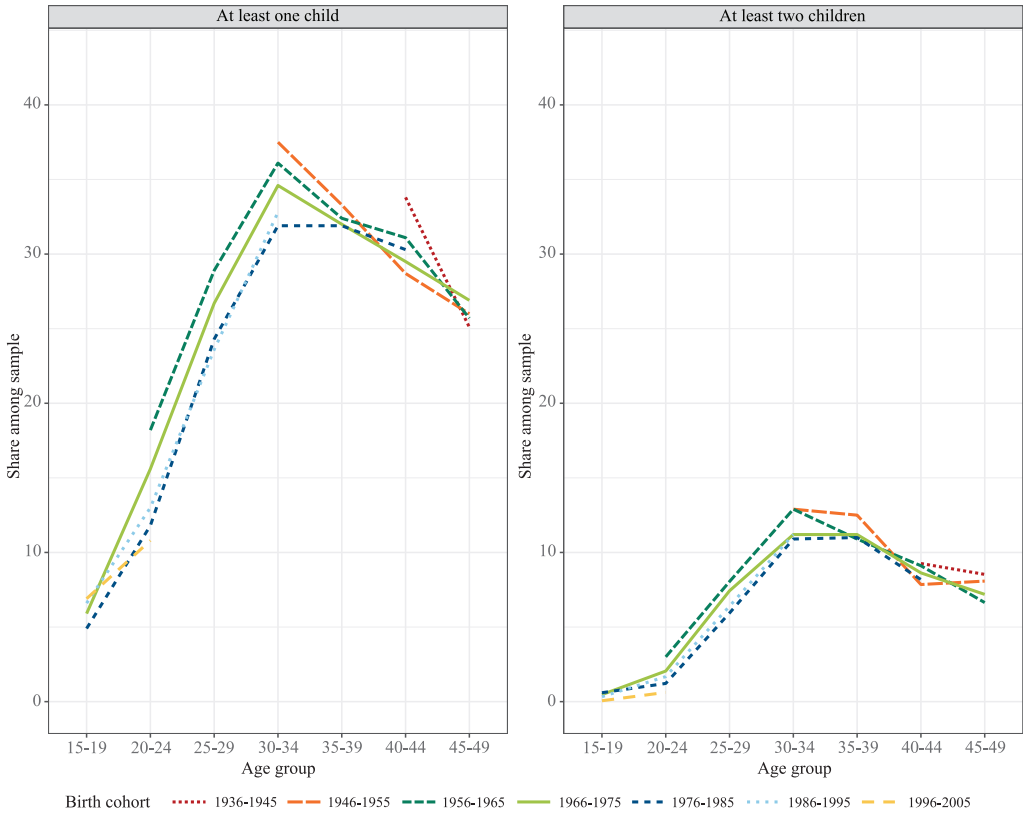
First, we examine how the practice of out-fostering children has evolved over time in Senegal. Mothers were grouped into 10-year birth cohorts, with the earliest and latest cohorts including mothers born between 1936 and 1945 and between 1996 and 2005, respectively. We chose birth cohorts over survey years to avoid overlap of women across data collection rounds, even though the DHS data are cross-sectional. We grouped women into five-year age groups. We also conducted a bivariate analysis of individual and household predictors to examine their relationship to the dependent variable. In addition to the bivariate analysis, we examine the births and deaths of children among mothers in our sample and visualize our descriptive findings. We obtained information about the mothers' individual characteristics and birth histories from the women's individual files. For the household characteristics, we relied on the information provided by the household files. We use the weights provided by the DHS. A complete overview of sample characteristics can be found in the Online Appendix (Appendix T1a and T1b). Note that household information is not available for the 1986 survey.

Second, we test the relationship between out-fostering and the covariates by estimating two sets of logistic regression models. We pool survey years and control for the year of the survey. The dependent variable across models remains the same binary variable (no out-fostered children 0; at least one out-fostered child 1). The reference survey round is 1986 in the first three and 1992–1993 in the last three models. We account for the complex survey design of the DHS by including weights, strata, and PSU, using the survey package in R to estimate the regression models (Lumley 2023). The results of all models are reported as odds ratios (OR). We also tested models for each individual survey year and several other interaction terms. However, the model fits did not improve significantly.

In the first model, we analyze the effects of time (survey year) and place (type of residence) on the likelihood of out-fostering. In the second model, we add mothers' demographic characteristics while controlling for socioeconomic variables. We focus on mothers' age (five-year age groups), number of children alive below or equal to age 14, marital status (never married; currently married; ever married), and union type (polygynous yes; no; don't know), while controlling for educational attainment (less than primary; primary; more than primary), employment (unemployed; employed), and ethnicity (Wolof; Poular; Serer; other). In the third model, we include an interaction term between the mother's age and fertility.

In the second set of models, we focus on the associations between out-fostering and mothers' living arrangements. In the first of these models, Model 4, we include information on the household size, the age of the household head, and the relationship to the household head (head; wife or co-spouse; daughter or daughter-in-law; other or nonrelative). In Model 5, we include a variable for the household structure (one or two related adults; three or more related adults; unrelated adults) instead of the relationship to the household head. In the last model, we add both the relationship and structure variables. In Models 4 through 6, we control for time, space, and individual characteristics of the mothers. We include mean-centered variables for the number of children, the household size, and the age of the household head.

FIGURE 1 Prevalence of out-fostering by age and cohort



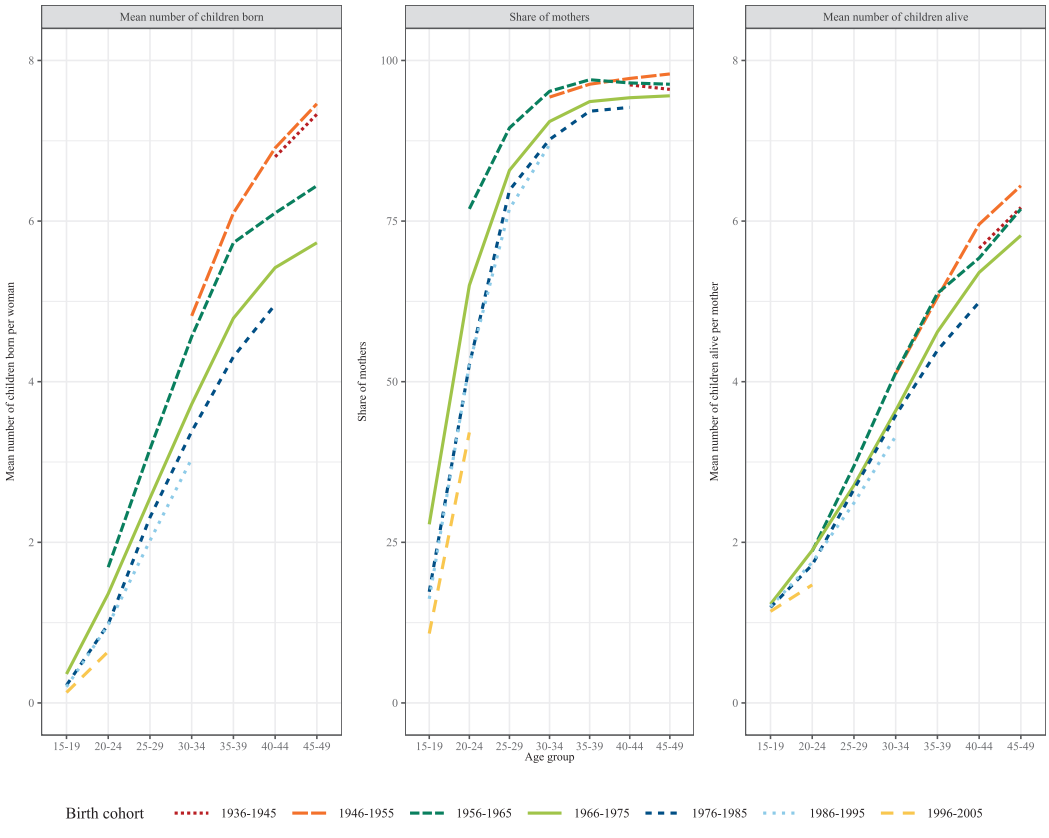
RESULTS

Trends in Child Out-Fostering in Senegal Over Time

The prevalence of out-fostering in Senegal has remained constant over the period studied: In 1986, 27 percent of mothers had at least one nonresident child, compared to 25.6 percent of mothers in 2018–2019 (see Table 1). Figure 1 shows the share of mothers with at least one (left panel) and at least two (right panel) nonresident children by mother's birth cohort and age group. While younger cohorts have not yet reached higher ages, we can compare all cohorts between 1956 and 1995 for the age groups 20–24 up to 30–34. The proportion of mothers with at least one nonresident child has declined at younger ages in all birth cohorts, but at ages 30–34 the differences between these cohorts are less than 5 percent. Moreover, the differences in out-fostering for nearly all ages across cohorts are not statistically significant.

In addition, at ages 35–39 and 40–44, the share of mothers with at least one nonresident child in the 1976–1985 birth cohort exceeds that of the previous two and previous three cohorts, respectively. For the share of mothers with at least two nonresident children, changes across cohorts are negligible. The figure shows that out-fostering peaks between the ages of

FIGURE 2 Underlying demographic dynamics of out-fostering by age and cohort



30 and 39. Overall, a population-level analysis of fostering prevalence emphasizes stability across cohorts but masks distinct age-specific patterns.

Several factors contribute to the stable prevalence of out-fostering in Senegal. The most fundamental are demographic factors: fertility and mortality. Women must have children to be able to out-foster, and children must be alive to be out-fostered. We compared the number of children born among all survey respondents, the proportion of mothers, and the number of children alive per mother by age and birth cohort (Figure 2).

Based on the average number of children born among respondents, we observe that entry into motherhood is postponed over time and that fertility per capita declines. The left panel shows that at ages 20–24, the difference between the 1956–1965 and 1996–2005 birth cohorts is almost one child, although a part of the younger cohort may still have years left in this age group. Toward the end of the reproductive career, we observe a substantial decline of more than one child in the average number of children born per woman between the earliest birth cohorts (1936–1945) and the latest to have reached that age group (1966–1975). The middle panel highlights the postponement of motherhood across cohorts but near-universal motherhood at higher ages.

Figure 2 illustrates an important dynamic. Infant and under-five mortality in Senegal declined substantially between 1986 and 2019, from 88 to 29 per 1000 live births and from 195 to 37 per 1000 live births, respectively (STATcompiler 2024), and it appears that mortality improvements offset fertility declines and the postponement of motherhood. Subsequently, the number of live children per mother at the middle and end of their reproductive careers (right panel) has not declined substantially. Among mothers, we observe that at older ages the differences between cohorts are small, with women in all cohorts whose members reach ages 45–49 having about six living children. Thus, the risk of out-fostering in terms of demographic availability remains similar across cohorts, as almost all women enter motherhood (middle panel) and mothers of younger generations have similar numbers of living children available to be fostered out as earlier generations. Despite changes at the individual level, demographic dynamics continue to drive the stability of child out-fostering over time. The age-cohort analysis of fertility patterns suggests that out-fostering may decline in the future but that mothers, in the absence of institutional childcare, continue to rely on relatives to provide such care.

Characteristics of Mothers in Senegal Over Time

While the population-level prevalence of fostering has remained relatively constant over time, the characteristics of mothers who out-foster may have changed. In the following section, we profile the individual and household characteristics (Table 3) of all mothers aged 30–34 over time and compare them to those of mothers who out-foster (Table 4). In this age group, more than a third of mothers foster out at least one child, and the prevalence of fostering increases compared to younger age groups. Most women in Senegal entered childbearing at younger ages, which increases the likelihood of having more children to out-foster by age 30–34. While the differences across cohorts are not statistically significant, pairwise comparisons of proportions suggest that differences over age groups are statistically significant.

Table 3 shows that around 90 percent of mothers aged 30–34 in Senegal are married, although the proportion of married mothers among all mothers declined by 5 percent. Mothers who out-foster are more likely to be in the formerly married group than all mothers. Substantial changes can be observed with respect to the type of union. In 1986, more than half of the mothers were in a polygynous union, but by 2018–2019 this share had fallen to around 30 percent. About 10 percent of mothers report not knowing whether they are in a polygynous union. This share includes women whose union is not polygynous at the time of data collection but could become polygynous. Mothers who foster out are more likely to be in a polygynous union over time than all mothers (Table 4).

Progress in educational attainment in terms of the highest level of education completed has been relatively slow among mothers, with the vast majority not completing primary education. The proportions of women who have completed primary or secondary education have remained fairly stable. More than two-thirds of women with higher education in all survey years are excluded from our sample because they are not mothers. It is important to note that there is educational stratification across mothers and nonmothers, with women in the latter group more likely to be less educated. Employment, measuring whether the respondent is currently working, has increased significantly among the sample, from 33.4 percent in 1986

TABLE 3 Characteristics of mothers aged 30–34 with at least one child aged 0–14

	1986	1992–1993	1997	2005	2010–2011	2012–2014	2015–2016	2017	2018–2019
Children	3.8	3.9	3.7	3.4	3.4	3.3	3.3	3.3	3.2
Marital status									
Never	1.0	1.8	1.9	0.6	2.4	2.0	1.4	2.7	2.2
Currently	94.3	93.5	91.0	93.1	91.5	92.9	91.8	91.5	89.9
Formerly	4.7	4.7	7.1	6.3	6.1	5.1	6.8	5.7	8.0
Polygynous									
No	42.4	47.6	45.8	54.3	56.2	61.7	61.7	60.9	59.7
Yes	51.9	45.1	43.3	37.1	35.3	31.1	30.1	30.6	30.2
Don't know	5.7	7.4	10.9	8.7	8.6	7.2	8.2	8.5	10.1
First Union	16.8	16.6	17.7	18.4	18.9	19.2	19.3	19.2	19.3
Educational level									
< Primary	78.5	84.3	78.1	83.6	86.0	88.3	86.0	82.7	84.9
Primary	13.0	13.0	17.9	13.8	12.2	9.3	11.0	11.8	10.8
> Primary	8.5	2.7	4.0	2.6	1.8	2.4	2.9	5.6	4.3
Employment									
No	66.6	47.2	33.4	57.2	54.1	45.0	50.5	40.1	43.1
Yes	33.4	52.8	66.6	42.8	45.9	55.0	49.5	60.0	56.9
Ethnicity									
Wolof	47.1	40.2	39.3	38.5	38.2	40.2	42.4	37.6	42.0
Poular	19.5	23.7	22.9	27.4	26.4	27.3	25.9	25.8	25.6
Serer	15.6	17.3	16.2	14.5	17.9	14.0	16.4	16.7	13.7
Other	17.8	18.9	21.7	19.6	17.6	18.5	15.2	19.9	18.7
Place of residence									
Rural	57.6	60.2	59.8	53.9	54.9	52.8	52.8	54.7	55.5
Urban	42.4	39.8	40.2	46.1	45.1	47.3	47.2	45.3	44.5
Relationship to the household head									
Head		4.5	5.2	6.7	6.6	8.5	8.7	8.4	8.0
Wife/co-spouse		61.4	52.6	47.6	44.0	42.0	39.7	35.8	34.1
Daughter (in law)		17.7	23.7	21.6	26.2	24.4	28.8	31.3	32.5
Other/nonrelative		16.4	18.5	24.1	23.3	25.1	22.9	24.5	25.4
Age of household head		50.0	51.2	50.7	51.6	50.4	51.8	52.6	54.0
Household size		13.2	13.3	13.2	13.8	14.0	13.3	14.0	13.6
Household structure									
1–2 related adults		14.6	14.0	14.3	13.9	14.5	18.5	15.8	14.7
3+ related adults		77.8	79.2	31.4	63.4	68.9	71.2	71.0	73.4
Unrelated adults		7.6	6.7	54.3	22.7	16.6	10.3	13.2	12.0
N	601	816	1059	1721	1869	2068	2220	2231	2319

NOTE: Children refer to the mean living children aged 0–14. First union refers to the mean age at first union.

to 56.9 percent in 2018–2019. The same trend can be observed if we look only at mothers who out-foster.

Looking at all mothers, we observe little change in the type of residence over time, with similar proportions living in urban areas in 1986 and in the most recent round of the survey available. Mothers who out-foster slightly more often live in rural areas as compared to the full sample. Regarding mothers' position in the household, we observe variation in the distribution according to their relationship to the household head over time. In 1992–1993, the earliest sample for which this information is available, about 61 percent of the group reported being the wife or co-spouse of the household head compared to less than 34 percent in 2018–2019. This change is driven by more women in this group reporting to be either a daughter/daughter-in-law or other/nonrelative of the household head. This could suggest an increase in intergenerational or extended household arrangements for mothers in Senegal. We do not find substantial changes over time in the household structure, with the exception of the year 2005. This suggests that households were possibly categorized differently in 2005, increasing the share of households in which coresident adults are considered to be unrelated.

We conducted a bivariate analysis using chi-squared tests within the survey package (results not shown) to analyze the relationship between the mothers' individual and household

TABLE 4 Characteristics of mothers aged 30–34 with at least one out-fostered child aged 0–14

	1986	1992–1993	1997	2005	2010–2011	2012–2014	2015–2016	2017	2018–2019
Children	4.2	4.2	4.0	3.9	4.0	3.9	3.8	3.9	3.7
Marital status									
Never	0.9	1.6	2.0	0.0	2.1	1.9	1.7	2.1	2.5
Currently	89.8	91.9	89.1	91.4	89.3	91.5	88.6	89.5	87.3
Formerly	9.3	6.5	8.9	8.6	8.7	6.6	9.7	8.4	10.3
Polygynous									
No	33.3	44.2	38.4	43.3	48.4	53.5	52.7	48.7	51.9
Yes	56.5	46.5	49.1	46.5	40.8	38.0	35.9	40.9	35.4
Don't know	10.2	9.4	12.6	10.2	10.9	8.5	11.4	10.5	12.7
First Union	16.6	16.2	17.3	17.9	17.7	18.2	18.1	18.0	18.0
Educational level									
< Primary	81.0	88.7	83.1	88.3	88.2	93.6	91.0	88.7	88.5
Primary	14.8	10.0	15.5	9.8	11.3	5.7	8.5	9.4	9.7
> Primary	4.2	1.3	1.5	1.9	0.5	0.7	0.5	1.9	1.9
Employment									
No	68.5	42.6	31.0	55.5	50.3	47.3	52.5	40.9	41.3
Yes	31.5	57.4	69.0	44.5	49.7	52.7	47.5	59.1	58.7
Ethnicity									
Wolof	43.1	36.5	36.5	38.8	34.0	38.0	39.3	40.2	37.2
Poular	19.4	21.0	20.2	26.9	29.5	29.3	27.6	24.9	27.5
Serer	14.8	21.6	20.6	14.2	16.5	11.2	16.8	15.5	12.2
Other	22.7	21.0	22.8	20.1	20.0	21.5	16.3	19.4	23.1
Place of residence									
Rural	52.3	61.3	68.3	60.5	61.2	61.7	58.7	63.6	58.7
Urban	47.7	38.7	31.7	39.5	38.8	38.4	41.3	36.4	41.3
Relationship to the household head									
Head		5.8	6.9	5.7	4.8	5.2	10.3	9.3	8.1
Wife/Co-spouse		62.3	55.3	49.3	49.8	49.9	43.7	41.0	40.8
Daughter (in law)		16.1	18.4	15.5	22.8	18.2	21.1	25.5	22.1
Other/nonrelative		15.8	19.4	29.5	22.7	26.7	25.0	24.2	29.0
Age of household head		49.5	50.5	50.8	51.7	49.9	50.3	51.7	52.5
Household size		12.9	12.3	12.7	13.3	12.9	12.3	13.4	13.0
Household structure									
1–2 related adults		14.8	15.8	13.2	14.8	19.5	21.6	16.1	17.4
3+ related adults		76.8	77.6	31.2	65.0	66.3	67.0	71.2	70.0
Unrelated adults		8.4	6.7	55.6	20.1	14.2	11.3	12.8	12.6
N	216	310	371	596	559	712	705	702	760

NOTE: Children refer to the mean living children aged 0–14. First union refers to the mean age at first union.

characteristics and the dependent variable. In the weighted sample, 25.7 percent of women have at least one nonresident child, with less than 5 percent variation across samples. The bivariate relationships suggest that women aged 30–34 are most likely to out-foster and that mothers who out-foster have a higher number of children, are more likely to be in a polygynous union, live in a rural area, be less educated, participate in the labor market, and have a lower average age at marriage than those who do not out-foster. The bivariate analysis suggests that all associations between the covariates and the dependent variable are statistically significant (p-value < 0.001), except for the sex of the household head.

Overall, the descriptive statistics reveal small but crucial changes that took place among mothers in Senegal over the past three decades. These changes, such as a decline in fertility and the number of polygynous unions, and an increase in the average age at childbearing and marriage, can contribute to a decline in the propensity to out-foster among mothers. Households appear to be evolving, with more female-headed households and declining polygyny contributing to changes in the relationship between mothers and household heads. The internal composition of households in Senegal might be changing but their urban–rural ratio has remained constant over time, as has their average size. Since our sample consists only of mothers, it is possible that broader societal changes are occurring among women who have

not (yet) entered motherhood. Selection effects in female migration could also contribute to the stability and demand further research attention.

Based on the descriptive findings, we find that child fostering remains prevalent in Senegal across social groups and strata. However, we find nuanced differences between mothers who foster and those who do not, such as lower educational attainment and higher polygyny among the former. Fostering also appears to be a rural practice, which is consistent with the literature suggesting that out-fostering can be a means of accessing opportunities for children from rural areas. Mothers who foster out tend to have more children, thus out-fostering may be associated with a higher need for care support.

Mothers' Characteristics Associated With Child Out-Fostering

Table 5 shows the results of the logistic regression models. In Model 1, we test the relationships between time, place, and out-fostering. We observed small, statistically insignificant effects across all survey years, except for 2010–2011. For this year, the OR associated with out-fostering is lower compared to 1986, and the effect is statistically significant. We observe a statistically significant effect for the space variable, suggesting that, in the absence of other controls, women in urban areas are less likely to out-foster a child than their rural counterparts.

In Model 2, we focus on the demographic characteristics of the mothers, controlling for time, place, and socioeconomic variables. We observed large, statistically significant age effects, especially for the 30–34 age group, relative to the reference group. The effect of having more children is pronounced, suggesting that for each additional child a woman has the odds of out-fostering increase by 47 percent relative to the mean number of children among women in the sample. Thus, mothers with more than the average number of children have higher odds of out-fostering compared to mothers with fewer than average children. In line with our expectations, women who are unmarried, in polygynous marriages, have less education and participate in the labor market are more likely to foster out at least one child.

In Model 3, we include an interaction term for age and the number of children aged 14 or younger that a woman has. The ORs for the age groups now represent the baseline effect of being in that age group on out-fostering, assuming that the number of children a mother has is at the mean. To find the effect of each additional child above the mean on the odds of out-fostering for women in a given age group, we multiply the effect for the number of children (OR 3.8) by the interaction term for that age group. For mothers aged 30–34, the baseline odds of out-fostering are reduced by 20 percent (OR 0.8) compared to mothers aged 15–19. For each additional child above the mean, the odds of out-fostering for mothers aged 30–34 increase by a factor of 1.52 (OR 3.8∗0.4) from this lower baseline. The pronounced age effect for mothers aged 30–34 suggested by the descriptive statistics and Model 2 diminishes; however, the baseline difference for this group and the reference group is statistically insignificant. More generally, for all age groups, both the baseline odds of out-fostering and the effect of number of children are lower than for the reference group, indicating that the youngest mothers have the highest baseline odds of out-fostering and are most affected by having additional children. The interaction term shows that having more children still in-

TABLE 5 Regression models

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.
(Intercept)	0.4	***	0.2	***	0.8	***	0.6		0.8		0.7	
Survey year												
1986	*Ref.*		*Ref.*		*Ref.*							
1992–1993	1.0		0.9		0.9		*Ref.*		*Ref.*		*Ref.*	
1997	0.9		0.8	**	0.8	**	0.9		0.9		0.9	
2005	1.0		1.0		1.0		1.1		1.0		1.0	
2010–2011	0.8	*	0.8	*	0.8	*	1.0		0.9		0.9	
2012–2014	0.9		1.0		1.0		1.1		1.1		1.1	
2015–2016	0.9		0.9		0.9		1.0		1.0		1.0	
2017	0.9		0.9		0.9		1.1		1.1		1.0	
2018–2019	0.9		1.0		1.0		1.1		1.1		1.1	
Residence *(ref. rural)*												
Urban	0.8	***	0.9	***	0.9	***	0.8	***	0.8	***	0.8	***
Age (ref. 15–19)												
20–24			1.9	***	0.6	**	0.5	***	0.5	**	0.5	***
25–29			2.8	***	0.7		0.6	*	0.7	*	0.6	*
30–34			3.0	***	0.8		0.7		0.7		0.7	
35–39			2.6	***	0.7		0.6	**	0.6	*	0.6	**
40–44			2.6	***	0.7		0.6	**	0.6	**	0.6	**
45–49			2.7	***	0.7		0.6	**	0.6	**	0.6	**
Number of children			1.5	***	3.8	***	4.1	***	3.8	***	4.1	***
Marital status (ref. never)												
Married			0.6	*	0.5	**	0.6	*	0.6	*	0.6	*
Formerly			1.2		1.1		1.1		1.1		1.1	
Polygynous (ref. no)												
Polygynous			1.6	***	1.6	***	1.8	***	1.7	***	1.8	***
Don't know			1.6	*	1.6	*	1.7	*	1.7	*	1.7	*
Educational level (ref. <primary)												
Primary			0.8	***	0.9	***	0.9	***	0.8	***	0.8	***
>Primary			0.5	***	0.5	***	0.5	***	0.4	***	0.5	***
Employment (ref. not employed)												
Employed			1.1	***	1.1	***	1.1	***	1.1	***	1.1	***
Ethnicity (ref. Wolof)												
Poular			1.0		0.9		0.9	**	0.9	**	0.9	**
Serer			0.9		0.9		0.9	**	0.9	**	0.9	***
Other			1.2	***	1.2	***	1.2	***	1.2	***	1.2	***
Age*number of children												
20–24*nchild					0.5	***	0.5	***	0.5	***	0.5	***
25–29*nchild					0.4	***	0.4	***	0.4	***	0.4	***
30–34*nchild					0.4	***	0.4	***	0.4	***	0.4	***
35–39*nchild					0.4	***	0.4	***	0.4	***	0.4	***
40–44*nchild					0.4	***	0.4	***	0.4	***	0.4	***
45–49*nchild					0.4	***	0.4	***	0.4	***	0.4	***
Household size							1.0	***	1.0	***	1.0	***
Age of household head							1.0	***	1.0	***	1.0	***
Relation to household head (ref. head)												
Wife/co-spouse							1.0				1.0	
Daughter (in law)							0.9				1.0	
Other/nonrelative							1.8	***			1.9	***
Structure (ref. 1–2 related adults)												
3+ related adults									0.9	***	0.8	***
Unrelated adults									1.1	*	1.0	*

NOTE: Significance levels (Sig.). OR: odds ratios; Ref.: Reference category; children: mean living children aged 0–14; Models 1–3: 74,164; Models 4–6: 71,070.

*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

creases the odds of out-fostering for other age groups, but the increase is less pronounced than for the youngest mothers.

In the second set of models, we examine the effects of mothers' living arrangements on out-fostering, while controlling for their socioeconomic and demographic factors. In Model 4, we control for mean-centered variables for the household size and age of the household

head and focus on testing the effect of mothers' relationship to the household head on out-fostering. We find that compared to mothers who are the head of their household, mothers who are other-/nonrelatives of the head of the household are 83 percent more likely to have a nonresident child. Mothers who are daughters or daughters-in-law of the household head have around 10 percent lower odds of out-fostering a child compared to the reference category.

In Model 5, we focus on household structure rather than relationship to the household head, keeping all the controls from Model 4. We observe that mothers living with three or more related adults are less likely to foster out a child than those living with one or two other relatives. No statistically significant effect is observed for women living with nonrelatives compared to the reference group. However, women in this group may also be living with relatives in addition to nonrelatives, which could explain the lack of an effect. Model 6 retains the same controls, but we include both the relationship and household structure variables. We observe that controlling for the relationship to the household head allows us to see the effect of household structure on out-fostering more clearly. We find that women who live with more than two other relatives and those who live with unrelated adults have lower odds of out-fostering.

DISCUSSION

Using nine rounds of cross-sectional DHS data, this research investigates the stable prevalence of child out-fostering in Senegal over the period of 1986–2019, during which nearly one-third of mothers of children aged 0–14 lived apart from at least one of their children. This work extends research by Cotton (2021), by investigating the remarkable stability of out-fostering over time to contribute to a better understanding of the persistent features of the African family systems in the context of broader socioeconomic and demographic dynamics. This paper opens further research avenues for studies of child fostering and differences in long-term trends across and within countries.

The first novel finding of this research is that the stability in child out-fostering is at least partially driven by macro-level demographic factors: Improvements in child mortality counteract fertility decreases; mothers in Senegal face a similar "risk" of out-fostering at the end of their reproductive careers because the number of children available for out-fostering has remained fairly stable over three decades. However, by focusing on mothers' birth cohorts and women's entry into motherhood, we find that women in younger cohorts enter motherhood later than older cohorts and tend to have fewer children.

The prevalence of child out-fostering in Senegal and other sub-Saharan African countries may change in the coming years as they continue their demographic transitions. Socioeconomic transformations and changes in fertility trends have an impact on the number of women who enter motherhood and on the characteristics of mothers. However, the link between such changes and behavior of mothers and families with respect to out-fostering is complex. If fewer women enter motherhood, the absolute number of women who out-foster may change but the prevalence among mothers could remain stable. It has been argued that demographic and socioeconomic changes can threaten the provision of intergenerational

support and weaken family networks (Mokomane 2013). In the absence of welfare state policies and services, this could be detrimental to the well-being of children and families; therefore, more research is needed to understand the interplay between demographic dynamics and out-fostering across and within African countries.

The second key result of our study is that, at the micro-level, the role of demographic factors in the non-coresidence of mothers and biological children is also crucial. Exploratory analysis suggests that middle-aged mothers are particularly likely to have at least one nonresident child and that this effect is positively associated with the number of children a woman has. However, a more nuanced picture emerges when analyzing the effect of the interaction between age and fertility on out-fostering. Whereas the effect of additional children remains pronounced, the youngest mothers are most affected by having additional children: Having more children increases the odds of not living with at least one of them, but the increase across age groups is less pronounced than for younger mothers; however, the difference across age groups in the youngest age group is not statistically significant for the 30–34 age group. Thus, mothers in this age group may have a similar baseline risk of out-fostering at least one child compared to women in the 15–19 age group. These findings suggest that child out-fostering is driven, at least to some extent, by an interplay of demographic factors and necessity. Mothers who are very young or in their prime working years may already need or want more help with childcare, with additional children contributing positively to this association. Importantly, however, it may not be the number of children that influences the decision to out-foster, but whether that number exceeds the ideal or desired family size (Cotton 2024; Mason 2001).

The demographic dynamics are moderated by mothers' individual and household characteristics. Mothers who are less educated, in polygynous unions, or unmarried, who participate in the labor market, and who live in rural areas are more likely to out-foster. Consistent with previous literature on child fostering in Senegal, we find that mothers living in more traditional contexts (e.g., polygynous unions; rural places of residence) are more likely to participate in a traditional practice (Vandermeersch and Chimere-Dan 2002). Fostering children for human capital accumulation is common (Akresh 2009; Beck et al. 2015; Serra 2009) and often reflects rural–urban kinship ties (Eloundou-Enyegue and Stokes 2002); however, the literature suggests that fostering pathways in sub-Saharan Africa are not as simple as rural–urban but depend on a variety of complex factors (Madhavan et al. 2017), such as kin availability, labor needs, and household resources among others. We further emphasize that these relationships are not causal and reflect selection effects, for example, into union types.

Nevertheless, our findings suggest that out-fostering is a practice that is highly stratified by education and that childcare provided by kin or social networks may be particularly relevant for working mothers in the absence of institutional childcare. Research on living arrangements in South Africa (Madhavan and Brooks 2015) indicates that the presence of kin changes over the life course and that fostering should be conceptualized in the context of kin networks. Due to data limitations, we do not have information on the duration and dynamics of living arrangements for mothers and their children. However, it is likely that changes in living arrangements occur partly in response to labor market conditions and migration, but also in response to union instability and formation. Thus, in line with Madhavan and Brooks (2015), we emphasize the importance of data that allow us to study the temporal aspects of living arrangements and kinship ties beyond the household.

We observe that mothers who are spouses or daughters (in-law) of the household head are as likely to out-foster as mothers who head their own household. This result is consistent with the findings of Beck et al. (2015) who found that female-headed households in Senegal are not more likely to out-foster children compared to other households. However, kin relations are particularly important for single mothers (Clark et al. 2017; Cotton, Clark, and Madhavan 2022). One possible explanation for our results could be the lack of suitable kin to foster a child for single mothers due to small social networks or economic disadvantages and precarity their kin also face (Cotton, Clark, and Madhavan 2022). Another, rather simple, explanation could be that headship is a poor predictor of fostering decisions in the Senegalese context because fostering is common among mothers in different circumstances and is not only a practice driven by need but also because the relationship between female headship and poverty varies across countries (Milazzo and Van De Walle 2017) and remains understudied in Senegal (Braithwaite, Posner, and Wood 2020). Still, Senegalese mothers who live alone or with only one other related adult face higher odds of out-fostering compared to mothers who live with multiple related adults or other unrelated adults. This finding raises the question of whether mothers who live with multiple related adults do not out-foster because the relatives who would foster the child already live in the same household (i.e., grandparents).

Our analysis also indicates that mothers who have a nonnuclear relationship with the household head are more likely to foster out a child than mothers who head their own household. Not being part of the household nucleus might increase the pressure on mothers to out-foster a child. Whereas, our analysis suggests that household size appears to have a small, albeit statistically significant, effect on out-fostering, we are not able to analyze the reason for living with non- or distant relatives. Possible factors could be mothers' migration status (Cotton and Oduor 2024) or life course events such as union dissolution (Cotton, Clark, and Madhavan 2022). A closer examination of mothers who live with people outside their kinship network or with distant relatives, such as in the case of migrant women, could be informative.

Several limitations should be considered when interpreting the results of our analysis. While we identify women who have at least one nonresident child aged 0–14, we do not have information on the living arrangements of the children. It is possible that the children are only temporarily absent, that they live with their biological father, and that the mothers are involved in the life and upbringing of these children. Nonetheless, the number of children residing with only their biological father has remained at around 3 percent of all children in the household roster in the earliest and latest rounds of the DHS in Senegal for which household data are available. In addition, as pointed out by Cotton (2024), some of these children may be attending boarding school or living on their own. In the context of Senegal, a share of boys considered out-fostered in our approach could indeed be living at Koranic schools. Thus, our estimates of child out-fostering may overestimate the prevalence of the practice in Senegal.

Foster care arrangements are diverse (Verhoef and Morelli 2007), and knowing more about who children live with, where they live, and for how long could provide important insights into child out-fostering and household composition. Income, type of employment, or household wealth are potentially important factors in predicting whether or not women out-foster a child. However, we do not have a comparable variable across surveys to include in our analysis and the available household wealth might differ between the time of the survey

and when the decision to out-foster was made. Similarly, several unobserved characteristics are likely to play an important role, such as child characteristics, the availability of nearby kin, and the strength, size, and characteristics of family networks. Finally, as a cross-sectional survey, the DHS is not ideal for studying processes and relationships over time but to our knowledge, longitudinal data on childcare in Senegal are not available for the period covered by the DHS.

CONCLUSION

Overall, we show that declines in fertility and child mortality offset each other, resulting in similar numbers of living children per woman across cohorts that can be fostered out. We also find that beyond the role of commonly identified associations, such as single motherhood or polygyny, household characteristics are important in understanding fostering. Despite the broad macro-level changes that took place in Senegal over the past three decades, maternal characteristics have remained fairly stable, even as households appear to be changing in structure and organization. We find that the postponement of fertility and marriage is likely to contribute to a peak in the prevalence of fostering at later ages and may lead to lower levels of child fostering among younger cohorts. Because we focus on mothers, it is possible that the demographic and socioeconomic changes observed in Senegal are more pronounced in the population as a whole, with implications for social reproduction and organization.

Lastly, it is important to emphasize the diversity of fostering arrangements and the contextual nature of the practice. We aim to highlight the circumstances in which mothers are embedded, such as the composition of the households in which they live, when discussing the motivations and implications of fostering as a social practice. We argue that comparative data and research on the living arrangements of women, children, and families in sub-Saharan Africa over time could be particularly insightful in understanding the persistence of traditional practices, such as child fostering, in changing demographic and socioeconomic contexts. Our findings suggest that demographic factors are important pieces of the puzzle that explain the persistence of child fostering in sub-Saharan Africa in the context of broader changes and they warrant further research attention.

DATA AVAILABILITY STATEMENT

The DHS Program datasets are publicly available from https://dhsprogram.com

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