



Unpaid Caring and Domestic Work in Kenya

A Scoping Review

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Executive Summary

This scoping review assesses the available evidence on unpaid caring and domestic work (UCDW) in Kenya, with the goal of informing impactful policy dialogue, programming, and research. Local time use surveys utilizing distinct data collection methods indicate a large gender gap in UCDW, with estimates of the ratio of women's to men's contributions ranging from 2-6. Childcare is both an undermeasured and significant constraint on women's labor market participation, especially in urban settings where support from extended family is more limited. Policy and program interventions offering affordable options for the care of young children could make an important contribution to increasing women's paid work and business earnings, as well as girls' school enrollment. Research outside of Kenya indicates the importance of social norms in driving the unequal distribution of UCDW between men and women. A complex interplay of socialization, reference group effects, and interpersonal behavioral preferences shapes norms, beliefs, and behaviors related to UCDW. There are both physical and mental health consequences of the gender gap in UCDW, the latter associated with perceptions of unfairness in the household division of labor and work-family conflict. Understanding these impacts and their pathways can be informative for gender transformative programming and other interventions for alleviation of the impact of unpaid care and domestic work.

Programs that directly target social norms as well as policy interventions such as parental leave can contribute to reducing gender inequalities in UCDW and health outcomes. Simple domestic technologies such as improved cookstoves can contribute to both reducing and redistributing certain UCDW tasks like fuelwood collection and cooking. However, there exist persistent gender barriers to adoption, due to the fact that the private benefits of time and labor saving domestic technologies largely accrue to women, while the financial costs – and, more importantly, the decision-making authority over relatively large household investments – are borne by men. Investments in physical infrastructure such as electrification and improving access to running water can reduce the time and physical effort required for many domestic care tasks. But as with domestic technology, the disconnect between who benefits from and who pays for infrastructure investments may create barriers to the diffusion of these basic time- and labor-saving services. Nationally representative time use data linked to information on demographic and socioeconomic characteristics, health outcomes, physical and psychological strain, and gender norms can yield important insights on how UCDW varies across subpopulations and access to services. Intervention research informed by these descriptive data can test cost-effective investments in childcare, domestic technologies, basic infrastructure, and normative change programming.

I. Introduction

What would it take to make progress towards Sustainable Development Target 5.4, “recognizing and valuing unpaid care and domestic work,” (UCDW) in Kenya? To inform an evidence-based approach to narrowing the gender gap in UCDW, this scoping review assesses the available data and research on the characteristics and distribution of unpaid labor, the relationship between UCDW and women’s economic empowerment, and the role of social norms in driving gender inequalities in the performance of UCDW activities. We also examine the potential contributions of domestic technologies and investments in basic infrastructure and public services to the reduction and redistribution of UCDW in Kenya. The report concludes with an overview of the data and research needs to advance Kenya’s progress towards this critical Sustainable Development Goal.

II. Methods

Relevant studies were identified by searching the Family and Society Studies Worldwide, EconLit and PubMed databases. Grey literature was also identified using a Google search with key terms. Family and Society Studies Worldwide and EconLit were searched with the terms: Gender inequality/ gap / differences/ disparities/ bias, gender/ social norms, women’s labor market participation employment/ earnings/ economic empowerment, together with the terms: time use, unpaid care, care work, child care, domestic work, housework, labor-saving technology, time-saving technology, improved cookstoves, water and firewood collection, food processing, grinding mills, threshing machines, Hippo Roller, infrastructure and technology, and terms for location: Kenya, East Africa, Sub-Saharan Africa. Similar search terms were used for the Google Scholar Grey Literature search. The Pubmed database was searched using the search string “‘health’ AND ‘domestic work’”. Additional references were sourced through back-referencing. All records underwent a title review, an abstract review, and a full-text review. Articles were included if they studied unpaid care work and if their work was done in Kenya or the study was applicable to the Kenyan context. Key information was extracted using a standardized form and reported under the themes covered in the rest of this report.

III. What do we know about the characteristics and distribution of UCDW in Kenya?

In the absence of nationally representative time use data, quantitative information on UCDW in Kenya comes from a number of disparate sources of varying quality and coverage. An early published analysis of the 1988 Rural Labor Force Survey (n=8102 households) tabulated the participation rates and average weekly hours dedicated to “household activities,” including “cooking, cleaning, child care, and fuel and water collection for which the [household] member is not paid.” (Neitzert, 1994). 92.8% of women heads of household heads and 96.5% of women spouses dedicated an average of 28.6 and 33.1 hours per week, respectively, to these unpaid activities. The corresponding figures for male household heads was 21.5% participation for an average of 13.6 hours per week. The pattern by sex is similar for children and other household members: girls dedicate twice as much time to UCDW as boys (17.7 hours per week compared to 8.5), as do other adult female household members.¹ Household survey data from a rural region of western Kenya² during 2004-2006 (n = 1310) show that women devote nearly six times as many hours to cleaning the house, preparing meals, fetching water and collecting firewood (Adda, Goldstein, Zivin, Nangami, & Thirumurthy, 2009). At baseline,³ adult women dedicated 18-20.6 hours per week to “housework,” 2.2-2.7 to firewood collection, and 3.1-3.8 to water collection. The corresponding figures for adult men were 3.2-3.7 hours/week to housework, 0.3-0.5 to firewood collection, and 1.2-1.3 to water collection. ActionAid (2013) used a combination of pictorial time use diaries and participatory research methods with 107 women in rural and urban Kenya to estimate the gender division of labor within households. Aggregating across various forms of unpaid care work (including housework, childcare, and care of adults), they found that women on average devoted more than twice as much time as men to these activities – 6 hours per day compared to less than 3. Women also spent an average of 1.65 hours per day collecting fuel or water, compared to 0.63 hours for men.

The most recent, and likely highest quality, time use data from Kenya were collected by OXFAM as part of its Women’s Economic Empowerment and Care (WE-Care) initiative (Maina & Kimani, 2019). The Nairobi Household Care Survey (n = 463) was carried out in the five informal settlements of Kibera, Mathare, Mukuru, Kawangware and Korogocho between October 2018 and March 2019. The time use module of the questionnaire is particularly well-designed insofar as it captures measures of eleven different UCDW activities: washing, drying, mending, ironing clothes; food and drink preparation, storing food; washing the dishes; cleaning/tidying the house/compound/garden, preparing the beds; fuel collection; water collection; caring for children; caring for people who are elderly, ill or living with disability; caring for community members; shopping related to care and domestic work; and travelling/walking related to care and domestic work. It is also unique among many LMIC time use surveys by recording up to two simultaneous activities during each hour of the day, as well as capturing supervisory responsibilities for children and/or dependent adults (Rost et al., 2020). The results indicate that women spend an average of approximately 5 hours a day on unpaid care as a primary activity compared to

¹ As is the case with many time use surveys, all activities were coded as mutually exclusive, which may lead to an undercount of joint/simultaneous activities, including child supervision (Folbre, 2018).

² Kosirai Division, near the town of Eldoret.

³ The study investigated the impact of antiretroviral (ARV) treatment on time allocation to various household tasks by treated HIV-positive patients and their household members. It found that, as treatment improves the health and productivity of patients, female patients in particular are able to increase the amount of time they devote to water and firewood collection, replacing the labor of children who perform those tasks when a parent is ill.

about 1 hour a day reported by men. If secondary activities are included, women report 11.1 hours per day for any care compared to 2.9 hours per day for men. In contrast, men spent almost double the time that women spent on paid work (10.5 vs. 5.3 hours per day, respectively). (See Box 1 for more information on the OXFAM research).

Because of its implications for both human capital development and women's labor force participation, childcare practices as a component of UCDW are of particular interest to both researchers and policymakers. In the Kenyan context, a cluster of studies carried out in Nairobi's informal urban settlements shed light on the strategies that mothers use to care for their children, including combining work and child care, relying on help with child care from others, and using center-based day care services (Clark et al., 2021; Clark, Kabiru, Laszlo, & Muthuri, 2019; Clark, Madhavan, Cotton, Beguy, & Kabiru, 2017). The research concludes that neither combining child care and work nor relying on family members to assist with child care are viable or preferable options for the majority of working mothers. Many of the income earning activities that low-income mothers pursue (such as vending and sales, cleaning, clothes washing, and public employment in the slum improvement program) are incompatible with simultaneous child care. Some working mothers are not allowed to bring their young children to work with them, while others worry about the safety of their children in their work environments. Nearly all mothers who did supervise their children while working felt distracted and worried that they were unable to satisfactorily perform either task (Clark et al., 2021).

Sharing childcare responsibilities with other family members is less common than might be assumed – among 752 employed mothers in the urban settlement of Korogocho, fewer than 20% of employed mothers relied on relatives to care for their children (ibid.). The process of urbanization has greatly increased the geographic distance between mothers and their extended family members. At the same time, the spread of primary and secondary education for girls and the expansion of employment options for adult women means that the opportunity costs of providing free child care have risen considerably. Single mothers rely most heavily on older sisters (63%) and maternal grandmothers to help care for their children, but almost a third receive no kin support at all (Clark et al., 2017). Children of commercial sex workers are often left unattended, and young adolescents are expected to take on domestic work responsibilities (Chege, Kabiru, Mbithi, & Bwayo, 2002).

Box 1. Gendered Patterns of Unpaid Care and Domestic Work in the Urban Informal Settlements of Nairobi, Kenya: Findings from a 2019 Household Care Survey

Time use: Women spend an average of about 5 hours a day on unpaid care as a primary activity compared to about 1 hour a day reported by men. If UCDW as a secondary/simultaneous activity is included, women report 11.1 hours per day for any care compared to 2.9 hours per day for men. In contrast, men spent almost double the time that women spent on paid work (10.5 vs. 5.3 hours per day, respectively).

Variation across households: Married women living in households that had at least one child under the age of six reported spending more time on primary and any care, while no association was found for men. There are negative associations between women's household decision-making power and asset ownership and the time they reported spending on unpaid care.

Association with access to domestic technologies and infrastructure: Women in households with access to improved water sources and healthcare facilities spent from 4 to 5 hours less per day on unpaid care as either a primary or secondary activity than women without these services. Likewise, owning more fuel and washing related equipment was also associated with about 2 to 3 hours less on any care for women, respectively.

Health impacts: Over half (55%) of surveyed women report that they had suffered from an injury, illness, disability or other physical or mental harm due to their unpaid care or domestic tasks in the last 12 months, including 22% having suffered a serious or incapacitating injury as a result of their UCDW responsibilities.

Role of gender norms: The majority (71%) of men had never seen another man wash clothes, while almost two-thirds (62%) had never seen another man clean the house/compound; almost half (45%) had never seen another man prepare meals, and over one-third (38%) had never seen another man take care of his siblings when they were children. Men who were taught how to cook or saw their fathers cook when they were children were more likely to be involved in care work. Men were also more likely to uphold attitudes they believe are shared by the majority of men in their community, compared to women's likelihood to uphold attitudes they believe are shared by the majority of other women. However, sustaining gender roles was not shouldered by men alone, as more than 70% of interviewed women reported that they were satisfied by their current share of housework despite the vast majority agreeing that men should do more UCDW, an attitude that the majority believe is shared by other women in their community. Most women (83%) agreed that men should do UCDW, but fewer than 10% ask for help with regular care tasks. Despite the widespread belief by both sexes that men should not be shamed for doing UCDW, 44% of women affirmed having known of a man who had been mocked for performing such activities. There is also persistent acceptability among study participants of violence against women related to women's performance of UCDW; between 4% of women and 11% of men thought it was acceptable for a man to beat a woman if she failed to undertake UCDW tasks.

Source: OXFAM (Maina & Kimani, 2019)

IV. What is the relationship between unpaid care and domestic work and women's economic empowerment?

Policy attention to gender inequality in the distribution of UCDW is in large part motivated by the belief that the time burden of this labor acts as an obstacle to women's labor force participation and income earning potential. Evidence from both Kenya and Uganda support the hypothesis that women's responsibility for the care of young children in particular constrains mothers' paid employment and entrepreneurial activities, and suggests that access to subsidized childcare could increase labor supply and business profits without displacing UCDW duties to daughters or other female relatives.

Drawing on data from the 1994 Kenya Welfare Monitoring Survey and the 1995 Kenya Early Childhood Development Centres Survey, Lokshin et al. (Lokshin, Glinskaya, & Garcia, 2004) find that mothers' decision to participate in the labor market is sensitive to both wages and child care costs: higher available wages encourage mothers to work outside of their homes, while high-cost child care can suppress maternal employment. Moreover, maternal wage rates and costs of care for young children affect school enrollment of school-age siblings. An increase in mothers' wages raises school participation of boys (elasticity = 1.27), but lowers that of girls (elasticity = -1.5), indicating that girls substitute for mothers in home production and child care. Higher prices for child care have no significant effect on boys' schooling, but significantly decrease the number of girls attending school. Conversely, a 10% decrease in child care costs increases girls' school attendance rate by 3.3% and does not significantly change boys' attendance. Simulating the effect of a policy that would fully subsidize the cost of child care finds free childcare would result in a fourfold increase in the use of early childhood development facilities by Kenyan households with preschool-age children, maternal rates of labor force participation would rise, and the percentage of households with older girls at school would increase (ibid.).

A more recent and widely cited study among mothers in an informal settlement in Nairobi likewise found that limited access to affordable early childcare inhibits poor urban women's participation in paid work at both the extensive and intensive margins (Clark et al., 2019). Women who were offered vouchers for subsidized early childcare increased daycare use by 25 percentage points (42.9%) relative to the control group and were, on average, 8.5 percentage points (17.3%) more likely to be employed than those who were not given vouchers, and average earnings increased by 24% relative to baseline, with most of these employment gains realized by married mothers.⁴ The impact of the vouchers on hours worked was heterogeneous by mothers' marital status: among married women, both employment rates and total number of hours worked increased, while single mothers significantly reduced the time spent working without any loss to their earnings by shifting to jobs with more regular hours. These findings suggest that access to subsidized early childcare, which is usually fixed at 40 hours per week, encouraged women, especially single mothers, to shift from jobs with more flexible hours that are more compatible with simultaneous childcare (i.e., laundry and small-scale vending) to jobs with more fixed hours, which may be more difficult to combine with childcare (i.e., employment in the service sector or government-sponsored programs).

⁴ The effects of actual daycare use (TOT) on employment were even stronger: a 15.2-30.5 percentage point increase depending on the specification.

New research among women small business owners in neighboring Uganda further supports the hypothesis that caring for young children can constrain women's income earning potential (Gap, Delecourt, & Fitzpatrick, 2020). The study, which used data from both a vendor survey as well as confederate buyer visits to the owners' places of business, found that profitability among female-owned businesses was 48% lower among those run by the 37% of women who brought their young child to work with them. The main contributing factor to this "baby profit gap" appears to be inventory shortages: female-owned stores with a baby present were out of stock of all antimalarial drugs during 13.3% of confederate buyer visits, compared with 5.3% in female-owned stores without a baby present, and being out of stock reduces average monthly profits by almost 75%. Simultaneous child supervision may reduce women business owners' ability to both monitor inventory and travel to a wholesaler for restocking, which puts them at a competitive disadvantage in terms of sales volume.

Evidence also suggests that multiple forms of pressures, encompassed in the work-family conflict framework, can discourage women from staying in employment (Langballe, Innstrand, Aasland, & Falkum, n.d.; Mata & Sen, 2017). Among Norwegian physicians, work-family conflict was a strong predictor of burnout among women which was different from the situation among men where workload was the strongest predictor of burnout. Work-family conflict is defined as "a form of multiple conflicts in which the role pressures of the work and family domains are mutually incompatible in some respects" (Ahmad, Muazzam, Anjum, Visvizi, & Nawaz, 2020; Greenhaus & Beutell, 1985). Work-family conflict can take the form of work interfering with family and/or family interfering with work, and could arise both because of time and energy limitations and the potential incompatibility of the specific requirements and expectations of paid and unpaid labor. Research had shown that beyond the time pressure, three additional pressures can be operating: strain-, behavior-, and psychological-based pressures. Strain-based pressure arises when strain from one role negatively interferes with the other role; behavior-based pressure arises when required behaviors at work (e.g. being authoritative) are not compatible with the role in the family, while psychological pressure arises when psychological preoccupation in one domain interferes with the role in the other domain (Ahmad et al., 2020; Carlson & Frone, 2003). Work-family conflict is evident in developing countries such as Pakistan, Afghanistan, Kenya, and South Africa, where norms have not caught up with women's increasing drive to seek employment outside the home, sometimes out of economic necessity but also as a result of increasing levels of education (Marcus, 2018; Muasya, 2016; Regeria & Nairobi, 2017). A study among employees of the Kenyan Revenue Authority found that multiple forms of work-family conflict were prevalent; work interfering with family was more prevalent among men while family interfering with work was more prevalent among women. (Ouko, 2010). While most research dealt with WFC in the formal sector, it has also been reported in the informal sector in South Africa (Mokomane, 2021).

Taken together, this evidence suggests that primary responsibility for childcare is indeed a gender barrier to women's labor force participation and independent income generation in an East African context, and that policy and program interventions offering affordable options for the care of young children could make an important contribution to increasing women's paid work.

V. What can we learn from research on UCDW in other countries?

While research on the determinants and consequences of gender inequality in the distribution of unpaid caring and domestic labor in low- and middle-income countries (LMICs) is still relatively scarce, there exists a large body of literature from high income countries, much of which is relevant in guiding a learning and policy agenda for Kenya and other sub-Saharan African contexts. Here we review a sample of this research, with an eye towards identifying commonalities and differences between study populations. We focus on two key dimensions of UCDW: the role of norms and preferences – including how these are intergenerationally transmitted – and the health impacts of unpaid labor.

Norms and Preferences

Formal and informal laws, social norms and practices determine gender roles by defining acceptable behavior in societies. For a long time and in most societies, working for pay has been considered a masculine task, while women have been tasked with unpaid care work. Evidence has shown that discrimination against women, such as restrictions on access to resources and decision-making, son preference, and restricted access to public and political space are linked with the distribution of unpaid care and domestic work. Furthermore, reducing the level of discrimination in social institutions encourages gender roles to evolve and allows the redistribution of unpaid care work (Ferrant, Pesando, & Nowacka, 2014). Gender roles' impact on the distribution of unpaid care work can be reinforced by norms that restrict women's ability to pursue economic activities outside the home such as norms around reputation and decorum, adolescent marriage and childbearing, and fear of work-related sexual violence (Marcus, 2018).

One approach to understanding the role of gender norms in perpetuating the unequal distribution of UCDW is to examine the association between standardized measures of gender-related values and indicators with time use data capturing women and men's relative contributions to housework and childcare. Campana et al. (2018), for example, do this for a sample of three Latin American countries (Mexico, Peru, and Ecuador) and find a significant negative correlation between egalitarian gender norms as measured in the World Values Survey⁵ and the gender gap in time spent on unpaid work (Campañá, Giménez-nadal, & Molina, 2018). A more rigorous analysis by Blau et al. (2020) utilizes the 2003-2017 waves of the American Time Use Survey in combination with the World Economic Forum's Global Gender Gap Index (GGI)⁶ to explore the influence of cultural characteristics of US immigrants' countries of origin on gender differences in time allocation to housework and childcare (Blau, Comey, Meyerhofer, & Kahn, 2020). This research finds that female immigrants from more gender equal countries, as measured by a higher GGI, spend significantly fewer hours per week on non-market work,

⁵ The researchers calculated an index from five indicators of attitudes regarding the roles of women in society, as measured by level of agreement with the following statements: (1) When a mother works for pay, the children suffer; (2) On the whole, men make better political leaders than women do; (3) A university education is more important for a boy than for a girl; (4) On the whole, men make better business executives than women; (5) Being a housewife is just as fulfilling as working for pay.

⁶ The Global Gender Gap Index is constructed from 14 different indicators of the gap between men and women in four fundamental categories: economic participation and opportunity, educational attainment, political empowerment and health and survival. See http://www3.weforum.org/docs/WEF_GGGR_2021.pdf

allocating less time to both housework and childcare. Moreover, men from more gender equal countries (and their sons) do higher levels of non-market work, including both housework and childcare.

An alternative approach to understanding the role of norms in the intrahousehold distribution of UCDW is to use experimental methods to elicit preferences. Thebaud et al. (2019), for example, take an experimental approach to testing two competing hypotheses about the ways in which gender norms influence the division of UCDW (Thebaud, Kornrich, & Ruppner, 2021). The first theory holds that, due to socialization during childhood and adolescence, women systematically have higher standards for the products of domestic and care work – such as a clean house and well-fed children – compared to men. Alternatively, women may do more housework than men because the individuals with whom they interact are more likely to hold them accountable and may therefore anticipate different social ramifications and rewards for their behavior. (Likewise, a man may actively avoid too much or certain types of housework to evade being labeled as less masculine.) The researchers evaluate these different normative mechanisms by exposing subjects to photographs of a relatively clean or messy room, which is ostensibly occupied by either a man or a woman, and posing a series of questions pertaining to the cleanliness of the room, the traits and characteristics of the room occupant, their sense of the perceptions that people in his or her social network might have, and his or her degree of responsibility for cleaning. They find that men and women subjects do not differ in their perceptions of how messy a room is or how urgent it is to clean it up; however, the gender of the room occupant has strong and significant effects on housework perceptions, moral judgments, perceived social consequences, and allocations of responsibility. For example, when a woman is believed to occupy a “clean” room, the room is viewed as significantly messier, and the occupant is judged to be less moral and to garner a less positive opinion from visitors. This lends support to the idea that gender norms around UCDW primarily operate through individuals’ beliefs and expectations about the judgement of others.

Auspurg et al. (2017) likewise uses experimental evidence from the UK to assess the role of gender norms in determining the allocation of UCDW (Auspurg, Iacovou, & Nicoletti, 2017). When presented with three hypothetical scenarios (vignettes) outlining different arrangements between partners for the sharing of housework, both men and women display a marked preference for equity, in terms of both the division of housework and the total allocation of paid and unpaid work. However, the research suggests that even though women do not derive any more utility from doing housework than men do, they may have stronger preferences than men for avoiding conflict in a relationship, with the net result that they end up doing more housework.

A final note on the role of gender norms as they relate to UCDW is that beliefs and practices about who should do what appear to be transmitted across generations within families. This is an important point for policy and programming because it implies that what works to redistribute UCDW responsibilities among adults may also influence children to implement more equitable arrangements in their future households. In the Blau et al. (2020) research on US immigrants, for example, second-generation men—particularly those with children—whose parents came from more gender equal countries were found to spend significantly more time on housework and childcare than their counterparts from more traditional countries (Blau et al., 2020). The most compelling evidence for the transmission of gender role attitudes on housework from parents to their children comes from Gimenez-Nadal et al. (2019), who use data from the Russia Longitudinal Monitoring Survey (RLMS-HSE) to analyze the time devoted by parents to housework during their children’s late childhood or adolescence and that of the same children once they marry (Giménez-nadal, Mangiavacchi, & Piccoli, 2019). The results suggest that a greater proportion of housework performed by mothers during childhood is related to a persistence in gender inequality in their children’s future families.⁷ More egalitarian gender norms are

⁷ An increase in mother’s share of housework by 1 percentage point implies an increase in female’s share in the children’s household by 0.216 percentage points.

perpetuated directly to sons through a lower amount of housework performed and indirectly to daughters through the choice of a partner that replicates her father role model.

What is the scope for gender norms around unpaid and caring labor to be transformed? There is limited evidence that well-designed psychosocial interventions targeted to young women and men may move the needle on the distribution of household chores, even when this was not the principal intended outcome. In Zambia, a two-week interpersonal skills training focused on improving adolescent girls' ability to negotiate in favor of their own educational aspirations resulted in girls spending less time on chores (measured in hours) before and during school hours and more time on chores after school, as measured using a time diary (Ashraf et al. 2020). The introduction of a gender equality curriculum in secondary schools Haryana, India, likewise led to boys taking on a significantly higher share of household chores (Dhar et al. 2021). Box 2 describes innovative programming in Zimbabwe and the Philippines that directly addressed gender norms around UCDW, in combination with other interventions (Oxfam, 2020).

In addition to programs that directly target norm change, policies can also indirectly (and often unintentionally) affect norms. For example, in Germany, the introduction of paternity leave policy in 2007 that led to a spike in paternity leaves changed the attitudes of the older generation about gender roles and the household division of labor. The change extended beyond the parents of those who took advantage of parental leave, indicating wide-spread societal change via social interactions (Unterhofer & Wrohlich, 2017). This concurs with what was found in a large evaluation of the effectiveness of primary education and paternal leave policies in improving women's and childrens' health outcomes (Heymann et al., 2019). Using a difference-in-difference method, the researchers compared changes in health outcomes before and after policy implementation with the change in countries with no such policies. They also measured the mediating effect of a norms proxy, represented by women's decision-making power. The study found that improvements in health outcomes as a result of the implementation of the policies were achieved partly through norm change. Research in Kenya had shown that women with more decision-making power and women who owned more assets independently or jointly spent less time in unpaid care and domestic work, likely because they were more capable of negotiating household division of labor (Maina & Kimani, 2019). The evidence therefore suggests that policies and programs should consider the synergy and antagonism between the multiple strategies and interventions for women's empowerment in order to optimize positive norm change.

Box 2. Gender transformative programming for the alleviation of UCDW

There is some evidence that tackling gender norms directly can improve outcomes for women. The WE-CARE program in Zimbabwe and Philippines employed multiple strategies in order to support women and girls to have more choice and agency over how they spend their time and have the ability to engage in social, personal, economic and political activities. Strategies included distribution of time and labor-saving equipment, improving water infrastructure, and training community champions. Evaluation of the program found that in the Philippines, having a household member participating in awareness raising activities related to gender norms and promoting shared responsibility for UCDW was associated with a significant increase in the time spent by men on care work. After two and a half years of the program, participant men increased their contribution to UCDW by 50%. While outcomes for women and girls were optimal with the combination of interventions, an unintended negative consequence of a focus solely on improvements in infrastructure that saved time for women and girls led some men to believe that they can reduce their contribution to UCDW, which could set back positive change in norms.

Health impacts of UCDW

The health impacts of UCDW are well-documented. Apart from physical impacts such as chronic musculoskeletal pain, which is particularly prevalent in LMICs (Osinuga et al., 2021), domestic work can also be associated with adverse pregnancy outcomes; low birth weight was associated with lifting heavy objects in the home and preterm birth was linked to physical exertion (Omokhodion et al., 2010). In Kenya and other sub-Saharan African countries, exposure to wood smoke from indoor cooking is associated with a variety of adverse health effects, especially for women. A recent systematic review recorded strong and consistent associations between exposure to wood smoke and respiratory diseases including acute respiratory illness and impaired lung function, increased blood pressure, low birth weight, esophageal cancer, and under-five mortality (Bede-Ojimadu & Orisakwe, 2020). Another systematic review found that women in the WHO African region are more susceptible to burns from cooking stoves (Rybarczyk et al., 2017).

UCDW can also take a significant toll on mental health. Two principal pathways whereby UCDW can impact mental health are related to perceptions of (un)fairness of the household division of labor, and WFC. Evidence shows that the mental health impact of UCDW is linked to women's perception of fairness in household division of labor rather than the actual amount of work (Harryson, Strandh, & Hammarström, 2012; Nakamura & Akiyoshi, 2015; Wagman, Nordin, Alfredsson, Westerholm, & Fransson, 2017), and that in turn is driven by social comparisons (Nakamura & Akiyoshi, 2015). Another important pathway for the impact on both physical and mental health involves WFC. Links were found with lower self-rated health, poorer mental health, psychosomatic symptoms, increase in health services utilization, higher medication intake among women (Borgmann, Rattay, & Lampert, 2019), and increased sickness absenteeism (Nilsen, Skipstein, Østby, & Mykletun, 2017).

Policies and programs geared toward reducing and redistributing UCDW can be informed by and address these physical and mental health consequences by framing interventions as both health and gender equality interventions, and by testing creative approaches to perceptions of fairness and WFC.

VI. What is the potential of labor-saving technologies to reduce and redistribute UCDW?

Increasing the productivity of domestic and caring labor holds the promise of both freeing up women's time, reducing the drudgery of some of the most difficult work, and incentivizing men to take on a greater share of unpaid activities. Some economic historians argue that as much as half of the increase in female labor force participation in the United States between 1900 and 1980 can be explained by the introduction of new and improved household technologies, such as refrigerators, vacuum cleaners, clothes washers and dryers, and dishwashers (Greenwood, Seshadri, & Yorukoglu, 2005). Other researchers question the impact of domestic technology on reducing unpaid household work; analysis of the 1997 Australia Time Use Survey showed no evidence of an association between owning appliances such as microwave ovens, dishwashers, and clothes dryers, and the time spent on the relevant task, nor that the diffusion of these appliances led to any significant alteration in the traditional gender division of housework tasks (Bittman, Rice, & Wajcman, 2004).

In Kenya, one domestic technology in particular has been promulgated as offering multiple benefits, including time savings, health improvements, environmental conservation, and income-earning opportunities for women: the “clean” (or “improved”) cookstove. Household-level adoption of these cookstoves, however, is notoriously low, and understanding the gender dimension of the demand-side constraints is important in assessing the potential of similar labor-saving technologies to contribute to the reduction and reallocation of UCDW in a developing country context.

The evidence on the time-saving benefits of improved cookstoves in Kenya is mixed.⁸ One study in peri-urban communities in Kisumu, West Kenya which traditionally use biomass cooking fuel found that the introduction of a combination of Upesi (ceramic) stoves, LPG stove sets, and the construction of eaves spaces to improve ventilation reduced self-reported fuel collection time by 64 hours per year, and self-reported cooking time by 961 hours per year (Malla, Bruce, Bates, & Rehfuess, 2011) (Geldsetzer et al., 2021). Monetizing these and the health benefits savings and comparing them to costs incurred implies an extremely high rate of return on these domestic technology investments. In contrast, Jagoe et al. (2020) employed a stove use monitoring device to record cooking time before and after the introduction of a fuel-efficient stove in rural Kiambu County, Kenya (Jagoe et al., 2020). This study found a reallocation of cooking time from traditional open fires to the new stoves, but no overall decrease in the average time spent cooking per day. This is partly explained by the fact that the participants initiated tasks on the improved stove that they had not carried out at baseline, such as heating water for milking the cows and for washing clothes, tasks that were previously done using cold water. The stoves, which require less and smaller sized wood, did save women a significant amount of time on fuel collection: from almost 12 hours per week at baseline to only 4.5 hours several months after the intervention (see Box 3 for more details on this study).

⁸ Elsewhere in Sub-Saharan Africa, there is evidence that adoption of improved cookstoves is associated with significant reductions in time spent on both fuel collection and cooking. See Cundale et al. (2017) for Malawi and Prah et al. (2020) for Ghana.

Box 3. Sharing the burden: Shifts in family time use, agency and gender dynamics after introduction of new cookstoves in rural Kenya

In order to assess the impact of a more efficient biomass cooking technology on household time use patterns and quality, a team of researchers distributed a locally manufactured Kuniokoa wood burning stove to 55 households in three rural agricultural communities located 50 km northwest of Nairobi in the western area of Kiambu County, Kenya (Jago et al., 2020). Quantitative pre/post measures of stove and time use indicate that while overall cooking time (for all household members) was not reduced, there was a shift away from traditional open fires, particularly for quick tasks like heating water. (Combining traditional and improved technologies is called “stove stacking.”) Many women perceived a reduction in the time they spent cooking (an average of one hour per day less), because some tasks were taken up by other household members, including teenagers and adult men. The key mechanisms that participants felt most improved their schedules and workload were the ability to cook on two stoves at once, the capacity to complete tasks faster with the Kuniokoa, and the opportunity to take the stove with them to facilitate multitasking.

Time savings from fuel collection were very large – on the order of 7 hours per week – thanks not only to the fuel-efficiency of the new stoves, but also to the fact that the Kuniokoa uses smaller diameter wood than the traditional stove. This means that some or all of the needed fuel could be collected on the *shamba* (farm) in conjunction with agricultural activities, reducing or eliminating the need to walk to the forest.

The most distinctive finding from this mixed methods research was that the introduction of the new cooking technology facilitated the sharing of food preparation with other family members because the Kuniokoa made the chore safer for teenage children and more appealing to adult male members of the household. Family members could now use the Kuniokoa to reheat dishes for supper that they had cooked earlier in the day, allowing the women to spend longer hours away from the kitchen taking care of other activities, especially on their *shambas*. Whereas cooking on the traditional stove was seen as demeaning for many men, using the Kuniokoa was associated with modernity, efficiency, and technology. Participants reported that their male family members either felt it was socially acceptable for them to cook on the Kuniokoa, or that they could keep their cooking activities private, because the new stove did not create clouds of tell-tale smoke. The findings suggest that cooking interventions could catalyze a deeper shift in the social dynamics of the household. The availability of higher tech cooking options may entice men to take on more household chores, allowing women more opportunities to engage in remunerated work and reducing their overall workload.

Despite their potential benefits, rates of sustained adoption of improved cookstoves are low in Kenya as in other LMICs.⁹ A large body of research has explored the behavioral and financial barriers to the uptake of clean cookstove technologies¹⁰; here we focus on those related to intrahousehold gender inequalities. The key issue, in Kenya and elsewhere, is that while the private benefits of improved stoves largely accrue to women in the form of time savings and health improvements, the financial costs – and, more importantly, the decision-making authority over relatively large household investments – are borne by men. In Bangladesh, for example, when

⁹ According to Kenya’s Ministry of Energy (2019), around 42 percent of Kenyan households use a charcoal jiko at home, with the primary alternatives being woodstoves (in rural areas) and liquefied petroleum gas (LPG) and kerosene stoves (in urban areas).

¹⁰ For a systematic review, see Vigolo et al. (2018).

stoves were offered for free, women exhibited a stronger preference than their husbands for any improved stove – and for indoor smoke-reducing chimney stoves in particular (Miller and Mobarak 2013). However, when a small positive price is charged, women with measurably lower status or decision-making authority within their households become less likely than men to adopt. This suggests that despite their preferences, women lack the authority to make purchases and that a key constraint to improved stove adoption is that one household member (the wife) benefits more from the new technology, but another household member (the husband) controls resources and spending decisions.

Qualitative research by Ochieng et al. (2021) in West Pokot County in Northern Kenya supports these findings; men – who do not directly experience the negative effects of traditional fuel gathering and cooking practices – have less motivation for purchasing cleaner cookstoves but have stronger bargaining power within the household for large expenditure items, including domestic technology (Ochieng, Murray, Owuor, & Spillane, 2021). Therefore, although women are responsible for cooking and other kitchen matters, and would likely benefit from the time-saving and health-improving features of improved stoves, they have less control over decision-making on the purchase of such stoves and lack the ability to act on their preferences for these products. Likewise, Fingleton-Smith (2018) finds that there is a disconnect between the people who benefit from modern domestic energy technologies¹¹ in Kenyan household settings, and the people who purchase them (Fingleton-Smith, 2018). Gendered roles mean that men do not spend much time in the house; however, they often make major purchasing decisions for the household as a result of traditional gender power divisions. The dominant economic position of men leads to a situation in which men do not believe they benefit greatly from modern household energy technologies, but are needed to purchase these very services in order to facilitate increased access to them. This suggests that a potential entry point for interventions might be working with men to increase their valuation of time and labor-saving devices.

In addition to improved cookstoves, there are a variety of other technologies that hold promise for reducing (and in some cases redistributing) women's unpaid labor burdens. Table 1, from IFAD (2016), provides a listing of labor-saving technologies and practices to reduce the domestic workload in rural areas, including water and firewood collection, cooking, food processing and preparation, traveling and transport, and care provision (Bishop-Sambrook, 2016). As with cookstoves, sustained adoption of these technologies depends on multiple factors, including the perceived effectiveness of the technology to meet household needs, the appropriateness of the technology in daily life, and the acceptability of the technology by both users and household budget holders (IFAD 2016).

¹¹ In this context, domestic energy technologies include cookstoves and other cooking devices, lights, fridges, radios, TVs, heating and cooling devices, washing machines, hair dryers, water pumps, spice grinders, and milling machines.

Table 1. Labour-saving technologies and practices to reduce the domestic workload in rural areas

| Domestic task | Existing practice | Labour-saving technologies and practices |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Water collection (annex 1) | Walking to fetch water from unsafe water source | Improved household water sources: <ul style="list-style-type: none"> ▪ Protected dug / shallow well and pump ▪ Protected spring ▪ Tube well / borehole and pump ▪ Public tap ▪ Rainwater harvesting from roof or ground ▪ Piped water into house or yard |
| Firewood collection (annex 2) | Wood collected from poorly maintained communally owned resources | <ul style="list-style-type: none"> ▪ Woodlots ▪ Agroforestry ▪ Improved fallow ▪ Alternative fuels, such as waste materials and organic by-products ▪ Fuel-efficient stoves |
| Cooking (annex 2) | Cooking on traditional open fires with traditional biomass or charcoal as fuel | <ul style="list-style-type: none"> ▪ Fuel-efficient stoves, using traditional biomass or modern biofuels, such as biogas and ethanol ▪ Small-scale low-cost power supplies, using renewable energy sources |
| Food processing and preparation (annex 3) | Manually processing and preparing food | <ul style="list-style-type: none"> ▪ Manually operated strippers and shellers ▪ Manual and motorized threshers ▪ Manual and motorized cleaners of grains / pulses ▪ Solar drying and milling equipment ▪ Manual crop processing ▪ Draught animal-powered and motorized crop processing ▪ Improved storage facilities ▪ Electric milk churners ▪ Small-scale low-cost power supplies, using renewable energy sources ▪ Multifunctional platform (power supply and various associated tools to ease workloads) |
| Travelling and transporting (annex 4) | All travel on foot and carrying loads on body | Intermediate means of transport: <ul style="list-style-type: none"> ▪ Donkey, wheelbarrow, cart, bicycle (+ trailer) ▪ Hippo water roller Affordable and safe public transport system Improved paths and feeder roads |
| Care provision (annex 5) | Looking after infants, young children and the elderly, ill or disabled people while undertaking essential domestic and productive tasks, but foregoing project activities and more profitable regular productive work | <ul style="list-style-type: none"> ▪ Rehabilitation / construction of care centre infrastructure ▪ Support to local stakeholders to set up and run temporary or sustainable care services ▪ Complementary awareness raising and training for both men and women on reproductive health, nutrition, hygiene, HIV/AIDS prevention, etc. |

Source: IFAD (Bishop-sambrook, 2016)

VII. How can investments in basic infrastructure and public services contribute to narrowing the UCDW gender gap?

Investments in physical infrastructure such as electrification and improving access to running water can reduce the time and physical effort required for many domestic care tasks. Electricity can be used for equipment that reduces care work, such as stoves, refrigerators, washing machines etc., but in rural households with limited access to such equipment it is often primarily used for lighting. While direct causal evidence from Kenya is limited, research from other LMICs indicates that the labor-saving externalities of both electrification and water provision can be substantial. But as with domestic technology, the disconnect between who benefits from and who pays for infrastructure investments may create barriers to the diffusion of these basic time- and labor-saving services.

In the case of electricity, a comprehensive scoping study of the empirical literature on women's empowerment through electricity access found that both women and men tend to reduce the time spent on household chores due to electrification (Winther, Ulsrud, & Saini, 2018). In India and Nicaragua, the time savings appear to be concentrated in fuel collection, while in South Africa – where cooking with electricity rose by 23 percentage points after the roll-out of grid infrastructure in rural areas – time savings in home food preparation helps explain the 30-35% increase in female employment (Dinkelmann, 2011). Electricity also facilitates production of market goods and services at home, such as food preparation and personal services requiring electric appliances.

Some of the most detailed and direct evidence on the association of electricity with unpaid time use comes from WE-CARE research using the Household Care Survey in multiple LMIC settings. Rost & Koissy-Kpein (2018) report unexpected and heterogeneous findings from Zimbabwe, Uganda and the Philippines (Rost & Koissy-kpein, 2017). Access to electricity is associated with *more* primary and any care hours for women in Zimbabwe, and Ugandan women living in a household with access to electricity also spent significantly *less* time sleeping compared to women without access to electricity. These counterintuitive outcomes may be explained by the fact that with electric light, care tasks did not need to be done as intensively before dark, and were instead performed later in the evening. However, in the Philippines, electricity access is associated with women spending fewer hours on primary and any care and more hours on leisure, and with a more equal distribution of any care between men and women. This suggests that in the Philippines electricity is used for powering domestic equipment that reduces care work, while in the African countries in the study it is mostly used for lighting. There is need for additional research to distinguish between the impact of access to small amounts of electricity (only sufficient for electric light) on levels and inequalities of UCDW, and access to sufficient, low-cost electric energy to enable mechanized time- and labor-saving equipment such as grinding mills, water pumps or refrigeration (Butt, Remme, Rost, & Koissy-kpein, 2018).

The link between water access and unpaid labor is particularly relevant in rural areas of many LMICs, because of the significant time burden of water collection. Women and girls are the primary collectors of water in all 24 sub-Saharan African countries where comparable data are available (Graham & Kim, 2016). Access to water is key for many domestic tasks, including cooking, laundry, cleaning, and caring for children; improved access to

water for household consumption can therefore be interpreted as a gain in the productivity of domestic labor time. In Kenya, only 37.5 per cent of urban households and 13.6 per cent of rural households have access to drinking water within their premises (Kenya National Bureau of Statistics 2018). For 17.5% of rural households, the distance to a source requires them to spend more than thirty minutes per trip fetching water; in some counties, such as Kitui, Turkana, West Pokot and Samburu, this proportion is over one-third and as high as 57.6% (ibid.).

Analysis of WE-CARE Household Care Survey data from the Philippines, Uganda and Zimbabwe shows that access to an improved water source is associated with women reporting less time spent on any care: about 1 hour less per day in the Philippines, 2 hours less in Uganda, and 4 hours less in Zimbabwe compared to households without an improved water source. In the Philippines and Uganda, the distribution of any care hours between women and men is also more equal where there is access to an improved water source (Rost & Koissy-kpein, 2017). In Zambia, households receiving a randomized piped water intervention spent a median of 3.8 hours per week (as indicated by a combination of self-reporting and direct measurement with GPS transponders) less fetching water, savings that accrued primarily to women and girls (Winter et al. 2021).

Given these substantial time savings from improved water access in multiple country contexts, it is reasonable to enquire into which activities women reallocate their labor, and in particular if reduced fetching times translate into higher rates of paid labor market participation. In a multicountry study of rural water access, women's work, and child outcomes, Koolwal & Van de Walle (2013) find no significant relationship between improved access to water and off-farm work for women. In some countries, time savings from reduced water collection burdens are associated with reduced unpaid non-market work (as high as 12-18% in Yemen, Morocco, and India), such as work on the family farm, and (hence) improved leisure for women (Koolwal & van de Walle, 2013).¹² In even more countries, positive impacts are found on children's—both boys' and girls'—schooling. These findings are consistent with the idea that water collection demands crowd out other activities for women and children. However, contrary to common claims, the welfare gains from improved water access were not associated with higher participation of women in paid work, at least in a rural labor market context (ibid.).

¹² The Koolwal and van de Walle (2013) study did not utilize domestic time use data, so leisure is measured as a residual. Parvez Butt et al. (2018) similarly find that use of an improved water source is statistically significantly associated with an increase in the time women spend on leisure in both Uganda and Zimbabwe.

VIII. What are the data and research needs to inform Kenya’s approach to UCDW?

Analysis of UCDW in Kenya is limited by a paucity of data both on existing patterns of time use and how these vary across sub-populations. Data are also limited on the social/gender norms governing the division of UCDW between household members, the impact of UCDW demands on women’s ability to participate in paid economic activities, and the most cost-effective and scalable investments/interventions that hold greatest promise for reducing and redistributing UCDW. A partial inventory of existing Kenyan data sources in Kenya related to UCDW is described in Box 4.

Understanding whether and how norms are evolving is critical for informing approaches that accelerate positive change (Ehrlich & Levin, 2005). Unplanned change can take place as a result of shocks or slower societal changes such as increasing wealth or education. Exploring where and how fast change is taking place in Kenya can shed light on potential barriers and facilitators. This can be facilitated by existing time-series data with norm-related measures or proxies. Since the only study in Kenya that measured norms in detail was carried out in Nairobi’s informal settlements, more studies are also needed to understand the situation in other developed urban and rural settings. This includes studies on the intra-household dynamics and mechanisms of change as they relate to perception of unfairness and work-family conflict.

The first nationally representative time use survey is currently underway in Kenya, with support from the UN Women’s Women Count program and other partners. These data will be valuable for consistent measurement of the intrahousehold division of UCDW, and how this varies across demographic and socioeconomic population strata. Moreover, the availability of such data – especially if secondary activities such as child supervision are accurately recorded, and if the sampling and coding strategies allow for linkage with other national data sources – will create the possibility for the analysis of both normative¹³ and policy correlates of gender inequalities in time use patterns. Box 5 provides more details on the Kenya Time Use Survey.

Alongside and informed by this important data collection initiative, creative intervention research can test “what works” to reduce and redistribute UCDW in alternative Kenyan social contexts. Of particular value would be well-designed studies to measure the impact and cost effectiveness of subsidized childcare, labor-saving domestic technologies, and basic infrastructure, as well as programs integrating social norm change. It is only by building a solid body of evidence on which investments make the greatest difference that progress can be made on increasing the productivity and quality, and equalizing the distribution of unpaid caring and domestic work.

¹³ There is particular need for the development and testing of high quality measures of gender norms related to UCDW.

Box 4. Selected sources of existing data from Kenya related to unpaid care and domestic work

Demographic and Health Surveys (DHS)

DHS have been collecting data on infrastructure that is related to the burden of domestic chores such as water source, time taken to fetch water, and who fetches it. Data are also collected in successive DHS rounds since 2003 in Kenya about attitudes towards violence against women if they neglected their children. Additional relevant data includes women's employment status, number of children, and girls' highest education completed. A new DHS survey round is planned for 2022.

Kenya Integrated Household Budget Survey

This nationally representative survey, last conducted in 2015/2016, provides data on key socio-economic aspects of the Kenyan population, including education, health, energy, housing, water and sanitation (including travel time for water collection). It is a key source of covariates for analysis of time use data.

Afrobarometer

In Kenya, the Afrobarometer round 2 survey collected data on time use (time spent doing various activities) while round 7 collected data on attitudes towards women having the main responsibility for taking care of the home and children rather than a man.

Dataset from Estimating the Impacts of Microfranchising on Young Women in Nairobi 2013-2015, Baseline survey

This research evaluated the impact of an intervention to provide microfranchising opportunities to young women in six neighborhoods in Nairobi, Kenya. The baseline survey in 2013 collected data on infrastructure and time spent in UCDW. The midline and endline surveys did not collect similar or otherwise relevant data.

Box 5. The Kenya Time Use Survey

There are three main objectives of this nationally representative data collection effort, which will comprise a specialized module within the 2021 Kenya Continuous Household Survey:

1. To identify gender differences in time use patterns with special focus on paid and unpaid work activities.
2. Provide data to inform policy and resource allocation to programs that will accelerate achievement of gender equality and women's empowerment.
3. Provide data to improve on the compilation of the contribution of household production to the National Accounts to inform macroeconomic policies and strategies.

During 2020, UN Women provided technical and financial support to the Kenya National Bureau of Statistics (KNBS) to design and pilot the Time Use Survey (TUS) methodology and survey instruments. KNBS field personnel/enumerators/interviewers were also trained on key concepts for International Classification on Time Use Survey (ICATUS 2016) and guided on how to fill in the TUS questionnaire and diary as aligned to the UN Statistical Division metadata guidance for computation of the SDG indicators 5.4.1 and the UNECE Guidelines for Harmonizing Time-Use Surveys.

The Kenya TUS employs a multi-stage stratified cluster sampling design with a third and final selection stage for eligible individuals from within the household. Enumerators first list all the usual members of the selected households, and from all eligible members (those age 15 + years), two individuals are selected randomly using KISH Grid. The survey is then administered to these individuals without replacements. Data collection began in early 2021, and weighting, analysis and tabulation are ongoing as of September.

The time spent on an activity is measured in minutes in a specified time period, within the 24-hour cycle in a day. The survey uses a retro-respective approach, which is a type of time diary method recording:

- The main activity and at most 3 simultaneous/secondary activities as determined by the respondent;
- The description of the activity;
- Activity ICATUS code; duration of the activity;
- Where the activity took place;
- For whom the activity was undertaken and characteristics of the care recipients;
- The means of transport and the presence of other persons;
- Typical/untypical day; and
- Information on attitudes towards the activity and gender equality.

Because the TUS is being implemented as a module within the 2021 Kenya Continuous Household Survey, the data will be linked to other modules, including demographic individual information and migratory status, as well as socioeconomic information on education, labor force participation, housing characteristics, and ownership of assets at the household level.

Source: UN Women, personal communication, 9 Sept. 2021

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