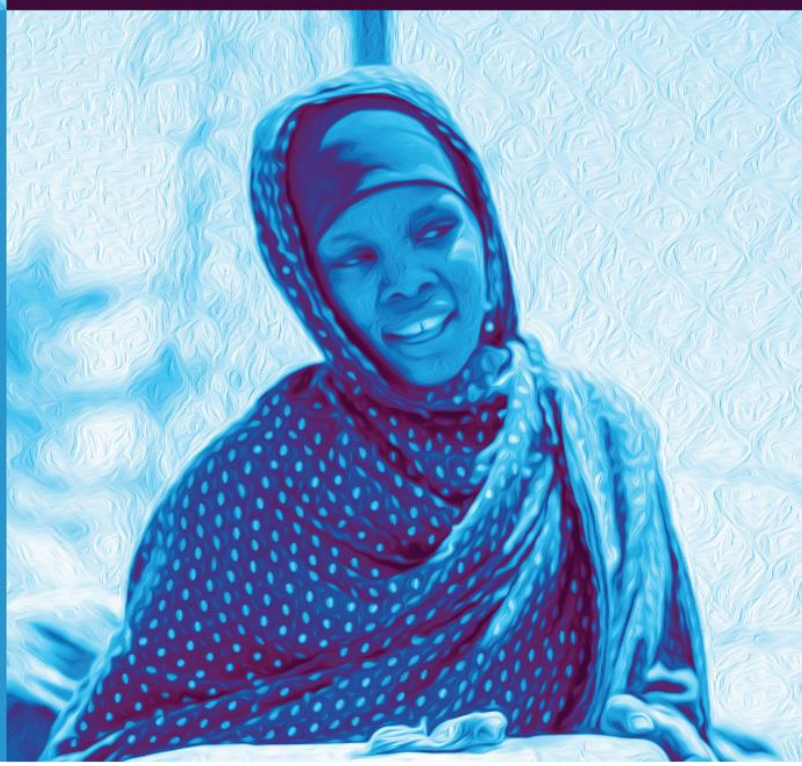

Six years later, what has become of them?

A cohort study of Somali women and girls who participated in the Somali Girls Education Promotion programme

Rapid Research and Learning Fund, December 2022

Annexes

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Annex 1:

The Evidence & Research, Programme & Political Economy Context

Annex 1: The Evidence & Research, Programme & Political Economy Context

This section provides a summary of the background evidence and research context, a short overview of the SOMGEP programme, and Somali political economy context.

1. Overview

In Study Phase 1 of this study (January – March 2022), we undertook a rapid review of the wider literature surrounding girl's education and life outcomes. We also mapped out the SOMGEP programme context and Somali political economy. In Study Phase 2, we have added further to this based on findings generated in the research.

The annex is structured as follows:

- An overview of the evidence and research backdrop to the girls' education and life outcomes
- A summary gendered political economy analysis covering critical moderating factors that could impact women's life outcomes in Somaliland

2. Evidence & Research Context

Understanding the wider evidence and research context is a critical step in understanding and contextualisation of generated findings and to identify potential entry points for findings.

As such a rapid review of literature was undertaken, using a purposive search strategy to identify wider relevant evidence. Areas reviewed included a review of the longer-term impacts of education on life outcomes, and a short contextualisation of the research context, particularly regarding UK Government commitments to girls' education and the SOMGEP contextual environment.

2.1. Search Strategy

For the first part of this light-touch review, we followed a simple literature research strategy; utilising the team's expert knowledge of the evidence base: GEC online databases; online keyword searches in academic journals and reference lists of key

sources. Our simple online strategy yielded 70 results from the string below, administered through Web of Science[1]:

TI= ((education OR school*) AND (impact OR "later life outcomes") AND (women OR girl) NOT ("higher education" OR university)). This string was controlled for date, to papers published in or after 2015[2]. Papers were then down selected to ensure we had the most up-to-date results of what works in the context of development.

Note that this is a non-exhaustive review but has been built on through the research process. In this annex we start with discussing, in brief, SOMGEP and then move to highlighting the wider evidence base.

2.2. Learning from SOMGEP

SOMGEP and its delivery partners undertook a series of learning papers and an endline evaluation (CARE, 2017), following the end of programme in 2016. These studies were focused on assessing programme impact, learning outcomes, and did include some discussion of longer-term aspirations, feeling of empowerment, and self-confidence. The impacts of the programme beyond education were only just emerging, but clear. This is true especially for what concerns girls' self-confidence and confidence-adjacent outcomes, such as willingness to speak up at home and in school. But the programme had limited impact on other aspects of "life skills", such as feelings of loneliness, agency over life decisions, and desire to stay in school. This research showed shifts in attitudes and perceptions about girls' education and gender equality but:

> *'It remains to be seen if these positive developments will move from community members discussing the importance of understanding men and women as equal, to indicators of equality that will be reflected in if and how women are able to persist in achieving their desired future goals, especially in terms of reducing expectations around domestic work, further incorporating education in understandings of marriage and child rearing, and increasing opportunities for higher education and employment.' (CARE, 2017)*

This longitudinal study allowed for the opportunity to investigate some of these key, anticipated impacts. The ability to understand both the long-run impacts of GEC

[1] See https://www.webofscience.com/wos/woscc/summary/b4da71dc-43d7-4281-a2f7-0242b4450efa-27889cde/relevance/1

[2] Further relevant documents, older than 2015, but deemed of high relevance by our Quantitative International Education Expert were also included in the review.

interventions and the impact of childhood characteristics and structural barriers are important for future targeted FCDO investments.

We move now to a review of the wider research and evidence landscape that the programme operated within. A rapid snapshot is provided below.

2.3. A rapid evidence overview of the longer-term impacts of education

There is an abundance of broad education related literature, with education long being seen as a critical entry point for transformative change in gender and broader social inequalities (see Favara, et al., 2018). The short-term positive impact of education has been well documented, particularly for girls, in providing them with safe spaces to explore, and challenge the structural obstacles facing them compared with their male peers.

> *'A large body of research documents the benefits of women's schooling for life outcomes. The typical analysis shows connections between schooling and outcomes, for instance, comparing the mortality of children born to women with no schooling to women who complete primary school. This approach has found a positive association between education and a wide range of positive life outcomes for women and their families: women's empowerment, lower age of first pregnancy, fertility rate, malnutrition, child health and survival, and others.' (Spivack, 2020)*

> *"Our results suggest that achieving literacy accounts for 36 percent of the child survival improvement, 50 percent of the reduction in fertility, and 80 percent of the increase in female empowerment from basic education." (Kaffenberger et al., 2018)*

In terms of global evidence beyond educational attainment, we see that education is associated with impacts related to decision-making, health, intergenerational advantage, lower age of first pregnancy, fertility rate, malnutrition, child health and survival and female empowerment (Kaffenberger *et al.*, 2018; Spivack, 2020; the well-cited Martin,1995; and Psaki, Chuang, Melnikas, Wilson, Mensch (2019) and longer-term impacts, for example on long term health and life-expectancy (Snilstveit, B, *et al.,* 2015, McMahon, 2004).

A study focused on Zambia revealed how education is associated with better reproductive outcomes (Austrian *et al.*, 2020), where women are more likely to use contraception and have fewer children. In a study of eight sub-Saharan African countries, Gupta, and Mahi (2003) found that eight or more years of schooling led to women being 13% more likely to avoid sex before age 18 compared to their peers with less education.

Also, in Zimbabwe, UNICEF (2004) highlighted that among 15-18-year-old girls, those who drop out of school are about five times more likely to have HIV than their colleagues who stay in school. Evidence from surveys in Malawi, Haiti, Uganda, and Zambia (Gregson et al, 2005) further corroborates these findings by showing a secure link between higher education and fewer sexual partners. These findings underscored global commitments such as the Millennium Development Goals related to HIV/AIDS, Education and Girls; the Dakar Framework for Action related to Girls' Education; and the current Sustainable Development Goals to promote inclusive and equitable quality education for all.

The global evidence base also indicates that education may provide women with key health knowledge that translates into reduced vulnerabilities in resource poor contexts. Data from LMICs (Frimpong *et al.*, 2020) reveals that education may provide women with critical health knowledge. This knowledge, in turn, enables women to better respond to specific disease burdens thereby reducing pressures on health systems. This may also offer women enhanced resilience when responding to global pandemics (Frimpong et al., 2020, Pastorello and Eyers, 2015). More broadly, education has been associated with enhanced wellbeing. Data from Cambodia suggests primary school scholarships led to higher cognitive skills and socioemotional outcomes for participants (Barrera-Osorio et al., 2018).

These insights are particularly important to identify the long-term effects of education. Yet, the work of Kaffenberger and colleagues (2018, 2020) express caution. They warn against the dangers of taking schooling as a proxy for education and learning: when data on schooling is complemented by quality indicators (literacy, for example), the impacts on child mortality, fertility, women's empowerment and the associations of men's and women's basic education with positive financial practices are three to five times larger than standard estimates.

Moreover, the gaps remaining largely relate to developing a better understanding of young women's identities beyond their educational journey. To fully engage with the nuanced and attitudinal impact of education in shifting life expectations, we need to track girls into womanhood and beyond. Such an approach holds huge potential in terms of achieving positive intergenerational change around the rejection of harmful practices, such as child marriage and FGM and the acceptance of women in the workplace.

2.4. Education and women's economic empowerment

The literature around long-term impacts of education has, for a few decades, documented positive links between education and women's economic empowerment (Duflo, 2012; Klasen, 2002; Card, 1999). However, wider literature on women's empowerment notes that income earning on its own is not enough to increase

resilience and decision-making power. A male backlash to women earning is often recorded even when a woman is educated to a professional level. Data collected by Oxfam (2019) evidences the generational impact of women's educational achievement and income on their aspirations for their daughters. It is the influence of education in shaping how mothers choose to socialise their daughters that carries the greatest significance when it comes to raising levels of empowerment. In this study, it will be important to capture the perceptual shifts in how GEC participants choose to raise their current and future children.

In this sense, we are starting to see that education is positively associated with the ability of women to exert at least some decision-making in relation, for example, to their own health, use of their finances, and around their social networks (Kaffenberger et al., 2018, Austrian, Soler-Hampejsek, Kangwana, 2020). Culture-wise, higher levels of education lead to lower acceptance of intimate partner violence (Austrian et al., 2020). Other indicators of women's empowerment triggered by education levels include financial literacy and savings behaviour (Austrian, 2020), employability probability (Barrera-Osorio, 2018) and the subsequent growth of female labour (Firpo and Hakak, 2021), which in Brazil led to declining gender inequality.

As described above, there are a great many socio-economic, health, psycho-social, empowerment and other potential benefits of education. The 'social benefits' of education may extend to civic participation, environmental protection, improved community safety and reduced crime among a myriad of other effects (Behrman, 1997; McMahon, 2004; Cannonier & Mocan, 2018). Arguably, one of the strongest relationships in social science is the correlation between women's education and the number of children they bear (fertility). Increasingly though and reflected in the design and evaluation of several GEC programmes, is the importance of taking a holistic approach integrating an empowerment agenda alongside more traditional academic subjects. The end-line evaluation for CAMFED[3] noted in its data more positive life outcomes in terms of confidence, decision making (including over how many children to have) and economic opportunities linked to a broader approach to education.

2.5. Education and Agency

Learning from across the GEC's Africa portfolio highlights the positive impact of taking a multi-pronged approach to girls' education combining improved teacher training with outreach work for out-of-school girls, empowerment curriculums and financial provision and incentivisation.[4]

[3] See https://girlseducationchallenge.org/media/edenrznx/summary_learning_camfed_v3.pdf

[4] See https://girlseducationchallenge.org/media/pk4ngmy0/gec_learning_brief_zimbabwe_may-22-final.pdf

Recent research (Kenny *et al* 2019) sought to capture a snapshot of how empowered young women are in Somaliland and Puntland. The qualitative data revealed that while agency could be seen in the confidence of the women spoken to, they were not necessarily conforming to the life decisions and outcomes that traditional development programmes hope for (including the GEC). The study described the interaction of agency with social norms through:

> *"the stories of two girls who chose to marry before their 15th birthday, despite parental wishes for them to continue their education. These girls conformed to gender norms (that define women's roles as wives and mothers) and cultural norms that delaying marriage is bad while opposing norms around sexuality. They made decisions that benefited them within their specific sociocultural context. Therefore, differences in whether child marriage results from girls' lack of, or capacity to, exercise agency are partly explained by the existing system of social norms that surrounds them, since these norms can expand or limit the viable options for these adolescents" (Kenny, 2019: 2)*

In other words, even with education, a girl's room for manoeuvre will be restricted by her environment, which in turn is shaped by several interlocking norms. In the findings of this study girls were often utilising mobile internet technology to find their own partners and then deciding to marry young to pursue a relationship despite the normative social expectations and traversing taboos. In reaching these conclusions the study goes on to challenge the dominant view that a lack of education promotes higher rates of child marriage (e.g., Wodon at al 2016, Nguyen 2014, McCleary-Sills et al 2015). At the same time, they do highlight that education remains a vehicle to increase women's agency and decision-making power. The article challenges assumptions that educating girls will leads to a prescribed and 'desired' set of life outcomes. The conclusions perhaps force a rethink in how concepts of agency and empowerment might be measured as outcomes of education.

2.6. UK Government and other donor commitments to girls' education

Despite significant turmoil in the UK HMG overseas development funding space over the last two years, the UK remains committed to supporting Girls Education programming, with a recent recommitment to *Leave No Girl Behind* by the current Secretary of State.[5] The UK government has made significant commitments to girls' education over the period, launched as part of a 12-year commitment to girls' education. The GEC,[6] although drawing towards the end of its second phase (2025), has

[5] See https://girlseducationchallenge.org/media/m5qasg3l/lngb_marginalised_girls_v3.pdf published in February 2022.

[6] See https://girlseducationchallenge.org/about/

current commitments of £376m.[7] Beyond this is the Global Partnership for Education[8] with UK commitments of £374m over two phases since 2015, and Education Cannot Wait – £92.7 million spent over two phases since 2015.[9] With such significant commitments has come significant scrutiny, with a number of education focused Independent Commission for Aid Impact (ICAI) reviews being undertaken. The ICAI (2016) on *Accessing, staying, and succeeding in basic education – UK aid's support to marginalised girls*, received an amber / red score and a current, yet to be completed ICAI (ICAI, 2022) will be published this year. Both reviewed GEC, although neither chose to review its Somali portfolio.

While all these programmes focus on delivery, there are also research focused programmes that could be relevant to our wider study. For example, the 20 year plus longitudinal Young Lives research study tracking 12,000 people across four developing countries (**Box 1**),[10] to the international research programme, Research on Improving Systems of Education (RISE),[11] which investigates how education systems can overcome crisis.

Box 1: The longitudinal Young Lives Programme

The Young Lives Programme was amongst the first to put in place a systematic longitudinal model for documenting the impact of education. Its findings tell us that education outcomes have improved at both primary and secondary levels in the four countries YL work in (Ethiopia, India, Peru, and Vietnam). This refers to both enrolment and completion rates. Gender gaps in basic education have reduced across these countries; however, they remain visible in access to post-secondary education.

Second, there are socio-economic gradients, particularly in secondary completion rates and in enrolment and completion at university. These gradients have reduced over time, but for most indicators they remain sizable across the four countries.

Third, we observe that those young adults that access post-secondary education report having higher cognitive test scores (especially numeracy), higher socio-emotional competencies and higher educational aspirations than their counterparts prior to college entry.

[7] See https://devtracker.fcdo.gov.uk/projects/GB-COH-03580586-GEC-GECT/summary

[8] See Global Partnership for Education

[9] See https://www.educationcannotwait.org/

[10] See http://www.younglives.org.uk

[11] See https://riseprogramme.org

Fourth, by the age of 22, a large proportion of individuals (between seven and nine out of 10 depending on the country) are employed. Apart from India, young people are moving away from agriculture. Males start their transition from education to work earlier than women, and for this reason by the age of 19 a pro-male gap in participation in the labour market is observed in all countries. Those that study only or that combine work and study at ages 19 and 22 are more likely to come from more privileged backgrounds. In addition, conditional on working, those that work as dependent workers are more likely to come from higher socioeconomic backgrounds (Favara et al, 2018).

Despite offering a wealth of information about the ways education has changed in the last two decades, YL data tell us much less about how education serves to promote and instil broader social and cultural change needed to bring about the sustained empowerment of girls.

The UK government has also recently procured the £36m Education Research in Conflict and Protracted Crisis, implemented by the International Rescue Committee, which is early into its implementation. With such significant investments both in the delivery and research of education programmes and their impacts, this study has several potential entry-points for uptake for its findings beyond GEC or national stakeholders.

The PEA below highlights issues relating to a lack of adequate teacher training and low numbers of female teachers, specifically in rural areas. The low number of female teachers will impact on wider gender norm change as a lack of female role models hampers effective shifts in girl's empowerment and confidence. The SOMGEP programme made efforts to address this lack of female role models for girls by recruiting and training female teachers specifically to deliver empowerment sessions alongside the usual academic curriculum. Our qualitative data suggests that inclusion of enhanced training for female teachers is beneficial on and for the life outcomes of girls. Although some barriers to schooling, such as cost, may be fairly consistent across settings, gender-related barriers to schooling are also likely to reflect local gender, cultural and religious norms, as well as other structural and policy-related factors. For example, in some settings, the school environment may be detrimental with teachers reported to have negative attitudes towards girls and low expectations of their academic ability, reflecting broader gender norms, and potentially undermining girls' achievement (Lloyd & Mensch 1999). The visibility of positive female teachers is critical in raising the life expectation of girls, instilling belief that they can achieve the same professional level.

Reviews have also documented the evidence that girls suffer violence and abuse in school acting as a deterrent to attendance (DevTech, 2004; EFA Global Monitoring Report; UNGEI, 2015; Leach; Dunne and Salvi. 2014; Leach, et al., 2003). To some degree,

the triggers for this abuse often relate to the deeper community level values and beliefs that normalise violence against girls and act to prohibit attainment at school by deterring attendance. This has been shown to lead parents towards early marriage as a way of reducing the risk of early pregnancy as a result of sexual assault (Barasa, Wamue-Ngare, & Wanjama, 2013; Crooks, et al., 2007; Leach and Humphreys, 2007). Again, in our research design we made efforts to capture participants' experiences of school including their relationships with their teachers.

2.7. The wider research context: Conflict, Covid-19, and climate change

Over the last seven years there will have been significant challenges that will have impacted on the lives of the women we are studying, which in turn could have limited and/or altered the hoped-for longer-term impacts of participation on the GEC programme. The Somali region has suffered a vicious cycle of prolonged drought and climate change, which has seen the country suffer both droughts and cyclones that have devastated stocks of Somaliland's main export, livestock.[12] These climate disasters have fuelled an economic and humanitarian crisis, which in turn has exacerbated historic internal conflict.

Global issues have also impacted on the region. Along with many other countries, in March 2020, the government of Somaliland began a nationwide lockdown, forcing the closure of all schools throughout the country as part of the restrictions to contain the spread of COVID-19. According to the Republic of Somaliland's own COVID-19 socio-economic impact assessment it was found *"that 92 percent of the respondents did not know any child who had not resumed schooling after the temporary closure of schools whereas, 8 percent responded that they knew children who did not resume schooling after the temporary closure."* (Republic of Somaliland, 2021). A UNFPA (2020) study also reported *'(t)he pandemic has seen a rise in cases of early marriage, FGM, GBV and violence in general.'* Other studies have confirmed these assertions and reported increased levels of GBV and FGM in Somaliland. This is coupled, not unexpectedly, with a reduction in GBV service provision. More recently, a survey has shown that *'61% of residents of Hargeisa and Somaliland's second-largest city, Burao, believed that FGM was increasing under the lockdown'.*[13]

Related to this and highlighting the importance of gathering deeper contextual data in our study, initial longitudinal analysis from SOMGEP-T (CARE, 2020), the successor programme to SOMGEP, engaged with mental health disabilities specifically, identified

[12]See for example: https://www.globallandscapesforum.org/glf-news/somaliland-struggles-to-diversify-economy-amid-climate-change-crisis/

[13] See for example: https://apnews.com/article/coronavirus-pandemic-health-lifestyle-religion-africa-e382d9893b7b8c02901c3a3177634c46

as the most prevalent form of disability in this context. At the project's baseline, conducted at the peak of the 2017 drought, over 16% of girls showed signs of severe anxiety and 13% were facing depression. The prevalence of anxiety and depression decreased in the 2019 evaluation to 6.5% and 5%, respectively. The reported decrease was likely to reflect the milder climate conditions at the time and the outmigration of affected cohort girls, as well as the potential contribution of life skills activities conducted by the programme, which seem to have a particularly positive effect on children with mental health disabilities (Tetra Tech, 2022).

2.8. Gaps in Knowledge: education and its impact on the lives of Somali girls and women

There is limited peer reviewed data related to Somali girls and education impacts and outcomes. Subsequently, this rapid evidence review has had to draw on the global evidence base and in doing so highlighted the importance of education as the entry point for transformative change in gender relations and women's life outcomes. The related political economy analysis given below has shown how a lack of political visibility of women and the fundamentally patriarchal clan structure works to exclude women. This makes it hard for the growing women's movement to make much impact, even as girls' attendance and attainment in school improves. Education alone is not enough to break through this degree of prejudice, but at the same time, educated women are more likely to achieve political visibility. The high-profile activists that do exist are all well-educated and from wealthy social economic groups. The global evidence also gives hope that generational change is and will occur as educational access increases. Educated mothers are more likely to push for their daughters to be educated even beyond their levels.

SOMGEP pointed to several barriers beyond patriarchy and the deeply entrenched elitist clan structures, including:

1. Stark differences in provision between rural and urban sites.
2. Poor training of teachers and the existence of very few female teachers.
3. Lack of specific provision for girls, for example, separate toilets and sanitary provision (although it is also acknowledged this has got better).
4. The expectation of girls to pick up domestic work outside of school is also an issue with retention and attendance. Girls have less time to do homework and are expected to pick up childcare of younger siblings and housework.

The evidence is clear that gender disparities in education continue to undermine girls' opportunities, despite enormous strides in recent years to improve primary enrolment and attainment for girls in low- and middle-income countries (LMICs). At the regional, country, and subnational levels gender gaps remain, with girls in many settings less likely to complete primary school, less likely to complete secondary, and often less likely

to be literate than boys. The academic and policy literatures on the topic of gender-related barriers to girls' education are both extensive. However, there remain gaps in knowledge regarding which interventions are most likely to work in contexts with different combinations of barriers (Chuang at al., 2019).

3. Political Economy Analysis

This section provides a longer overview and analysis of the regional political economy, with emphasis on Somaliland's political economy, against which the SOMGEP programme operated, and participants continue to live.[14] Given the focus of SOMGEP, we have taken a gendered lens to this overview. Understanding this wider context is important as it has implications on and for the life outcomes of Somali girls. It also offers a realistic picture of what education, if accessed, may be able to achieve in terms of empowerment and other life outcomes.

This PEA is structured as follows: it begins with a brief **political history** and summary of the **economic context** and then moves on to an assessment of the **clan structures** and impact on nation building. The policy and legislative provision are then considered from a gendered perspective in terms of how well girls and women are represented through them. Consideration is given of the **influences of wider geo-political factors**, in particular Wahabi Islamic discourses supported through foreign investment from Saudi Arabia. The following sections review the **education** system and available data on attainment and the gender gap including details on the school system and attendance. Specific details on the **education structures in the SOMGEP sites** are also given. The PEA then moves to consider the **wider role of women in society** and the specific norms and practices that operate to limit life opportunities and prevent gender equality. The final section maps the **stakeholder landscape** and considers the potential for civil society to drive and support deeper structural change, specifically widening access to educational opportunities for girls.

3.1. A brief political and economic history

A British Protectorate from 1884, in 1960, Somaliland declared its independence from Britain, and five days later joined the Trust Territory of Somalia (formerly Italian Somaliland and now Somalia) to form the Somali Republic. In 1991, Somaliland announced itself as an independent state, breaking its union with the Somali Republic. This declaration happened against a backdrop of long-term insurgency in Somaliland and the descent of southern Somalia into civil war (Bradbury, 2008). Muse Bihi Abdi was

[14] SOMGEP communities are based in Togdheer (central Somaliland), Sool, and Sanaag. The latter two regions are disputed between Puntland and Somaliland. This PEA has some focus on Somaliland and statistics and stakeholders that cover both. If the Fund Manager wanted to make this an open access document, we would need to adjust the language and references within it.

officially sworn in as the 5th President of the Republic of Somaliland in December 2017. Today Somaliland has its own political system, government, police force and currency, but its self-declared independence remains unrecognised by the United Nations and Somalia continues to consider Somaliland as a federal member state. However, a small number of countries have established diplomatic ties with Somaliland, these include Ethiopia, Djibouti, the UK, and Taiwan.

Somaliland has maintained something of a fragile peace for the last two decades. Some analysts have accredited Somaliland's relative stability to its bottom-up peace-building approach (Azam 2013). Whilst it is considered relatively stable, the process of state-building in Somaliland has been fractious and prone to periods of civil conflict. As Boege *et al.,* (2008) argue, state-building is always a highly fraught political process that often leads to conflict as distributions of power are contested and negotiated and Somaliland is not an exception to this (see also Meagher, 2012; Balthasar, 2013).

From 1991 to 1994, Somaliland experienced several episodes of civil war largely taking the form of battles over key economic strategic areas such as ports (Marchal & Sheikh 2015). Seizing control of key national assets was seen by rival clans as critical in establishing political dominance. For example, Miklian (2016) describes the tensions over control of the Berbera port in 1992, which had been under the control of the Musse, an Isaq clan for decades and represents a key economic asset. The 1994 war was triggered by President Egal attempting to take control of Hargeisa airport from the Edagalle clan (Musa and Horst 2016). These and similar events, mostly involving Berbera port and Hargeisa airport, centred around different sub-clans within the Isaq clan fighting for control over resources as a means of trying to leverage more political representation and ultimately power (Phillips, 2013). A series of clan conferences have been held since Somaliland's inception to establish the peaceful foundations required to build a flourishing state. Ahmed and Horst offer the following commentary on the success of these conferences. *"Since the last national reconciliation conference in Hargeisa from September 1996 to February 1997, Somaliland has experienced major political and economic changes, including considerable economic growth and a transition from clan-based representation to a multiparty democracy. Due to the clan conferences, the plural and hybrid nature of Somaliland's governance system is amongst the most formalised in the world as through the Guurti (upper house of elders) clan is recognised as a key organising principle in society."* (Ahmed and Horst, 2019: 33)

The business sector in Somaliland have been attributed credit in brokering peace. The local business elites act as peace brokers between rival political clan factions ensuring a hybrid structure which provides security and *"defacto protectionalism"* (Ahmed and Horst 2019: 4). Ahmed and Horst (2019) describe how peace in Somaliland is founded on alliances between several state and non-state actors including businesses elites,

clans, and religious leadership. The influence of external private companies has been limited due to the complexity of navigating the sensitive internal power dynamics. They go on to state; "*None of these power holders in Somaliland's hybrid governance system has a monopoly on power. While preventing civil war and state collapse are high on the agenda of these power holders, few have a marked interest in building strong national institutions and there is little to no consensus of what type of state to build."* (Ahmed and Horst 2019:36) (see also Boege, Brown, Clements, Nolan, 2008).

Goetz and Hassim (2003) articulate the implications a lack of commitment to building strong equitable institutions has on and for gender equality and women's rights. They argue that *"the design of political institutions [...] profoundly hampers the perceived legitimacy of women politicians and of gender equity concerns, and hence the effectiveness of feminists in advancing gender equity policy."* (2013:5) That said and in the context of Somaliland, a UCL published report (2012) exploring the gendered nature of political settlement drew the following key finding; *"Somalilanders are becoming increasingly disillusioned with the 'politicisation' of clan and the rise of 'clannism'. These developments for political settlement are themselves potentially destabilising, but this type of change offers room for gender-focused activism that uses greater inclusivity for women and men (as well as minority groups) to help promote peaceful transition in Somaliland."* The extent to which these opportunities have, since 2012, been capitalised on through widening educational access for girls needs further consideration.

3.2. Economic context

The country's economy largely relies on primary products such as livestock and agriculture. Somaliland has a gross domestic product (GDP) of about US$2 billion as of 2019, most of which it receives in remittances from Somalilanders working abroad. Livestock is the main export which it ships to neighbouring Djibouti and Ethiopia, as well as to Gulf states, such as UAE, Saudi Arabia, and Oman. The country's GDP per capita, US$ 682, is one of the lowest in the world.[15] Somaliland is located along the Gulf of Aden, near the entrance to the Bab al-Mandeb, a major sea-lane through which almost one-third of the world's shipping passes. Its location has helped the government attract new trade and development deals. In 2016, DP World announced that it would invest nearly US$450 million to manage and upgrade the Port of Berbera and to develop a

[15] As cited by Central Statistics Department of Somaliland | Central Statistics Department of Somaliland (somalilandcsd.org)

corridor running from there to the Ethiopian border (World Bank, 2019). Optimism at Somaliland's economic growth has been noted in business publications.[16]

Since Somaliland is unrecognised this limits the ability of the government to draw on wider donor funding, and the government relies mainly upon tax receipts and remittances from the large Somali diaspora, which, as already highlighted, contribute significantly to Somaliland's economy (Lindley, 2010). Remittances come to Somaliland through money transfer companies, the largest of which is Dahabshiil, one of the few Somali money transfer companies that conform to global money-transfer regulations. The World Bank estimates that remittances worth approximately US$1 billion reach Somalia annually from migrants working in the Gulf states, Europe, and the United States. Analysts say that Dahabshiil may handle around two-thirds of that figure and as much as half of it reaches Somaliland (World Bank, 2019). This lack of international recognition has arguably slowed the growth of a women's rights movement as global visibility is hampered. Arguably, at present, the conditions are more favourable in Somaliland for civil society expansion not least because of the relative stability and reduced influence of fundamentalist Islam. However, without a strong state system making inroads into the deeply patriarchal power structures will remain challenging and limit the influence of women's rights activists and stakeholder organisations.

The dominant religion is Sunni Islam. Other religious minorities are Somali Christians and dispersed religious groups across different clans and ethnic groups. As this PEA will show, women and girls find themselves caught often as bargaining chips in the complex web of clan lineages. Marriage is centrally important in maintaining 'pure' blood clan lines. The intense scrutiny that girls and women are under from birth to conform to highly conservative gender norms arguably relates to the clan based social system that depends on the preserving of kin networks through interclan marriage (see section below on cultural practices). Women as reproducers are fundamental to this system hence the need to ensure they remain loyal to their clan lines.

3.3. Growing influence of Wahabi Islam

As covered in the previous section, foreign investment from Saudi Arabia and the United Arab Emirates is supporting the growth of the private sector. Investment though is also being directed towards funding an educational infrastructure consisting of madrassas highly accessible to boys and girls and increasingly bridging the rural-urban

[16] See for example: https://www.economist.com/the-economist-explains/2017/11/13/why-somaliland-is-east-africas-strongest-democracy, (https://www.busiweek.com/somaliland-economic-growth-on-the-rise/, https://www.aljazeera.com/economy/2007/5/20/economic-success-in-somaliland

divide. The roots of the influence of Wahhabism can be traced to the Islamic backlash to the socialist reforms introduced by President Mohamed Siad Barre through the introduction of family law in 1975 (see Mohammed 2015). Barre found loyal support in women who were actively recruited to support the revolution and war, with many women enlisted into the Somali Women's Democratic Organisation (see also Ingiriis and Hoehne 2013, Samatar 1985).

The law introduced greater equality between men and women who were deemed to have equal decision-making power, promoting the education of girls and women's employment outside of the home including maternity provision, banning of dowry, and reducing polygamy. It also gave women equal inheritance rights. Critics of the law did not see it is as a sign of feminist socialism in the way that Barre did. Those that disputed how liberal Barre was highlight how men were still described as the household head. That said Barre did nonetheless give women greater rights than previously.

The secular values of equality and rights introduced by Barre upset the religious elite, consequently he faced protest from Islamic scholars who were increasingly supported by Islamic movements from outside, mainly from Saudi Arabia (ibid). Barre turned to violence in an attempt to remove opposition; this ultimately lost him support and led to his demise. The removal of Barre was promptly followed by the rewriting of the law, which removed many of the more progressive components of gender equality.

However, this period of Somaliland history seems to have resulted in some positive legacy for women which we can also see in our data. The period following Barre can be characterised as increasingly fragile with the region being pulled into regional and geo-political agendas, including, from the mid-2000's, the "war on terror". Deepening poverty and the failures of state-building left Somaliland with no functioning welfare state and education system (ibid). This left an opportunity for more conservative Islamic movements to take a stronger hold. With increasing numbers of men migrating to Arab states for work and encountering Wahabi Islam, it seemed like only a matter of time before the influence of Saudi Arabi and other Arab nations strengthened. Control over building and funding a system of Islamic education was a key route to wider influence over the structures of governance and political decision-making (see also Marangio 2012).

Jhazbhay (2008) stated; "A major agency for disseminating Islam as a religion and culture in Somaliland, as elsewhere throughout the Muslim world, has been education. The funding of religious and/or religious-based education by Arab/Islamic charities, which have emerged as a major vehicle for channelling what are identified as Wahhabi-Salafi expressions of Islamic fundamentalism and jihadist tendencies, is subjected to major scrutiny in terms of how the education–charities link is influencing Somaliland society." (Jhazbhay 2008:175). Jhazbhay goes on and offers a summary of various

historical narratives on Somaliland arguing that the British colonial approach was to leave the pastoralist structures virtually untouched and as such no real efforts were made to introduce a formal secular educational system.

Importantly, after Somaliland's declaration of independence in 1991, the Islamic movement of Waxda had become *"deeply involved in educational institutions, (while) keeping close links with Kuwait"* (Ibid 176). Ronald Regan has been associated with the rise in prominence of Wahabi Islam in Saudi Arabia, seeing it as a liberation movement that could counter the influence of Soviet Russia. As such the Wahabi influenced Waxda movement was able to grow its footprint across Somaliland drawing on the Islamic principles of charity and welfare to do so. The impact of Islam cannot be ignored as a strong dimension in shaping the gendered roles and expectations for women (Rayale Pomfret, Wright 2015).

3.4. The Clan System

The clan system has been central to Somaliland's process of state formation. Somaliland is inhabited by three main clan families – the Isaq, Dir (mainly Gudabursi and Ise) and Harti Darod (Dhulbahante and Warsangeli), of which the Isaq are the majority, accounting for 70% of Somaliland's population (Kraushaar & Lambach, (2009). These clan families agreed on the cessation of hostilities and peaceful co-existence during a series of clan conferences, including Burao (1991), Sheikh (1992), Boroma (1993) and Hargeisa (1996–1997). The leadership of the clans come together through the *Guurti*. The *Guurti* discusses and signs off on bills proposed by the lower house and so carries considerable decision-making influence (yet as highlighted above has very limited female representation).

3.5. Policies, Laws, Legislation

Somaliland's legal system is a mixture of civil law, Islamic (Sharia) law, and customary law. Sharia law takes precedence over all laws, and customary law also has a strong influence. This mixed system can lead to conflict and is not generally supportive of women's rights (Farley, 2010). Somaliland is not listed as a separate jurisdiction among the signatories to the international and regional treaties most relevant to protecting women and girls from forms of gender-based violence (e.g., CEDAW). However, the Constitution of the Republic of Somaliland (2001) confirmed compliance with all international agreements and treaties formerly signed and ratified by Somalia in Article 10(1), "*provided that these do not conflict with the interests and concerns of the Republic of Somaliland"* (Renders, & Terlinden, 2010).

A Somaliland National Gender Policy was developed in 2009, comprising commitments to ensure gender equality across department portfolios.[17] According to a report compiled by Nagaad; *"The Ministry of Family Affairs and Social Development, which has the overall mandate for coordinating women's rights and gender interventions, was only established in 2006."* Nagaad goes on to state; *"needless to say, gender mainstreaming is perceived as the responsibility of the Ministry of Family Affairs and Social Development, instead of as a multisectoral issue. The government budget is very meagre, accounting for less than $30 million; consequently, the development of enabling policies and laws to cater for gender mainstreaming has been a very slow and painful process."* This obviously has implications for the level of gender responsiveness across departments including Education.

Regarding women's social status, Article 8 of the Constitution of the Republic of Somaliland states: 'All citizens of Somaliland shall enjoy equal rights and obligations before the law, and shall not be accorded precedence on grounds of colour, clan, birth, language, gender, property, status, opinion etc.' It is further provided that: 'Precedence and discrimination on grounds of ethnicity, clan affiliation, birth and residence is prohibited; and at the same time programmes aimed at eradicating long-lasting bad practices shall be a national obligation.' (The Constitution of Somaliland, 2015)

According to a summary provided by Nagaad, human rights as a concept is recognised by the Constitution in that it endorses equal opportunities for all in terms of education, employment, and health. It goes further recognising that some groups are more vulnerable than others including women, disabled people and children and acknowledges that special protective measures may be needed (Nagaad 2010).

The challenge in terms of implementing the constitution, and the gender strategy specifically, is the way in which the underlying principles appear to clash with the patriarchal traditions and customs that dominate the values and beliefs of many of those in power (and at all levels). According again to Nagaad (2010); "*Customary laws and practices remain discriminatory against women, particularly in relation to institutionalized violence against women, e.g., wife battering and rape."* Statutory laws and customary laws are often conflicting with many women not realising that they do have rights under the statutory legislative framework and through global treaties recognised by the government (e.g., CEDAW). Education is a critical vehicle through which these rights and provisions are communicated, yet the implementation of an equable system is dependent on government commitment.

[17] Republic of Somaliland (2009), National Gender Policy, Ministry of Employment, Social Affairs and Family (MESAF).

3.6. Governance and Education

The recent history of education in Somaliland is non-linear and closely linked to central government support. Following independence in the 1970s mass literacy campaigns bolstered the demand for education and enrolment, but during the 1980s the gearing up of conflict saw this wane with enrolment and literacy levels dropping due a lack of central government support. By 2001 Somaliland Constitution affirmed education as a fundamental human right and a Free Primary Education Policy was confirmed in 2011.

The territorial disputes that define Somaliland-Puntland and Puntland-Galmudug relations, combined with the federal structure of Somalia's government, have produced a situation of fragmented government administration. SOMGEP, and subsequently SOMGEP-T, has attempted to work actively with the Ministries of Education in each respective area, but the proliferation of ministries is likely to make coordination more difficult and increase the logistical and financial burden of interventions targeting them. In practice, programme teams must engage with the Ministry of Education and Science of the Republic of Somaliland, which is responsible for education in Somaliland,[18] which operates with limited coordination with the FGS, and the Galmudug Ministry of Education, which is much more closely tied to the federal Ministry of Education. Complicating this issue further is the fact that some districts in Sool and Sanaag have overlapping administration, with Ministry of Education staff from both Puntland and Somaliland operating in the area. The result is divergence in how education is provided – for instance, different curricular standards applied in different areas – and additional required effort on the part of SOMGEP and SOMGEP-T staff, who must coordinate across multiple ministries.

Coming to SOMGEP specific programme sites, the majority are in Togdheer (central Somaliland), Sool, and Sanaag, of which the latter two regions are disputed between Puntland and Somaliland. The remaining schools are in northern Galmudug and southern Puntland, concentrated in the rural areas between Galkayo and the Ethiopian border. The varied historical trajectories and experiences during the civil war directly impact current conflict dynamics, government administration, and economic marginalisation in the areas where SOMGEP worked.

3.7. Educational System, Attainment, and the Gender Gap

Although the government does run its own schools, diaspora and non-state actors across Somaliland (including international non-governmental organisations like SOMGEP delivery partners, CARE, and International Relief) are critical to the management, funding, and delivery of the education sector.

[18] See Ministry of Education & Science (govsomaliland.org)

In Somaliland, there are eight years of primary school starting at age six and four years of secondary school starting at age 14. The official age range for secondary education in Somaliland is between 14 and 18. In both the primary and secondary systems there are both formal and informal systems (detailed below). It is important to note that across both primary and secondary levels girls access more informal education to a significantly greater degree than boys. This indicates that formal education is still more highly valued for boys. Article 36 on The Rights of Women in the National Constitution states*: "In order to raise the level of education and income of women, and also the welfare of the family, women shall have the right to have extended to them an education in home economics and to have opened for them vocational, special skills and adult education schools."* The influence of gender can be seen in this statement, which clearly sets out what type of education is deemed appropriate for girls. This automatically sets limits in terms of what is available to girls both as a curriculum but also then life opportunities. The educational attainment gap is 0.68 (Oxfam, 2019) which reflects the disadvantage girls suffer because of a deep gender bias in the system.

Data on literacy rates in Somaliland has been collected but is quite old, this is acknowledged by the most recent Educational Yearbook (2020/21). The Somaliland MDG Report (2010) draws on MICS data from 1999, which put the overall literacy rate at just 26.9% with a significant gap between female and male levels (54.8% among males, 25.4% among females). UNICEF MICS data from 2011 put the literacy rate among young women aged 15-24 at 40.0% with great variance between urban and rural locations (53.8% in urban locations, 27.3% in rural locations). Awdal was the region with the highest level of literacy at 50.7% and Togdheer (one of our sites) had the lowest rate at 35.6%. Unsurprisingly, family wealth is a significant determinant of female literacy: 64.7% of females in the richest wealth quintile are literate, compared to only 14.1% in the poorest quintile. (Oxfam, 2019).

According to the Labour Force Survey (2012), reported literacy rates were highest among youth aged 15-25, with literacy rates of 74% for males and 55% for females; literacy decreases significantly among older age groups. In Oxfam's study male respondents supersede female respondents in terms of literacy levels in all three categories of reading, writing, and basic math skills. Literacy levels again decline with age. While 80.8% of respondents aged 15 or younger reported being able to read a book and claimed to fully understand it, this percentage dropped to 62.2% for 26-35-year-olds, 50.2% for 36-64-year-olds, and 28.1% for over 65-year-olds. Figures are similar for writing and math skills. Disaggregated by group status, non-displaced people's literacy skills far supersede those of IDPs or refugees. For instance, while 12.2% of residents say they cannot read, this percentage rises to 30.2% among IDPs, and 47.6% among refugees (writing: 12.2% among residents, 32.5% among IDPs, and 47.6% among refugees). The same holds true for the divide between urban and rural settlements, with rural dwellers twice as likely to be illiterate.

3.8. School attendance

Attendance has been measured through various data sets and to some degree over time. The most recent figures available from the Somaliland Educational Yearbook 2020-2021 shows the Gross Enrolment Rate (GER) in primary for males as 36% and females 29%. The report notes that this is a slight increase compared to the previous report of 2018/2019 but *'(t)his indicates that Gross enrolment rate is still very low in Somaliland and suggests that capacity of primary education system to enrol students of primary age group needs further improvement.'* (Somaliland Educational Yearbook 2020-2021: 44). The report goes on to state; *'the national gender parity index in School enrolment is 0.81, this means that there is still more work to be done for the equity in education between boys and girls in Somaliland.'* (Ibid:45)

The statistics also reveal a clear gender disparity when it comes to drop out rates with the total dropout rate at primary level being 3.5%, the rate for boys is 3.1% and for girls it is 3.9%. The data per year shows that girls drop out in greater numbers as they progress through the years.

In our field sites, enrolment at government schools is as follows: Sool 8023 boys, 6496 girls, Sanaag 9584 boys and 8669 girls, Togdheer 10619 boys, 7829 girls. (Somaliland Educational Yearbook 2020/21)

Drilling into participation rates in the Alternative Basic Education (ABE), an approach introduced to try and capture out of school children and provide some form of more non-formal education, we see girls slightly accessing this form of education more than boys (4420 boys, 4676 girls). In Sool, this jumps to 420 girls compared with 268 boys: in Sanaag 412 boys and 472 girls, and in Togheer 1022 boys and 1151 girls. (Ibid)

Taken together, we can conclude that in our field sites, underlying barriers are working to prevent girls from attending formal schooling in the same numbers as boys. Whilst girls may be able to access ABE, the attainment levels are much lower through this route.

Secondary Education in Somaliland has four forms. Entry to secondary education is determined by the centrally administered standardised examination at class 8 (at the end of primary education). At the end of form four, students take the national examination (Somaliland general certificate examination), a standardised and centralised test used to certify the completion of general secondary education and to select students that qualify for the next level of education (University).

According to the 2020/2021 Somaliland Educational Yearbook, the total enrolment at secondary education is 72,125 students of which the highest enrolment is in

Maroodijeex (26%) and the lowest is in Xaysimo region. 42% are girls, indicating that the share of girls in secondary schools is still lower than boys.

In our study site of Sool in 2018/19 there were 2092 boys enrolled compared to 995 girls. In 2020/2021 the figures had increased to 2376 boys and 1142 girls, but the gender gap is still very large. In 2020/2021 in the other two sites; Sanaag, 2015 boys are enrolled compared to 1683 girls. In Togdheer, 6581 boys are enrolled compared to 5213 girls (Ibid).

Non-formal Education (NFE) offers practical educational activity outside the established formal system providing fundamental training in literacy, numeracy and life skills for out-of-school youth and adults. In Somaliland there are two non-formal education modalities: Adult education and family life education programmes. Secondary aged children until they reach adulthood qualify for the family life programs. We see significant differences between the participation figures of women compared to men, with far higher numbers of girls accessing this form of education. For example, in our sites; Sool, 17 boys compared to 108 girls, Sanaag, 31 boys compared to 168 girls, in Togdheer 12 boys compared to 164 girls (Ibid). Understanding what it is about this type of education that appears to be more attractive and/or acceptable for girls is important in terms of proving deeper insights into the structural barriers facing girls in attending and completing formal education. (Ibid)

The UNICEF MICS data from 2011, which represents a relatively early set, recorded that just over half of children of primary school age were attending school (51.4%). In the UNICEF data primary school enrolment was higher among boys (55.4%) than girls (47.3%). When compared with the most recent data given above, we see a decline in enrolment. The report revealed an urban-rural divide with a participation rate of 59.1% in urban areas and 43.1% in rural locations. Attendance was highest in Awdal at 62.7% and lowest in Sool at 39.4% (one of our study sites). The Somaliland Educational Yearbook of 2013/14 highlighted a drastic urban-rural divide: Only 10% of secondary teachers are deployed in rural areas, while only 78 or 4% of teachers were female.

In the MICS data analysed by Oxfam (2019) household wealth emerged as a key characteristic when it came to the likelihood of a girl going to school. The data summarised claimed that 70.8% of children of primary school age in the richest wealth quintile are attending school, compared to 28.1% in the poorest wealth quintile. The 2020 Somaliland Health and Demographic Survey found that almost one out of 4 (21%) girls and women aged six and above have never attended school compared to 17% of men (Central Statistics Department, Ministry of Planning and National Development, Somaliland Government, 2020: xxvii).

The Republic of Somaliland Ministry of Education and Higher Studies. ESSP 2017 - 2021 Education Sector Strategic Plan estimated net primary enrolment at 33.7% (with 5% less

enrolment among girls) with a projected trend of 54% by 2021. The Ministry start point data seems to show a lower enrolment rate than the figures presented by UNICEF MICS 2011. The percentage difference is about the same. The impact of covid makes it hard to know if this increase and the Oxfam predicted upward trend for enrolment has in fact happened.

Given the recorded and acknowledged impact of multiple factors on school attendance including natural disasters (drought, flooding, and cyclones), financial shocks, and conflicts, increasing school attendance is obviously fraught with challenges. Measures to increase girls' enrolment outlined in the 2017 - 2021 Strategic Plan included: adequate and girl-friendly facilities; encouraging female teacher training and placement, especially in secondary schools (the proportion of female teachers is under 5%); affirmative policies to achieve gender parity among teaching staff, including head teachers; scholarship programmes that target girls at secondary level; and improved systems for students with special needs. The endline SOMGEP report provides evidence that these measures do have a positive impact in increasing the attendance of girls.

According to Oxfam's study (2019); 'The gender gap on educational attainment is definitive: female respondents are far less likely to reach higher levels of education than their male counterparts. The percentage of female respondents who have received no education or have attended Quranic school stands at 50.7%, compared to 25.8% of men. Only 9.5% of female respondents attended secondary school, compared to 20.1% of men, and 13.5% of female respondents have obtained a university degree, compared to 23.2% of men.'

Figures on tertiary education rates are difficult to find. Somaliland's first university, Amoud University in Borama, Awdal, was only opened in 1997. According to the 2017-2021 Education Sector Strategic Plan, there are between 24 and 35 recognised universities in Somaliland, with Amoud, Hargeisa, Gollis, and Burao University the largest. The higher education sector is overwhelmingly driven by private investment, with universities being initially founded by NGOs or private entities and then funded through tuition fees. The number of lecturers sufficiently qualified to teach at this level is very low, calling into question the quality of university education (Oxfam, 2019).

3.9. Women in Somaliland society – social norms, values, and beliefs

It is well-acknowledged that women and girls often lack a strong voice in society, as decisions in the home and government are made almost exclusively by men. In Somaliland, 97% of girls aged between four and 11 have endured female genital mutilation (FGM). The previous section detailed the low literacy rates, which often result in limited awareness of legal rights that increase the vulnerability of women and girls to a range of abuse. The gender gap index of 0.45 (Oxfam 2019) indicates that women are severely disadvantaged across several areas ranging from fewer economic

opportunities to a lack of representation in political decision-making processes to the already detailed lower educational attainments. Women are far less likely than men to participate in the labour market and Somaliland's economy offers limited opportunities for formal employment. Women are twice as likely as men to be unemployed but actively looking for a job (30.1% of the female labour force, compared to 16.4% among men). This indicates that despite the socio-cultural norms that place women in the domestic sphere, plenty of women are looking for economic opportunities outside the house. This gap is particularly evident among youth, where 53.8% of women aged 15 to 24 are not in employment or education, compared to 24.4% of young men in the same cohort (Kenny, et al., 2019).

3.10. Women's political representation and decision-making influence

According to an IDS published report (Carter, 2021) women struggle to gain inroads into political representation. "Saferworld and Somaliland Non-State Actors Forum (SONAF)" (2018: 5) reported there was one woman in parliament and none in the upper House of Elders (*Guurti)*, while only three out of 32 cabinet members were female. Likewise, there has been little progress in the last decade in representation in local government, despite '*a record number of women*' standing for office in the 2012 local council elections. Male elders dominate informal decision making. Following on-going campaigning in Somaliland, the Cabinet approved a 20% gender quota of women and minority clans in the future Parliament and Local Councils Elections.[19] However, this was subsequently rejected by the *Guurti*.

It is important to note that women have been far from passive in decision making. Carter (2021) describes how women have played important informal peacebuilding roles in their communities and at the national level but are excluded from formal decision-making. *"Women's key contributions have included: mobilising communities and elders for peace; encouraging leaders to negotiate for peace and reach agreements; acting as intermediaries ("peace envoys") between clans; providing logistical support (venues and food)."* (See also Walls et al., 2017: 23, 61; SIHA Network, 2020: 8; Horst, 2017: 394; Rayale *et al.*, 2015: 11; Parke et al., 2017: 15). Moe and Simojoki (2013) also document how women are often key in resolving small-scale conflicts in their neighbourhoods or within households.

Concerningly, emerging research has revealed how patterns of urbanisation are now threatening the mechanisms and forums women, particularly pastoralists, have traditionally been able to leverage for influence. As Walls *at al.,* (2017) observed, the clan system is seen to be heralded as the foundations of Somaliland's peace, yet it also

[19] See https://www.horndiplomat.com/2018/06/07/somaliland-cabinet-approves-20-quota-for-women-in-the-upcoming-parliament-and-local-councils/

operates to systematically exclude women from decision-making. As climate change drives pastoralists to move to towns and cities and the clan system expands as the primary state building process, the marginalisation of women from politics looks to deepen. That said, research conducted by Nagaad (cited by Carter 2021), reveals a level of distrust and frustration at the clan system (see also Walls *at al* 2013). "NAGAAD's 2019 nationally representative household survey found, *"(a)n overwhelming 85.8% of survey respondents (90.8% of women and 80.7% of men) agree that women's political participation is beneficial for society"* (NAGAAD, 2019: 7). Walls et al. (2017: 8) concluded that while *"potentially destabilising",* this is a *"time of change"* that "*offers room for gender-focused activism that uses greater inclusivity for women and men (as well as minority groups) to help promote peaceful transition in Somaliland."* (Cited by Carter 2021: 6)

Education is obviously critical in building the self-esteem of young girls and women and preparing them to exercise political agency. Those women that are in politics have received high levels of education and come from families that are less conservative when it comes to gender (Carter 2021). We also see a growing rise in the number of women in entrepreneurial roles suggesting there is potential for female leadership in the business sector to grow. Given the importance of the business community in both the overall stability of Somaliland and for its economic growth, it may well be that greater political visibility will be afforded to female business leaders in the future.

3.11. Women's economic engagement

A woman's educational background decides the type of employment accessible to her and higher education increases the likelihood of labour market participation. In the Oxfam commissioned study (2019) 89% of female survey respondents obtained tertiary education and were participating in the labour market (either employed or looking for a job), compared to 94% among men. The informal economy is where most women find income generating opportunities. As we know, work in this sector is highly risky and those engaged in it are vulnerable to exploitation and poor working conditions. Those that can set up businesses struggle to grow them and are not able to employ other women. 91.5% of female survey respondents who identified as self-employed did not employ any other person on a regular basis, compared to 80.3% of men.

In addition to gender specific barriers, clannism is considered the main challenge in accessing employment opportunities (see Kenny, et al., 2019). Access to the labour market for women is exacerbated by lower levels of literacy and education compared to their male peers. Also, and as outlined in the previous section, women have a weaker social network because of their exclusion from political processes. Additionally, the gendered nature of work means women are perceived as unable to fulfil certain jobs seen as physical and are deemed more suited to domestic labour. In short, women's employment is largely seen as a contribution which adds to the male head's income

(Kraushaar & Lambach, 2009). Studies such as that conducted by Balthasar (2019) reveal how urban based women and men recognise the necessity of women's financial contribution to household income and women who work outside the household are *'respected and admired for shouldering the double burden of housework and livelihood activities'* (2019:67). However, in the same study, many men voiced concern that if women were supported as income generators this would threaten their position as breadwinners. This challenging of the gendered status quo was negatively perceived by those men interviewed and is also backed by international literature on women's economic empowerment (e.g., Bradley, 2020). For those women in Somaliland who do earn an income there is little research that explores the impact they then have (or not) on decision making influence in the home. It is not clear if earning an income increases a woman's resilience to exploitation and violence. What we know from the global literature on women's economic engagement also tells us the impact of income for women's empowerment is complex and a backlash to a woman being deemed too successful is often recorded (Bradley, Martin, Upreti 2021; Bradley & Gruber, 2021; John, 2020).

3.12. Images of female strength

Walls et al (2017) recorded a range of gendered folktales. The study stated, '(i)t is interesting to note that three of the most popular mythical tales told to children involve strong, female protagonists.' One such figure highlighted is called Queen Caraweelo. Queen Caraweelo is documented as castrating almost all of her male subjects she ruled over. Other female figures include the cannibal witch, Dhegdheer; and the wise but devious Huryo, who are also presented as figures of strength and fear. It is significant that Somali men and women have very different customs with respect to these mythical figures. For many women, Caraweelo remains a source of pride reflecting empowered womanhood. There is little research in the context of Somaliland, into the ways in which narratives of female strength serve as a psychological mechanism strengthening the resilience of women but in wider literature looking at similar links in other contexts it has been suggested they represent a highly important culture resource to and for women (Bradley 2006, Raheja & Gold 1996, Leslie 1986). The extent to which these narratives are tapped into and used in gender empowerment curricula is unclear and undocumented but may be worth exploring for inclusion in empowerment programming. Walls et al (2017) goes on to describe how women obviously have a key reproductive role and in pastoral life this extends to several key survival related responsibilities. Women often own goats and sheep and decide how much ghee and milk is needed for household use, selling the rest for an income. Women also often coordinate the relocation of the family dwelling or aqal, when the time comes to shift the household in search of better pastureland. As already stated, the impact of urbanisation may well destabilise these opportunities for women to show and exercise control and influence. There is likely to be even more of a demise of pastoralism due

mainly to climate change rendering this way of life impossible. In turn this demise will bring new challenges for women. Women will find themselves having to operate in a much more rigidly male and clan base urban structure. Given these almost inevitable patterns of urbanisation, the education of rural girls and women becomes even more critical for their empowerment.

3.13. Conflicts, Clans and SOMGEP communities

While SOMGEP communities largely fall outside areas directly impacted by ongoing, widespread conflict, they can be and are buffeted by internecine conflicts of three main types. The first is centred on Sool and Sanaag, the site of a territorial dispute between Somaliland and Puntland, which overlaps with clan-based disputes in the area. Somaliland claims the entirety of Sool and Sanaag based on the colonial boundaries that separated British Somaliland (now Somaliland) and Italian Somaliland (Puntland and south-central Somalia). Puntland makes claims to much of Sool and Sanaag based on clan affiliation, as Puntland was formed, effectively, as a homeland and safe haven for Darood clans during the civil war. Much of this region has limited state presence from either the Somaliland or Puntland administrations.

The Somaliland-Puntland dispute results in unpredictable outbreaks of conflict between formal security forces of the two sides. The most recent serious violence occurred in January 2018, when Somaliland forces attacked and captured the town of Tukaraq, and in May 2018, when Puntland attempted to re-take the town. At present, the conflict is muted, but underlying tensions impact daily life in Sool and Sanaag, in the form of reduced public service provision, inter-clan disputes, and tense citizen-state relations where Somaliland controls areas that are populated primarily by Darood sub-clans that prefer being governed by Puntland. Many of the clan disputes that occur in Laascanood, Buhodle, and elsewhere in the region overlap with the broader state-level conflict, as they pit Isaaq clans that dominate and prefer the Somaliland administration against Darood clans that have ties to Puntland and view themselves as marginalised within Somaliland society and politics.

The second type of conflict centres on violent extremist organisations that operate in the region, especially al-Shabaab, a *Daesh* (ISIS) affiliate whose influence is limited to areas of Puntland. SOMGEP-T communities fall outside the zone of widespread al-Shabaab control in southern and central Somalia, but the group still exercises significant influence around Galkayo and has a strong foothold in mountainous areas of Sanaag and western Bari. Al-Shabaab's operations in Puntland are a mix of targeted assassinations in urban areas, typically aimed at public officials and police, and attempting to control territory in more isolated rural areas. Several SOMGEP communities are impacted and have been excluded from samplings, due to insecurity caused by Al-Shabaab.

The third type is inter-clan conflict that can arise in many areas where the programme is being implemented. Clan disputes impact every region, though outright violence tends to be short-lived. In Sanaag, the longest-running conflict is in Ceel-Afweyn, where violence has been widespread for multiple years and the city is effectively divided between two sub-clans. Shorter-term conflicts have occurred around Yubbe (over natural resources), Galdogob, and – most recently – Saah-Maygaag, among many others. Most inter-clan disputes do not come to wide international attention because they occur in rural areas and villages and involve a relatively small number of deaths; however, they disrupt the provision of public services and drive displacement. In addition, the continual exposure to violence – or the latent threat of violence – can have significant mental health consequences even outside of direct, physical harm caused by conflict.

What SOMGEP tells us about the challenges facing Somali women and girls:

The end line SOMGEP report (CARE, 2017) identified five main challenges to the successful engagement of girls in school. These include:

1. Cultural-religious beliefs and practices that inhibit girls' education
2. Parents' and girls' own attitudes that devalue girls' education
3. Teaching practices that are neither child-friendly nor girl-friendly
4. Learning environments that are neither child-friendly nor girl-friendly
5. Policies and education system functions that produce gendered effects

The wider literature on gender access in Somaliland confirms that cultural and religious norms shape gendered perspectives, which in turn feed into institutional and social structures that systematically exclude girls. Challenging these underlying gendered inequalities is the only route to wholesale transformation.

3.14. Harmful cultural practices and other forms of violence against women and girls

Entrenched social norms in Somaliland reinforce gender inequality, normalising and making women and girls susceptible to FGM, IPV and discrimination (ECW, 2019). On-going justification of FGM from within Somali society is founded in both religious and cultural practices. Many see religion as reinforcing FGM, through its perceived promotion of Sunnah rather than the more extreme Pharaonic form and cite it as a cultural intergeneration practice. Beyond this, FGM is believed to assure the women's purity (and virginity), considered clean and believed needed to ensure she and her family do not face community ostracisation (UNFPA, 2022).

Respondents justify continuation of FGM as a traditional cultural practice, while there have been recent movements to try to combat the practice, from civil society to

externally funded donor programmes to fatwas issued by the Ministry of Religious Affairs in 2018.[20] However, many cite a disconnect between what religious or community leaders say and what happens within their own families regarding FGM (UNFPA, 2022).

Despite the existence of more positive motifs of strength and influence the wider and deeper web of gendered cultural norms operate to marginalise and oppress women in Somaliland (see section above). It is impossible to ignore the very high rates of FGM and the refusal of government and Islamic leaders to condemn its practice, despite the fatwas. According to the 28 TooMany country report (2019), Somaliland has the highest prevalence of FGM at 99.1%. The report also suggests that girls are mostly cut between the ages of 4-14 and 85% of the 99.1% undergo type 3 which is the most extreme type ('sewn closed'/infibulation, also referred to as 'Pharaonic Circumcision'). The report highlights how this type of cutting is mainly conducted in rural Somaliland and not urban areas. The report also states that FGM is usually performed by traditional practitioners. The report does document that there is a move towards medicalisation in which medical practitioners are paid to perform the practice, however again this is largely only in urban centres (Smith 2009). Whilst there have been moves to introduce legislation to ban FGM, it has been slow to emerge through the legislative process (Bowman 2008).

3.15. Links between child marriage and FGM/C

In understanding the root cause of FGM it is important to acknowledge the relationship between this practice and child marriage (Gruenbaum, 2001; Johnsdotter 2004; Nnaemeka, 2005; Rye, 2002; Talle, 1993; Thomas, 2003; Mufaka 2003). FGM is a requirement of marriage to demonstrate the sexual purity of the bride. In turn, sexual purity is essential for families to command high bride price for their daughters. Child marriage is the result of fears over a daughter straying before families can settle on a match. Preservation of the clan blood line is a strong driver. Bride-price is also turned to at times of increased poverty as families struggle to survive with food insecurity, so girls are married early to generate much needed resource.

3.16. Stakeholder landscape

One of the most visible and proactive stakeholders in Somaliland working on women's rights is Nagaad, a women's rights umbrella organisation launched in 1997. It claims to work "tirelessly advocating gender equality, equity, and gender mainstreaming in the political arena. Influencing the law, policy and practice for improved gender equality and women's human rights in Somaliland continues to be a key agenda for Nagaad." In

[20] See https://www.reuters.com/article/us-somalia-fgm-fatwa-idUSKBN1FR2RA for further details. It should be noted that the fatwa only covered some forms of FGM.

Puntland it is the network PUNSAA which is active in promoting education as a key entry point for gender equality.

Generally, an ongoing challenge facing women's rights organisations is a lack of capacity with very few female trained lawyers. This makes the implementation of legal provisions, which arguably exist to some extent (see section above) tough. Other challenges include fears over the rise of Islamic fundamentalism and the influence of al-Shabaab given its growing support in Somalia.

Arguably and prior to covid, there was a growing network of activists working for several national organisations. The growth of civil society is hampered by the conservative government and general societal and cultural attitudes that stress conformity to gender norms rather than radical change (which is what is needed). The Siha network reported: *"The NGOization of women's rights activism in Somaliland has contributed to factionalism and polarization within women's movements, limiting their capacities for activism and political influence. This results in a large part from a prevalent perception within the NGO sector that identifies women outside the sector – particularly poor and minority women – as beneficiaries of NGO interventions, but not as partners in the same struggle."* (2020). There are few NGOs that primarily push for educational access for girls, but some do exist such as the relatively small Candlelight, an INGO working to build a gender equal education system.

According to a report published by the Siha network (2020)[21]; The Midwifery Leadership and Development in Somaliland Association represents *"an emerging modality for the women's movement through the alliance of jobs dominated by women, such as midwifery and nursing. The University of Hargeisa is also providing a space for women to organize and learn, particularly within the University of Hargeisa legal clinic, which enables female lawyers to access and engage with the legal system. The Women Journalist Association (WIJA) is another attempt by women to organize beyond the bounds of the conventional NGO format. These efforts resist the 'NGOization' of the women's rights struggle in Somaliland."* These organisations do not have a specific focus on education but arguably do work to create the enabling environment needed to empower girls through education.

The Voice of Somaliland Minority Women Organization (VOSOMWO) reports that minority clans in Somaliland, namely the Goboye, Tumals and Yibirs, in addition to other smaller minority groups, are systematically faced with obstacles that prevent their access to education, employment and resources. According to VOSOMWO, minority women are more susceptible to systemic gender-based violence due to the weak infrastructure and non-availability of protection mechanisms within the clan system.

[21] See https://sihanet.org/

According to Siha (2020), since it was established by the government in 2010, the Somaliland National Human Rights Commission has not managed to play a significant role in addressing gender inequalities, especially the rights of minority women.

Educational programming in Somaliland has tried to introduce approaches that tackle unequal gendered relationships by promoting healthy equal partnerships. One example of this is ActionAid who have pursued a girl centred approach in Somaliland for several years. Their approach focuses on promoting girls' education as a vehicle for wider social and gender norm change. Specifically, they introduce and run youth clubs for boys and girls as safe spaces where young people can share their concerns and look collectively to find greater agency to challenge society's harmful norms.[22]

Whilst there are visible and vocal female activists, they do not pursue a focused mandate on education. The Siha network identified Dr Edna Adan in its report (2020) as a key female actor in Somaliland. They describe her as '*one of the women who was particularly involved in the peace processes. She was the first woman from Somaliland to advocate for ending all forms of FGM/C and served as Minister of Foreign Affairs between 2003-2006 and later served as a Minister of Social Welfare*.' Whilst important figures, their mandate is not specifically on empowering girls through education.

Diagram 1 below depicts the number of organisations working on the education of girls as at least part of its portfolio. Key UN agencies such as UNICEF have been committed for several years to educational programming. The growth of many national CSOs is encouraging as many do push for equal gendered access to education at all levels. The diagram also highlights the government educational departmental reach with separate entities covering Puntland. The extent to which these stakeholders work well together is questionable. In particular, the link between government and CSOs is critical if education is to work as a driver for gendered social change.

[22] https://www.actionaid.org.uk/about-us/where-we-work/somaliland

Diagram 1: National stakeholders

Map: Somalia and Somaliland

Government | United Nations Organizations | International NGOs | National NGOs | Non-State Education Umbrella Association

Somaliland Ministry of Endowment and Islamic Affairs (MoEIA)	Somaliland Ministry of Employment, Social Affairs and Family (MESAF)	Minstry of Education and Science	Somaliland Human Rights Commission (SLNHRC)	Puntland Ministry of Education and Higher Education	Ministry of Women Development & Family Affairs (MoWDAFA)	Ministry of Religious Affairs and Endowement
Galmudug Ministry of Education and Higher Education	Ministry of Women Family Affairs & Human Rights Development	Ministry of Religious Affairs and Endowment	UNESCO	UNHCR	UNDP - Somalia	UNICEF
Save the Children	Action Aid-Somaliland	CARE	IRC	OXFAM	Plan International	World Vision
DRC	GIZ	Candlelight	SOS Children's Villages	Adventist Development & Relief Agency (ADRA)	Africa Educational Trust	Rural Education and Development Organization (READO)
NAGAAD	Somaliland Women's Research and Action Group (SOWRAG)	HAVOYOCO	Somaliland Women Development Association (SOWDA)	Welcome To Women's Action For Advocacy & Progress Organization (WAAPO)	Somaliland National Youth Organisation (SONYO)	Somaliland YPEER
Women Rehabilitation and Development Organization (WORDA)	Steady Voluntary Organization (SVO)	Youth Volunteers for Development and Environmental conservation (YOVENCO)	Somali Women Study Centre (SWSC)	Daryeel Women Organization (DAWO)	Save Somali Women and Children (SSWC)	Somali Women Development Centre (SWDC)
KAALO	Voice of Somaliland Minority women organization (VOSOMWO)	Women action of rights and safety network (WARSAN)	Somaliland Youth and Development Association (SOYONDA)	Tawakal Women Organization	Somaliland Red Crescent society (SRCS)	Comprehensive community based rehabilitation in Somaliland (CCBRS)
Taakulo Somaliland Community Organization (TASCO)	Somaliland Youth, Development and Voluntary Organization (SOYDAVO)	Tadamum Social Society	Puntland and Social Development Association (PSA)	Youth Empowerment Solutions (YESO)	Galkayo Education Centre for Peace and Development (GECPD)	Somali Peace Line (SPL)
IIDA Women's Development Organization	Puntland Non-State Actors Association (PUNSAA)	Puntland Minority Women Development Organization (PMWDO)	Formal Private Education Network (FPENS)	Schools Association for Formal Education (SAFE)	School Organization for Formal Education (SOFE)	Somali Formal Education Link (SOFEL)
Somali Formal Education Network (SOFEN	Somali Education Development Association (SEDA)(PMWDO)	Formal Education Network for Private Schools (FENPS)				

The overview and analysis presented in this PEA show that against a complex historical, economic, and social background, the educational infrastructure remains patchy and weak with significant differences in access and resource between urban and rural locations. Political motivation to see girls educated on an equal footing to boys remains low mainly due to the clan based male domination of the political system. Whilst there are signs that people are getting tired of the slow nature of change and blame the rigid elitism of the state, without more female representation in parliament wider changes may still be slow. This is hampering more progressive gender friendly educational policies from being implemented with any vigour.

Cultural, religious and gender norms are strong barriers to educational opportunities. These in turn shape the attitudes of parents who continue to devalue the need for girls to be educated. Masculine fears of women out-achieving men though income appears to be making some husbands hesitate to support women's full access to the labour market. Pastoral women have some influence over domestic decisions but their ability to impact at a national public level seems a long way off. The quality of education is limited by poor teacher training and a small number of female teachers. The Higher Education sector is slow to grow in capacity not least because there is a shortage of qualified lecturers.

The poor availability of data and peer reviewed academic research also makes it difficult to understand the full extent of how gender inequalities form barriers to educational access. Furthermore, the data that does exist rarely drills down intersectionally. This means we do not have a nuanced picture of who are the most excluded groups of girls when it comes to educational access and attainment, and later life outcomes. That said, there are several factors that are cause for optimism. The women's movement and network of activists is growing, and civil society is emerging as a forceful entity to challenge and hold politicians to account. The importance of the business sector for stability and growth is widely acknowledged and the increase in female leadership in entrepreneurial enterprises may act to leverage greater female influence politically.

These positive patterns do need to be harnessed in a more focused way on education as a key critical driver in gender transformation. Clearly urbanisation will drive further stark internal differences when it comes to girls' education.

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Annex 2:

Research Conceptual Framework

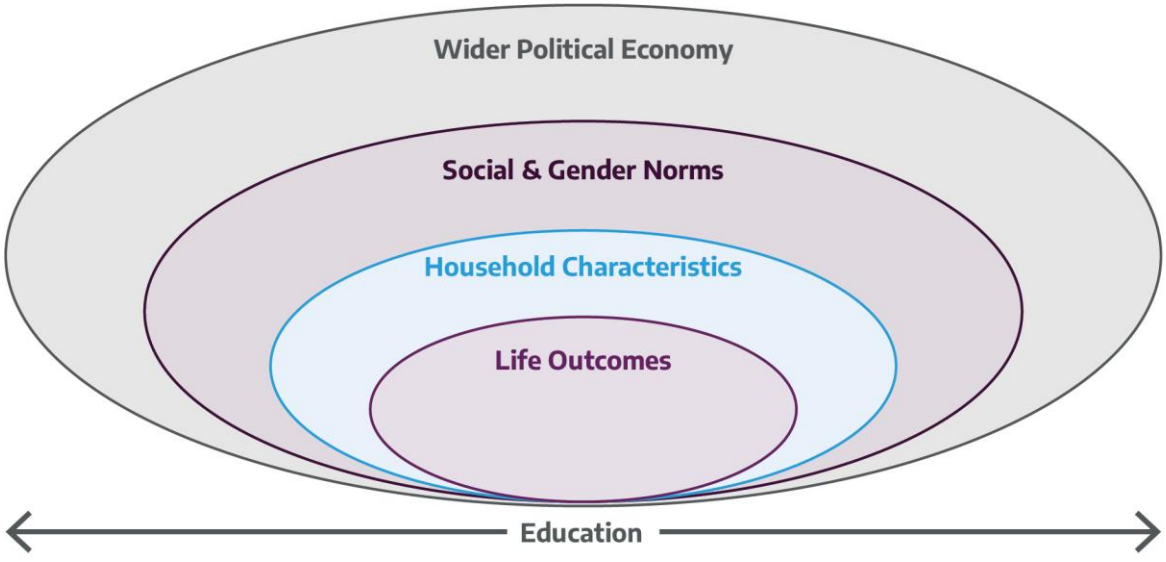
Annex 2: Research Conceptual Framework

This annex provides a more detailed overview of our initial conceptual research approach to framing this study, and how this then formed the building blocks of our data collection process. It goes on to show how this framework was added to and adapted by evidence collected in the study.

1. Initial Conceptual Research Framework

The research was underpinned by an initial conceptual framework that guided our methods, areas of enquiry, and tools. This framework comprised several interrelated dimensions that we aimed to track – each underpinned by wider theoretical foundations. We developed the framework around the anticipated life outcomes of Somali SOMGEP programme participants, and the contextual moderators that both drive and limit these outcomes. These factors include household characteristics; social and gender norms; and the wider political economy. Education, as a trigger for increased empowerment, shaped our lens. Diagram 1 provides a visual overview of the initial framework we used, which in turn informed our data collection approach. This framework evolved over the course of the study.

Diagram 1: Our initial high-level research conceptual framework



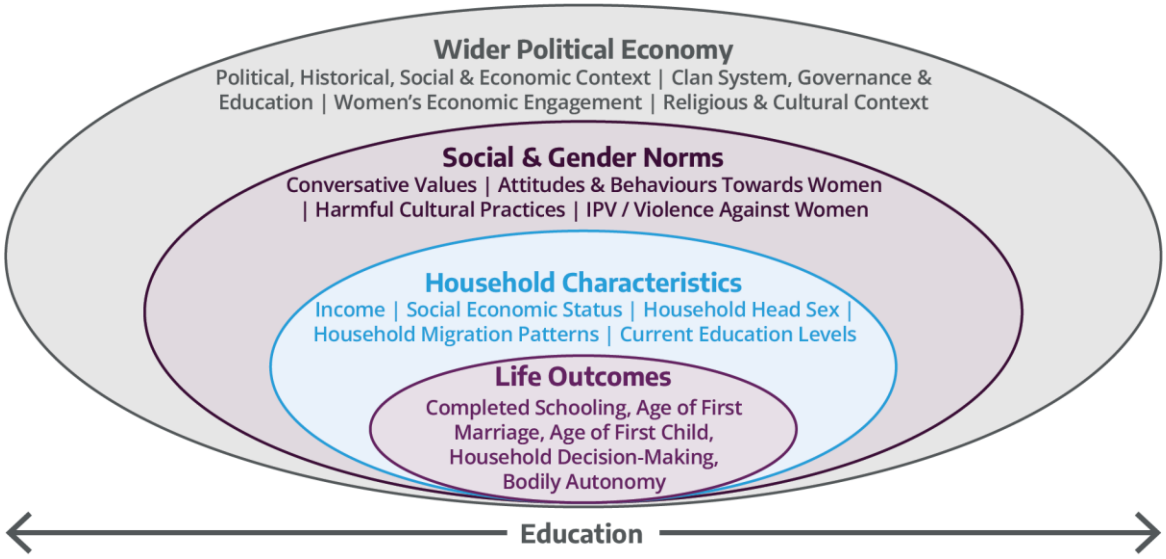
Our research aimed to track and capture changes for former Somali SOMGEP girls, as such our diagram places these women and these anticipated changes at its heart. Beyond this, there are two broad dimensions we considered critically important to track and review in relation to life outcomes. Household characteristics and dynamics, including income, marriage choices and social economic status, were considered critical dimensions in all phases of data collection. Social, cultural and gender norms, which

support the behaviours and attitudes of social inequalities, were further central dimensions.

Education, as a trigger for increased empowerment, shaped our lens. In particular, following SOMGEP's focus on education as empowerment, our emphasis was on the impact of education in challenging patriarchal norms that sanction gender inequalities and limit the life opportunities for girls. Understanding how all these critical dimensions developed over time and interacted with each other against the wider political economy was an important aspect in our research.

Diagram 2 provides an overview of the breakdown of these dimensions and what factors we initially planned to track within them.

Diagram 2: Breakdown of dimensions



We expected, from our research, that our findings would add to evidence that argues for the need to contextualise what gendered empowerment looks like at a micro level and across differing country contexts (Kabeer 1999, Mclead and Modi 2016). As such, we anticipated that as our findings developed, a second more nuanced model for measuring empowerment and agency would result from the data analysis. Prior to sharing this, we discuss in brief our conceptual framework's theoretical foundations.

2. Theoretical Foundations

2.1. Agency and Empowerment

Our first conceptual framework was based on Kabeer's concept of gendered power, Heise's ecology model (1991) and Crenshaw's intersectional approach (1991). Kabeer (1999) maps how gendered power shapes the environment in which girls live and grow

and as such determines the life pathways available to them. A commonly used model to support gendered situational analysis is the ecological model (Heise 1991). This model maps factors at multiple levels in order to assess the dominant influences supporting or inhibiting the empowerment of women and girls. Intersectionality informs analysis by disaggregating marginality and vulnerability according to a number of intersecting factors, such as age, wealth etc.

Our early thinking was also influenced by Malhotra (2002), who emphasised the power of household dynamics in determining levels of female empowerment (see also Raj *et al* 2021 for a more recent wider conceptual framework for empowerment). We hoped from the start that our data and analysis would contribute to growing research that challenges western developed and universally applied models of development. As detailed in Annex 1, models of empowerment often present a universal set of indicators. These indicators are largely applied based on the assumption that women and girls in the poor global south contexts display weak life outcomes across many spheres of life (see Kabeer 1991a, b, 1999, Alkire 2013, Alsop and Heinsohn 2005). Critics of these narrow and technocratic models of empowerment include Kabeer (1999) whose ethnographic approach founds her consistently made argument:

> *'Inasmuch as women's subordinate status is a product of the patriarchal structures of constraint that prevail in specific contexts, pathways of women's empowerment are likely to be 'path dependent'. They will be shaped by women's struggles to act on the constraints that prevail in their societies, as much by what they seek to defend as by what they seek to change. The universal value that many feminists claim for individual autonomy may not therefore have the same purchase in all contexts.' (1991:1)*

The research of Kabeer and many others in the late 1980's and 1990's (e.g., Mason 1986, Batliwala 1997) called for nuanced approach to understanding empowerment. Not least because empowerment is a term, which often cannot be translated into local languages (Kabeer 1991a,1991b, 1992). Much of this early research emerged from data collected in South Asian contexts but it has helped thinking on what empowerment means across contexts including for Somali women and girls.

Despite these first calls for empowerment to be contextualised, in 1995 the UN Development Index first introduced the gender empowerment measure (GEM). The GEM was based on indicators relating to political and economic participation and decision making (UNDP 1995). Early critics of the GEM highlight how its quantitative focus on a limited number of indicators (economic engagement, political representation and control over decision making in relation to household income) fails to take the cultural and social contextual factors into account. Not taking these factors into account can skew the overall result (Pillarisetti and McGillivray 1998) and fails to capture the

ways in which women navigate through the pathways available to them which are shaped by their immediate environment (Kabeer 1999; Malhotra and Schuler 2005; Mason and Smith 2003).

Agency and decision-making emerge as the main focus for these models with challenges and barriers understood in terms of the influence of gendered power structures shaped by patriarchal norms. Agency is the ability to identify one's goals and act upon them (Kabeer 1999). Agency is the central component of women's empowerment (Kabeer 1999; Malhotra and Schuler 2005). Sen in his early work on human capabilities (1999) pinpointed agency as a defining characteristic of being able to exercise freedom to make decisions. In that same year, Naila Kabeer published her now famous paper (1991a) which gave a concept of empowerment in terms of the ability of women to make life choices. Kabeer presented empowerment as a staged process: of resources, agency, and achievements.

Kabeer defines each of these terms holistically. Resources are not just economic but also should be measured as access to a safe and secure environment in which girls are educated and have the social capital to make choices (and that choices exist) (Kabeer 1999; Malhotra and Schuler 2005). Agency then for Sen and Kabeer relates to the freedom to make choices and to have the resources available to achieve the goals individuals set for themselves.

Building on this work and our conceptual frame, and understanding that empowerment is messy and non-linear, we saw key elements of how empowerment might be typically expressed as (Table 1):

Table 1: Examples of expressions of empowerment

Elements of Empowerment	For SOMGEP women these dimensions may be expressed as:
Aspirations of self-determined goals	▪ ***I think*** */ I believe I have the right to make some decisions or participate in them* ▪ ***I want*** *to be a good mother and wife* ▪ ***I want*** *to work or continue education* ▪ ***I am*** *confident*

Elements of Empowerment	For SOMGEP women these dimensions may be expressed as:
Agency to act on aspirations	▪ ***I feel*** *I have opportunities and* ***I can act*** *on them.* ▪ ***I make*** *decisions for myself, or opportunities presented to me*
Achievement of goals	▪ ***I am*** *a student studying the course I choose* ▪ ***I have*** *my own business*

Critically these elements of empowerment, which are centred on the individual, engage with the wider household, community and national political economy and social norms (the dimensions in our diagram above and reflected in our literature review in Annex 1) maintain, catalyse, or limit women's ability to express themselves.

As described above, these dimensions of empowerment are messy, and do not necessarily progress together. From the wider evidence base, areas like control over making decisions is not uniform across all domains of life (Agarwala and Lynch 2006; Ibrahim and Alkire 2007; Malhotra and Schuler 2005; Mason and Smith 2003). Women might have a higher level of decision-making power in some areas and not in others (Gupta and Yesudian 2006; Malhotra and Mather 1997; Mason and Smith 2000, Dilli 2017, Carmichael and Riipma 2017). Agency then needs to be broken down into different areas, which will be different across contexts (Richardson at al 2018). For us, then in this study, it is to identify and gather data on these nuanced spaces that women exist within.

2.2. Norms

The impact of dominant social, cultural, and religious norms, all of which are heavily gendered are fundamental in determining the level of enablement a woman has throughout her life. Increasingly social norm change models have gained influence in helping us understanding why change in gender attitudes and practices (e.g., FGM) are so difficult to achieve. Shell-Duncan *et al* (2011) created a model depicting the stages of gendered attitude change as a continuum. She argues that mindset change from highly patriarchal to gender transformative, happens in small steps often highly nuanced and may involve steps back as new influences impact (e.g., change in government, funding from more conservative regimes, reductions of resources in community led initiatives

(see also Bradley, Mubaiwa Meme 2022)). In assessing the nuances of change, both along a continuum and potentially back again, an intersectional lens is also necessary. The concept of intersectionality, first introduced by Crenshaw (1991), encourages us to engage with the multiple causes of inequality, identifying that each form may require a different approach to achieve and promote the empowerment of girls.

Our inception frame drew on all these approaches and key concepts recognising that what we wanted to understand was the extent to which SOMGEP had increased agency and opened up greater life opportunities, enhanced the capabilities and freedoms for girls as they moved into adulthood. We also recognised from our PEA and literature review that room to exercise agency and be empowered would be constrained by other structural dynamics of power shaped by deeply embedded patriarchal norms, social structures, and economic factors.

Box 2: Some definitions

Empowerment is the overarching state of being which reflects both agency (having a voice to make decisions) and resilience (possessing the emotional and physical resources to withstand shocks), both of which can only be exercised within a supportive enabling environment (Raj *et al* 2021).

More recent research (McLean and Modi 2016) stresses the need to contextualise "empowerment" arguing that it is often defined in highly technocratic terms shaped by a western development discourse, blind to the lived experiences of the most marginalised, particularly girls. Some of the most well cited gender empowerment frameworks, include that of Kabeer (1991a.b) cited above, describe different forms of patriarchal power existing at multiple levels. Structural power combines to determine the room to manoeuvres a girl has in pursuing life choices and therefore also her life outcomes.

Agency then is understood to be the room for manoeuvre a woman has to exercise her own autonomy, to make decisions and to act for her own benefit. Indications of empowerment and agency are often evidenced through and by influence over monetary decision making and impact on household decisions e.g., over how to use resources, freedom to work outside of the home, and feelings of being able to challenge and seek justice should they suffer forms of abuse (Kabeer 1991 a, b, 1999, Dilli 2017, Carmichael and Rijpma 2017).

Resilience links to both empowerment and agency. Standard definitions in development literature frames resilience as the ability to respond to and withstand shocks (e.g., Pearce at al 2018). Usually, resilience frameworks are developed to measure how communities cope with environmental, conflict or climatic events. Resilience in relation to issues of justice and gender can be assessed according to the range of options available to an individual to challenge and achieve a different life outcome. Some scholars such as Appadurai (1988) and Sen (2005) have written about resilience more in terms of human capabilities and the freedom to live by choices made autonomously of any social, cultural, or religious pressures. Appadurai argues that, whilst culture and religion may be sources of values and

beliefs that limit a person's freedoms and remove certain rights, they also represent resources that can support a person in resisting or acting to change a situation (see also Bradley 2016). Religion and culture both generate networks and can offer positive sources of self-esteem needed to psychologically withstand challenging situations. In contexts such as that in Puntland, where poverty is deep and life is insecure due to the impact of climate change and conflict, culture and religion become even more important anchors. Arguably, religion and culture are a means of finding some security: for example, by providing a connection to a place and a network of people.

Resilience as a development concept has been defined and applied largely in humanitarian settings and in order to assess a community's ability to overcome the challenges of conflict, climate change and more recently global pandemics. Application in the field of gender empowerment has led to a more holistic definition which includes emotional and psychological dimension (see Bradley 2020). Resilience in this sense is often linked to how supported an individual girl or woman is by family and peers. Emotional strength is coupled with access to resource/income that remains present even during periods of crises.

3. From Theories to Data Collection

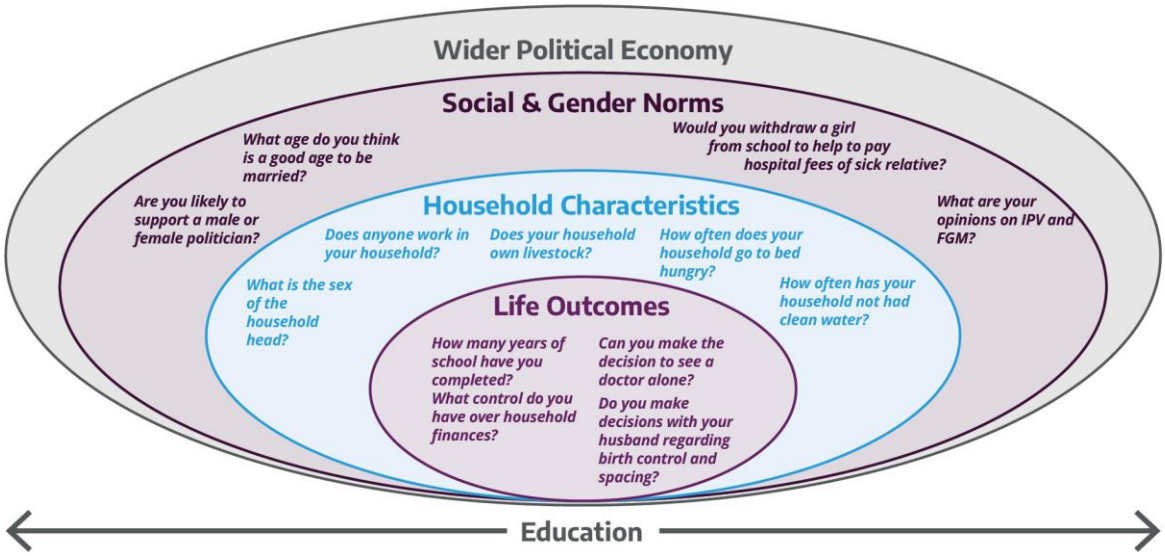
3.1. What we asked?

Unpacking these dimensions and their factors on the ground in the context of Somali SOMGEP women, as in other research areas, takes local contextualisation. We were always clear that it would be unlikely that significant changes in life outcomes would be captured in this study. This is largely because seven years is not long enough to see significant changes or even expect the women to be at the point in their lives to experience them (for example, seeing later marriage or fewer children). This was confirmed by the average age of the women we spoke with in our sample being 19, and roughly only a quarter being married (or ever married).

Beyond this, we also know changes in mindsets and behaviours take many years to transform (Shell-Duncan et al 2011, Mackie et al 2015). Areas our data collection tools covered: household characteristics, perceptions of SOMGEP, further education, employment, household decision making, bodily autonomy, IPV, FGM etc. Diagram 3 provides an overview of what we asked against each of these areas and featured in our qualitative and quantitative tools.[23]

[23] Please note, for ease of understanding, these are not the exact questions asked to interviewees but encompass what was asked. The actual questions can be found in our tools annex.

Diagram 2: Example questions



In March 2022, the team undertook a series of Study Phase 1 qualitative interviews to inform the later quantitative survey fielded. Following this, we added further questions around intergenerational differences including mothers / grandmothers or female relatives age of marriage and children.

4. Post Research Conceptual Framework

4.1. Key Insights

Following the Study Phase 2 quantitative and qualitative data collection we developed some key insights that effected our understanding of our conceptual framework. These included:

1. Intergenerational change - Women reporting that they are marrying younger than their mothers. Related to this was the reported agency of mothers, grandmothers, and aunts, many of whom are mobile outside of the home, and run their own small businesses, which have been a critical source of household income (and for some the only source) for many years.
2. Impact of technology - Use of technology in opening up their lives to the world (in contrast to their mothers / grandmothers) and in identifying a future husband and increased perceived autonomy in selecting husbands.
3. Agency as voice - Aspirations to enter a vocation, start a business and to pursue vocational training.
4. Agency as choice acted upon – Although there were limited examples of where aspirations or self-directed choices became reality, these included choosing to leave husbands and returning to the family home, studying medicine, or

undertaking vocational courses to provide financial security and contribute to their wider communities.

5. Conservative norms - Strong influence of religion in shaping conservative social norms around the role of wives and mothers and what it is to be a "good" wife and mother that perhaps points to the influence of Qur'anic school.
6. Familial support – Particularly close bond between mothers and daughters, with clear intergenerational role modelling and overall closeness with family. With a number of SOMGEP women even returning to their family homes following the collapse of a marriage.
7. The enduring impact of household wealth and early educational attainment – The study clearly showed the on-going impact of wealth and educational attainment within the SOMGEP women we spoke with.

These findings have added to our initial conceptual framework. In particular, understanding the linkages between the moderating external factors and the autonomy over personal decisions our participants felt they had. Other factors that impacted on decision making included a heightened expression of conservative religious values seemingly clashing with a powerful sense of self and agency. For example, our participants felt they had control over some household or financial decision making but also expressed very conservative views on what their role as a wife entailed or regarding FGM. Close maternal bonds seem to give emotional strength and resilience, and there were deep reflections from SOMGEP women over the intergenerational changes that are supporting their agency and empowerment today.

Many of the women we spoke with shared the goal of wanting to become financially independent but constraints and moderating factors mean that they lack the *"ability to act on life aspirations"*. SOMGEP women also acknowledged increased self-confidence as a result of better skills in reading, writing and numeracy gained through SOMGEP. Whilst many of our participants shared how happy they were to have been educated and voiced commitment to ensure their daughters (and sons) were educated, they also articulated how they hoped to be able to continue their education further at either vocational or higher level. Only a few of our participants were in further or higher education (see quantitative results in the main report). Those that had continued with study often shared their intention to marry later. Those women who were already married and with children felt their priorities were now focused on raising their children and being a good wife. Instead, other moderating factors, including early household resources (wealth), supportive natal families, and religious gendered norms come into play and shape the life choices taken.

The following quote highlights the self-perceived trajectories of many of our participants '*I have positive aspirations for my life but am not yet achieving them'.* This reveals that our participants feel positive and also a degree of agency, however the

translation of both into attainment is yet to be delivered for many. This, perhaps, is expected as many of our SOMGEP women today are still young, unmarried and in school. Yet against the backdrop of Somali societal structures, norms and rules[24], which limit women's agency across the Somali region can we expect more micro-outcomes in the future that move a little further in our empowerment spectrum for our SOMGEP women?

Applying longitudinal frameworks as a means of tracking nuanced changes allows us to understand what these core concepts (empowerment, agency and resilience) really mean in practice. We know change is slow to happen. Data needs to be collected on an on-going basis to capture small shifts in multiple directions and across generations. We hope to be able to revisit our 40 participants on a yearly basis and measure their views against our framework in the years to come.

4.2. Contextualised Micro-outcomes for SOMGEP Women Today

Applying what we found in our data to the elements of empowerment described above for SOMGEP women today, we can see progress towards broader outcomes or as we describe them, micro-outcomes. **Table 2** provides an overview of some of these micro-outcomes as evidenced by our research.

Table 2: What does empowerment look like for SOMGEP women today?

Elements of Empowerment	What does it look like for SOMGEP women today?
Aspirations of self-determined goals	Wanting to ▪ study more and be a doctor / medical profession ▪ train vocationally and contribute to household income. ▪ own their own business like their mother ▪ get married later (but sometimes still getting married early) ▪ be a good mother and wife and obey husband according to religious and cultural gender norms

[24] **Annex 1** gives a detailed analysis into this backdrop drawing more deeply on both the data, wider literature on agency and the PEA.

Elements of Empowerment	What does it look like for SOMGEP women today?
	▪ have a good husband who conforms to religious norms and will support the family financially ▪ better education and better life options and outcomes for children ▪ be able to withstand drought and water-shortages (climate change) ▪ wanting to stop FGM for some but many others also want to continue it (but with Sunnah rather than Pharaonic practised)
Agency to act on aspirations	▪ Feeling confident and more resilient in life to act because of education ▪ Having more self-perceived ability to act because they live in peace, rather than through the conflict period of their parents ▪ Controlling household domestic household finances ▪ Feeling more educated, with better access to health and education infrastructure than their mother's generation, which makes them feel they have increased choices and agency ▪ Feeling more connected to the wider world than their mother through technology ▪ Wants bodily autonomy regarding children but will ultimately be led by husband's choices ▪ Making connections to future husband through social media ▪ Seeing some forms of violence as IPV but not necessarily supporting breaking up of marriages or reporting violence to the authorities in response
Achievement of goals	▪ Going to a secular school despite sometimes receiving backlash from parents and religious figures ▪ Mobility outside the home independently travelling to work or study (within culturally accepted hours)

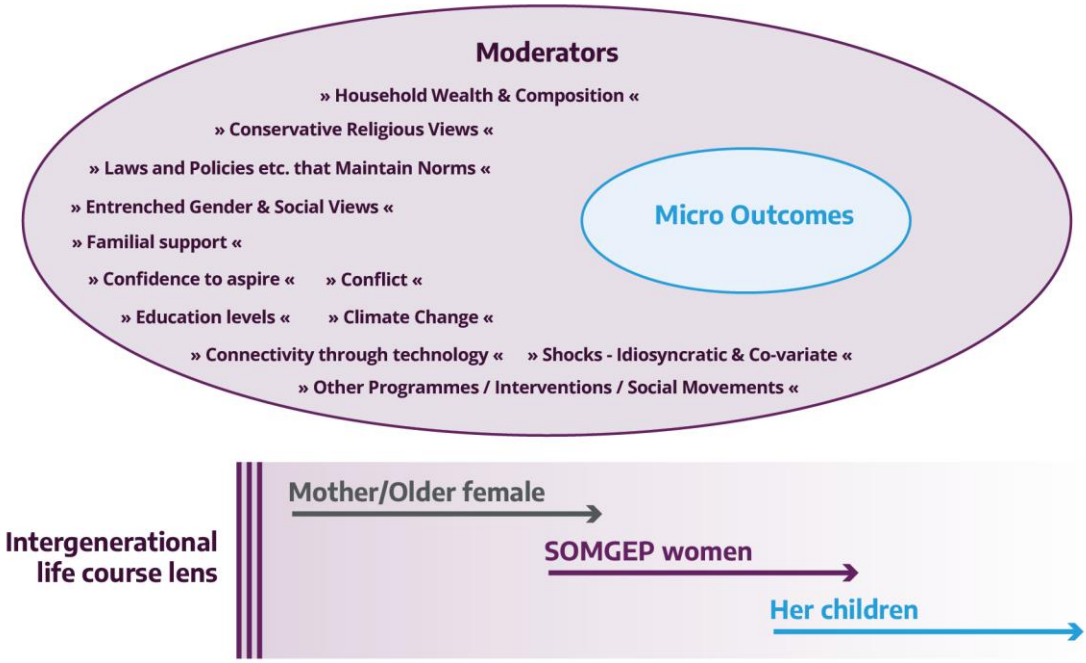
Elements of Empowerment	What does it look like for SOMGEP women today?
	▪ Studying, working and owning business ▪ Making the decision to divorce and leave husband ▪ Able to make decisions for children

As can be seen from Table 2, not all micro-outcomes are consistently positive, and many are restrained by specific moderating factors (which are drawn from all the dimensions of the earlier conceptual framework). Our findings add further to social norm theories evidencing how domains are moderated by social, cultural and religious norms. If the environment is not enabling for girls their room to express agency and empowerment will be limited. This again emphasises the importance of analysing levels and domains of empowerment within a broader understanding of the context in which girls live and taking a generational life course lens.

4.3. Refining the Conceptual Framework

Building on these identified outcomes, Diagram 4 provides an overview of our revised conceptual framework. Highlighting the specific moderating factors that could lever or limit change for Somali young women today and the impact of the long view of intergenerational change and position in life. This could be a useful starting point for future programmes or interventions that seek to influence and enhance life outcomes for Somali women and girls.

Diagram 3: Revised Conceptual Framework



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Annex 3:

Sampling, Re-contacting, Sample Characteristics

Annex 3: Sampling, Re-contacting, Sample Characteristics

This annex provides a more detailed overview of our methodological approach to data collection, our sample universe, and characteristics.

1. Overview

The first section describes the process by which we identified the sample universe, located the potential respondents, constructed the final sample frame, and drew the sample. The second section provides a review of quality assurance processes that were used prior to and during fieldwork. The third section covers data collection for the quantitative surveys, primarily focused on the location and timeline of fieldwork. Note that earlier phases of "quantitative" data collection, undertaken to re-contact women and assemble a sample frame, are covered not as part of Section 3, but in Section 1's discussion of sampling. The fourth section documents the characteristics of the final sample, analyses differential attrition as a function of the respondent or her household's characteristics, and compares the characteristics of the sample to that of the wider population from which it was drawn to assess the extent to which the final sample is representative of the overarching population of women who formerly participated in the Somali Girls Education Promotion Project (SOMGEP) – hereafter "SOMGEP women".

Data collection for this project took place over approximately five months, from late March through August 2022. The lengthy timeline is a function of the staggered data collection, which allowed us to adjust tools and approaches in response to early findings. Crucially, the team spent significant time *prior to survey data collection* identifying and re-contacting SOMGEP women, after which a sample was drawn from among those who could be located. This process necessitated a phased approach. **Table 1** below shows the timeline for each phase of data collection.

To ensure clarity on the order of events and how the sampling was performed, the next section walks through sample frame construction, re-contacting process, and final sample draw in a step-by-step fashion. Attentive readers will note that this discussion includes some discussion of data collection, which may be confusing (as sampling usually occurs prior to all data collection and is, therefore, discussed first). In this case, significant data collection – in the form of identifying and locating SOMGEP women – was completed prior to the sample draw and describing the re-contact process is critical for understanding the final sample and its properties (including representativeness). Therefore, we have opted to keep all discussion of sample frame construction within

the sampling section, while Section 3 (data collection) is limited to fieldwork specific to the final quantitative survey.

Table 1: Timeline of data collection phases

Phase	Purpose	Timeline
Qualitative Data		
Phase I	Initial information on girls' life outcomes, intended to guide development of life history tool	End of March - mid-April
Phase II	Life histories of 40 women; primary data for analysis and reporting	June - late July
Phase III	Follow-up interviews with women from Phase II, for expansion on early findings	Mid - late August
Quantitative Data		
Phase I – Community-Based Re-Contact	Collect contact information for each woman and her family from key informants in village	Late April - May
Phase II – Individual Re-Contact	Follow-up from Phase I by contacting women directly to ascertain their location and gain consent	May - mid-June
Phase III – Quantitative Survey	Complete quantitative questionnaire with sample of respondents	Mid-June - mid-July

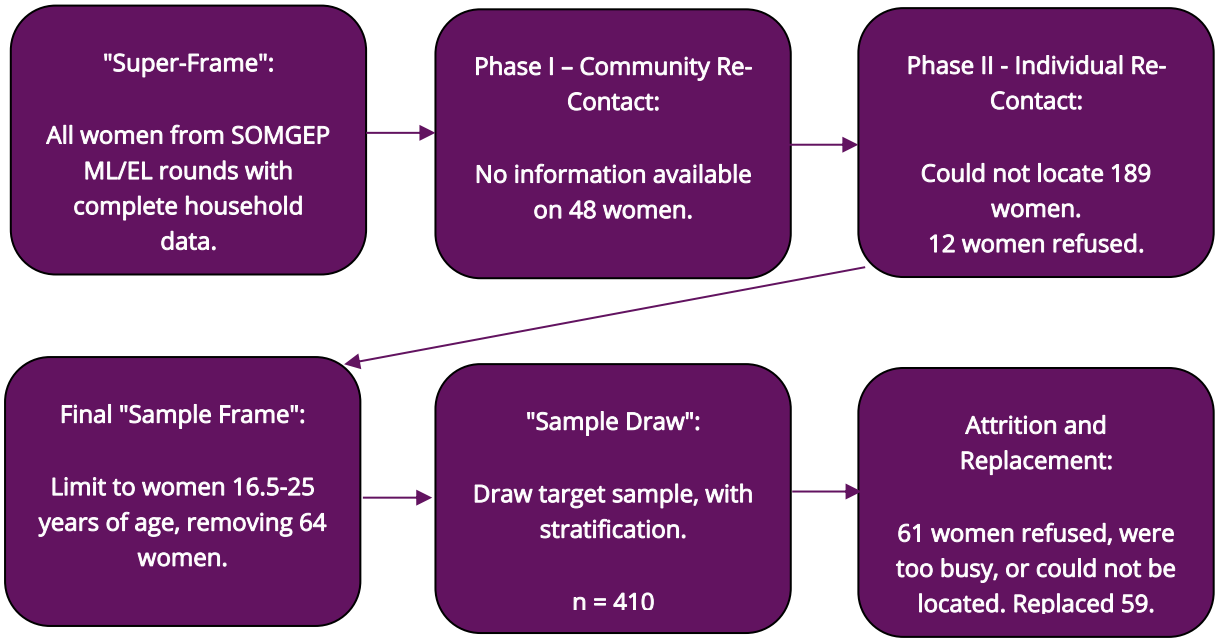
2. Re-Contact and Sampling Procedures

The process by which the eventual quantitative sample was drawn involved several distinct steps of sample frame construction, re-contacting, sample selection, and further recruitment of women to complete the eventual interview. Before turning to a more detailed description of each portion of this process, it is important to fix terminology and describe the process at the macro level.

The goal of the sampling and re-contacting process was to produce a sample of at least 400 women who had previously been interviewed in the SOMGEP midline and endline evaluations, conducted in 2015 and 2016, respectively.[25] **Figure 1** below summarises the process and how each step of the process shaped the final sample size.

[25] As we discuss in more detail in the next subsection, we elected to sample only women and only girls who were exposed to the SOMGEP intervention, both of which have implications for the analysis we can conduct. Note that formal power analysis was only a small part of the decision-making process regarding the sample size. Given the small number of eligible women in the target population and uncertainty surrounding our expected re-contact rates, sample design considered what we viewed as a feasible sample size, under the circumstances.

Figure 1: Steps in identifying sample frame and drawing sample



We started with an overarching population of 861 women who participated in SOMGEP and who had been interviewed in 2015/2016. Throughout, we refer to this set of women as the *sample universe*, distinct from the sample frame from which we eventually draw the final sample.[26]

Our next step was to locate and then contact each of the 861 women in the sample universe, typically by contacting the head teacher in the woman's original primary school, a member of the Community Education Committee (CEC), or other knowledgeable contacts in the woman's original village.[27] We were able to collect information from community informants about the vast majority (n = 813) of the women; however, this information was of varying quality and depth. The second step of re-contacting involved contacting the woman herself and obtaining her consent. At this stage, many women fell out of the sample, mostly because we were unable to contact them with the available contact information and the help of community informants. The set of women (n = 612) who were located and contacted was further refined based on age range; this smaller set of women (n = 548) constituted our *sample frame*.

[26] Prior to the start of re-contacting, we identified the "super-frame" as consisting of 1,115 women. However, this list included many duplicates who we failed to identify until the re-contacting process started. Here we refer to the super-frame after all duplicates were removed.

[27] CECs are local management bodies that typically oversee a single school in a village. Most commonly, they are composed of seven members who have interests in local education, including parents and educated or prominent individuals.

Next, we drew a sample – hereafter, the *sample draw* – of 410 girls from the sample frame. We sought to contact and interview each of these girls, replacing those who refused to participate or could not be contacted – despite having been contacted previously – with pre-selected replacements also drawn from the sample frame.[28] The final *sample* is composed of the women who completed interviews, whether they were in the original sample draw or were replacements.

Note that our approach to sampling deviates slightly from standard practice. Under normal circumstances, a sample would be drawn from the set of all possible respondents, and those who could not be interviewed would be replaced as needed. However, we anticipated very high levels of attrition from the panel, given the time elapsed since last contact; we also expected high rates of expected migration away from respondent's original villages. Combined, these factors made an intermediary step necessary, reducing the *sample universe* to a *sample frame*, the latter consisting of those women from the sample universe who could be located and contacted.[29] In the subsections below we describe each step in this process in more detail.

2.1. Assembling the Sample Universe

The overall sample universe includes 861 women who were interviewed during the midline or endline evaluations of SOMGEP, conducted in 2015 and 2016, respectively. During the initial construction of the sample universe, we identified 1,115 women who were interviewed and had complete survey data in one or both rounds. Further scrutiny during the re-contact phase revealed several duplicates that had been mistakenly included in the sample universe; accounting for these duplicate women reduced the sample universe to 861 women total.

Our initial goal was to use the sample from the baseline SOMGEP evaluation in 2014 as our sample frame. However, this proved impossible, because no identifying information was included in the final datasets produced by the baseline evaluation team and shared with Consilient when beginning the midline evaluation in 2015. Baseline data collection

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[28] Replacement girls were ordered randomly, such that all girls in the sample frame who were not selected as primary respondents constituted a potential replacement, but the order in which they were used as replacements by the field team was randomised.

[29] This approach was necessary for several reasons. First, to facilitate fieldwork, we needed to establish the locations of respondents, who were no longer constrained to the original villages where SOMGEP was implemented. Without this information, fieldwork planning was impossible. Second, by pre-establishing the set of respondents who could be located, we reduced the number of replacements that would need to be selected during fieldwork. Third, and most importantly, this approach allowed us to dedicate considerable time to the re-contact process *prior* to fieldwork. If re-contacting occurred only during fieldwork, we would not have been able to use our networks to locate women, and our re-contact rate would have fallen dramatically.

used paper forms and it is unclear whether identifying information was included when performing data entry.[30]

In response to this challenge, we shifted our focus to the midline evaluation – conducted in late 2015 – which included surveys with 1,086 households. Unfortunately, a number of respondents lacked complete data in the midline evaluation. That is, while 1,086 household surveys were completed during the midline, the "girls' module" – which included questions asked of girls themselves – was completed by just 663 girls. Our interest is largely in how SOMGEP girls' personal characteristics, at an early age, predict their later life outcomes. As a result, girls for whom we have household data, but no data collected directly from the girl herself are of less inferential value to this research.

Expanding the possible sample universe further, we incorporated data from the endline evaluation, conducted in late 2016. There is significant overlap between the midline and endline samples – which was purposeful, at the time, given that the evaluation sought to track the same girls over time. The advantage of utilising the endline data to supplement the midline is that additional girls completed the girl-specific survey module during the endline evaluation. By expanding the sample universe in this way, we were able to identify 861 unique women with complete household- and individual-level data from at least one round. This set of women constitutes the overarching *sample universe*. Accounting for duplicates and non-completion of the girl's module in some interviews, 437 of the women's core "early life" data is drawn from the midline (2015) and 424 of the women's data comes from the endline (2016).

2.2. Locating and Re-Contacting Respondents

Given over six years had elapsed since the midline evaluation, we anticipated high rates of out-migration from the 51 original SOMGEP villages where they were initially interviewed. Movement to other villages or urban areas impacted our ability to sample in more traditional ways, by visiting a location and attempting to re-contact all the past respondents who formerly lived in that village. Sampling in this way would have reduced our re-contact rate dramatically; it also would have resulted in systematically excluding women who had migrated away from their original villages, introducing significant bias to our sample. In addition, we needed to pre-identify locations where

[30] A second reason for avoiding using of the baseline data is that Consilient (previously known as Forcier Consulting) did not conduct the baseline evaluation but led data collection for the midline and endline evaluation rounds. As such, we are unable to verify or guarantee the accuracy of data collected during the baseline and would prefer to utilise the midline data over which the team exercised a greater degree of quality control.

women lived to efficiently organise fieldwork.[31] These methodological and logistical considerations are very different from typical projects, in which sampling is tied directly and inextricably to geography; instead, members of the sample universe lived in a wide variety of locations that could not be identified until we had spoken with them directly and which needed to be captured to avoid bias.

These complications forced us to adapt our sample design to the context and goals of this project. A typical approach to sampling from a small sample frame would involve drawing 400 girls randomly from the sample frame, and then – as fieldwork progressed – replacing those girls who could not be located. This standard practice is typically employed where unit non-response, and subsequent need for replacement respondents, is assumed to be low. Due to the number of years that have passed since the target women were last contacted this would not be possible.[32] Rather than drawing a sample of 400 women from the 861 women who comprise the maximum possible sample frame, we first attempted to re-contact every woman from this maximum *sample universe*. This process involved two main steps.

Phase 1 – Community-Level Re-Contacting: The first phase consisted of contacting head teachers, teachers, elders, and other knowledgeable informants in each of the 51 villages where SOMGEP women originally lived. For each village, we identified informants and filled information about each woman in our sample list, seeking contact information for her and her family. In a typical school, we would identify three or four contacts although most information was provided by just one or two.[33] Other informants were used to fill in gaps. We asked the informants:

[31] Specifically, we needed to pre-identify villages where sufficient women still lived to justify sending a field team (as opposed to conducting interviews via CATI). Sending a field team to a village only to find out that all but 1 or 2 women have migrated away is a waste of scarce project resources. A related point is that we needed to identify the urban areas to which women had migrated, to allow teams of an appropriate size to be dispatched to those areas.

[32] We anticipated low re-contact rates based on previous studies of migration in these regions and on our experience implementing panel studies in similar villages in Somalia and Somaliland. For instance, the 2021 endline evaluation for SOMGEP-T (Somali Girls Education Promotion Programme – Transition), conducted in very similar rural villages, showed that 23.1% of households with a girl aged 11 - 21 years had experienced out-migration by at least one such girl in the previous year. Across six years, we expected much higher rates of out-migration. Our experience re-contacting girls for GEC programmes similarly suggested the need to temper expectations: across six rounds of evaluation on two other GEC programmes implemented in Somaliland and Puntland, we have typically achieved successful re-contact for between 77% and 82% of adolescent girls targeted, under the much more favourable circumstance in which just 1-2 years separated re-contact rounds.

[33] In some cases, the informants also included mothers and women of SOMGEP age, who might have known the woman while she was in school.

a) Whether they knew the woman or *any* member of her family[34]
b) Whether the girl still lived in the village or where she lived
c) To provide us as many contacts for her and her family as possible (e.g., the phone number of an aunt or uncle)

In many cases, the informant did not know the respondent directly or did not have her contact information; in these cases, we deputised them, asking them to make use of their own networks. In this way, we likely doubled or tripled the size of our "network of informants." This phase of re-contacting took place over approximately four weeks. The available time for re-contacting was critical to our success: informants needed time to reach out to their own contacts and wait for them to respond and contact and call-back times tend to be long in rural areas, as individuals often keep their phone switched off to conserve battery life.

In total, we were able to collect at least rudimentary information for 94.4% of the women (813 of 861) in this stage; 48 women were entirely unknown to our local informants.

Phase 2 – Individual-Level Re-Contacting: The second phase consisted of contacting the woman directly to verify her contact details, her location, and obtain her consent to be interviewed. In some cases, this phase was straightforward, as we contacted the woman using contact information provided by our informants. In other cases, it required greater effort, especially if we only had contact details for a family member or neighbour, requiring multiple steps to reach the woman directly. As with Phase I, this process required approximately 3-4 weeks to complete.

Ultimately, we defined a woman as successfully re-contacted at this stage – and eligible for inclusion in the sample frame – if we had at least one working phone number for her, we had spoken to her directly, and she had consented to participate in a survey in the future. In general, this was the stage where our contacts were put to the test and many women could not be located. We successfully contacted 612 women; we were unable to locate or contact 189 women, and a further 12 refused to participate further.

2.3. Drawing the Sample

From the set of 612 women who were successfully re-contacted, we further restricted the sample frame by age. The age of SOMGEP girls in 2015/6 ranged widely – based on reported ages in 2015/6, our frame included women as young as 13 or 14 years. Because the outcomes of interest to this project are often correlated with age, we

[34] This strategy made use of household rosters that documented the names of everyone in the girl's household in 2015/6, because teachers and elders occasionally recognised the name of the woman's brother or sister and could connect us to her family in that way.

sought to limit the age range of respondents, focusing our attention on the bulk of the age distribution, which consisted of women 16.5-22.5 years of age. Owing to the small available sample, we loosened this restriction slightly, and identified women aged 16.5 to 25.5 years as eligible; the final sample frame included 548 women.

Our approach to the actual sample draw was comparatively simple. We stratified the sample by a woman's region of origin and did not restrict the sample in any way as a function of logistical considerations. This is an essential point, as it relates to the representativeness of the sample – we did not exclude women who had migrated away from their home villages, moved across country borders, or who lived in a village distant from all other potential respondents. Employing a mixed – Computer-Assisted Telephone Interviewing (CATI) and Computer-Assisted Personal Interviewing (CAPI, or "face-to-face" interviewing) – mode allowed us to sample women whose inclusion would otherwise have been cost-prohibitive.

The sample was stratified by region of origin, with the goal of achieving a sample with stratification proportional to the share of the *sample universe* made up by each region. Unfortunately, differential re-contact rates during the construction of the sample frame mitigated against actual proportionality. Table 2 lists the region of origin of women in the sample universe, among those we successfully re-contacted, among those who also fit the age criteria established, among those in the final sample draw, and among those in the final sample after attrition and replacement.

As the table shows, Mudug constituted 26.5% of the sample universe, but only 17.8% of the sample draw. The reason for this shift is that re-contact rates were much lower in Mudug than other regions – just 42.1%, compared to rates of over 70% in Sanaag, Sool, and Togdheer. The sample frame, therefore, lacked sufficient potential respondents in Mudug to achieve proportionality, after factoring in the likely in-field attrition and replacements that would need to be selected.[35] As a result, we shifted allocated interviews from Mudug – and, to a lesser extent, Bari, which was affected by the same low re-contact rate – to the other regions. Consequently, Sanaag, Sool, and Togdheer are all over-represented relative to their share of the sample universe, producing a sample that is more heavily weighted toward Somaliland.

[35] Without solid evidence on which to base expected attrition rates in this specific circumstance (in which we had already contacted the women in question), we assumed a small amount of attrition (10-15%) would, nonetheless, occur during fieldwork. A proportional sample would have required 109 respondents from Mudug. However, just 85 Mudug respondents appeared in the sample frame after re-contacting and restricting the sample by age. Factoring in the potential for attrition, we reduced the Mudug allocation to 73 interviews to ensure enough respondents were set aside as potential replacements.

Table 2: Breakdown by region, at each stage of sample construction

Region	Sample Universe N = 861	Re-Contacted Sample N = 612	Final Sample Frame N = 548	Sample Draw N = 410	Realised Sample N = 408
Bari, Puntland	3%	2%	1.8%	1.7%	2%
Mudug, Puntland	26.5%	15.7%	15.7%	17.8%	17.9%
Sanaag, Somaliland	30.1%	37.9%	38.8%	34.4%	33.3%
Sool, Somaliland	14.4%	14.7%	14.4%	16.3%	15.2%
Togdheer, Somaliland	26%	29.9%	29.3%	29.8%	31.6%
Total	100%	100%	100%	100%	100%

The choice to abandon strict proportionality was driven by competing goals in sample design. In our view, trimming extremely young and old respondents was a higher priority, as greater variation in age would complicate the analysis.[36] For instance, our analysis of marriage rates was already affected by the varied age of the sample, because respondents have varied exposure to the *possibility* of marriage – studying predictors of early marriage is complicated by this fact and the need to carefully account for the impact of age. Similarly, we prioritised achieving the target sample size of 400 respondents over proportional stratification because failure to meet the target sample would reduce our statistical power and our ability to draw conclusions from the data. Again, we considered this an issue of higher priority than accurate regional representation.

Following the sample draw, replacement respondents were pre-selected, with the goal of minimising replacement frictions during fieldwork. For each location, we selected replacements from the same location randomly. Replacements were selected as a function of *current* location – a respondent who originated in Shimbiraale and now lived in Burco was replaced, where necessary, by another respondent in Burco, regardless of where they originated. The purpose of this approach was both practical – to allow the team assigned to a given respondent to always be able to select her replacement – and

[36] In practice, the final sample included women outside the target age range because of attrition and replacement but trimming the sample draw still concentrated respondents among a narrower age range that was more conducive to analysis.

principled, as we wanted to ensure that replacements did not alter the urban-rural balance of the sample.[37]

2.4. Post-Sampling Attrition and Replacement

All women in the final sample draw had been contacted during the re-contacting phase and advised of the purpose of our research. Despite this, we still experienced attrition of 14.9% (61 women) from the final sample draw and replaced nearly all (59) of those who fell out of the sample. Prior to replacing a woman, teams were required to make multiple contact attempts across several days; they also offered to shift the interview from face-to-face to phone-based if the woman had travelled away from her home at the time our team visited. The most common reasons necessitating replacement were an inability to contact the woman (42.4%), refusal (28.8%), and the woman indicating that she was too busy currently (23.7%). Further details on the predictors of successful re-contact during the fieldwork phase are provided in our broader discussion of re-contact rates, in the next section.

2.5. Key Takeaways Regarding Sampling

Our sampling and data collection strategy required overcoming several challenges unique to this project. In response, we developed a slightly unorthodox approach to sampling that would produce a sample that would mirror the broader sample frame's characteristics, to the extent possible. The multi-stage approach to re-contacting and interviewing women complicated fieldwork but ensured that we could locate and interview a reasonably large sample.

Overall, attrition occurred at several points in the process. Aggregating them slightly, we can decompose attrition into two stages:

- **Locating and Re-Contacting (Phase I and II) Women –** this pre-fieldwork phase resulted in a re-contact rate of 71.1%. Of all non-duplicate women (861) in the sample universe, we were able to locate and gain consent from 71.1%, or 612 women in total.
- **Contacting and Interviewing Women –** this process occurred during fieldwork, when we returned to a sample of the same women who had already provided consent and sought to conduct the actual survey interviews with them. Of all 410 women in the sample, we were able to interview 85.1% (349), replacing all but two of the remainder, for a total realised sample size of 408.

[37] The fact that replacements were selected based on *current* instead of original region explains the small shifts in regional sample composition shown in the table, above, between the final sample draw and the realised sample.

Our ability to locate and initially re-contact women exceeded our expectations. As we note elsewhere, our success was a function of having an extensive network in the regions – including rural areas – where SOMGEP was implemented and allocating significant time and human resources to the process. During initial internal discussions, we speculated that re-contact rates at this stage might be 40 or 50%, a rate which we exceeded comfortably. At the same time, we were slightly surprised by the attrition rate observed *during* fieldwork, given that we had spoken with each respondent during the re-contacting phase. We expected a completion rate higher than 85.1% in that final stage, but this outcome may be partially attributable to the fact that data collection could not be entirely open-ended. The time invested in earlier project stages – e.g., re-contacting and tool development – resulted in allocating slightly less time to fieldwork than might have been ideal for minimising attrition.

In the next section, we describe the realised sample. Building on this section's discussion of the sampling and re-contact process, we also analyse how aggregate attrition – between the sample universe and the realised sample – affected the sample's composition and whether there is evidence of bias emanating from non-random attrition.

3. Quality Assurance & Quality Control

The production of high-quality data begins prior to fieldwork or even training of enumeration teams. The quantitative survey and qualitative interview guides were both developed in consultation with local team members for contextual appropriateness, use of language, and style / sequencing of questioning. After the questionnaires were finalised in English, they were translated into Somali and back translated to check for translation errors. Translation of difficult or highly-specific concepts – especially terms related to female genital mutilation/cutting (FGM/C) and intimate partner violence (IPV) – were completed using consensus-based team translation to ensure that the translation captured the precise meaning of each term. This approach ensures broad discussion of, and agreement on, the final translation.

Prior to training, the quantitative survey was scripted in Consilient's survey software, Open Data Kit Collect (ODK Collect), an open-source standard in international research projects. The survey was subjected to extensive bench-testing by our technical team and by field team leaders, who check for systematic errors in skip logic, incorrect or illogical response options, incorrect translations, and other potential errors. Importantly, identifying information about each woman – derived from their survey responses in 2015/6 – was scripted into the survey, ensuring that the 2022 and 2015/6 data could be linked immediately and seamlessly.

In-field quality assurance for face-to-face interviews was provided by the three team leaders. Team leaders led the identification of respondents, using physical tracking

sheets – one for each woman in the sample – produced by Consilient's technical team. They accompanied enumerators during at least two of their interviews within the first three days of fieldwork, assessing their performance and correcting any survey administration problems they observed. Team leaders also held the sole authority to replace respondents if they could not be located. For interviews conducted via CATI, quality assurance responsibilities were held by the Call Centre Manager, who cross-checked respondents' information to verify their identity; the Call Centre Manager also reviewed full audio recordings of early interviews for each CATI enumerator (equivalent to accompaniments in the field) to verify the quality of survey administration.

Back-office quality control (QC) is a more expansive process. For qualitative interviews, researchers write notes for each question/response and submit their notes and a full audio recording of the interview to the Fieldwork Manager. The Fieldwork Manager reviews each set of notes and spot-checks the notes against the audio recording. The audio recording also allowed the Fieldwork Manager to provide guidance and feedback to improve interviewing practice (e.g., identifying areas where additional probing should occur) and to supplement written notes where they were insufficiently detailed. A smaller set of notes went through an additional round of quality control by Consilient's technical research team, who reviewed a selection of notes and provided feedback on interviewing practices, probes, and note-writing.

For quantitative surveys, data was uploaded daily, except in very rare cases in which teams were outside the area of network coverage. This data was downloaded from Ona's servers daily, after which it underwent basic cleaning and Consilient's technical team checked sample performance, re-contact and replacement rates, and response patterns for a select set of questions. Deeper review of the data was conducted every few days, such as identifying outliers on integer responses, checking enumerator-specific response patterns for any biases in question administration, and checking the consistency of responses across questions. Any issues identified were relayed to the Fieldwork Manager and – where appropriate – specific enumerators or team leaders. Interviews conducted via CATI underwent additional quality control when the Call Centre Manager reviewed audio recordings of a randomly selected set of interviews, verifying respondents' answers against the data entered by the enumerators.

4. Data Collection

4.1. Training and Fieldwork Preparation

Broadly speaking, the purpose of the early phases of data collection – Phase I Qualitative, Phase I and II Quantitative – was to guide later data collection efforts. In contrast, later phases provided the data that is analysed directly throughout this report; as such, we limit our discussion of timelines and geographic coverage, below, to these later phases of data collection.

Training of the quantitative enumeration team for Phase III was conducted on 5 June at Consilient's office in Hargeisa, where ten enumerators and three team leaders were trained on the objectives of the survey, use of ODK Collect, consent, research ethics, COVID protocols, and in-field quality control. All enumerators and team leaders had extensive prior experience using ODK Collect and conducting quantitative surveys, including in the context of education research. A pilot test was conducted on 7 June in Hargeisa, followed by a debriefing session with the technical team, fieldwork manager, and all field staff members to discuss issues related to survey administration (skip/filter logic, re-contact processes) and content (sensitive questions, adjustment of translations, etc.). Following the pilot, revisions were made to the survey tool, with Consilient and the University of Portsmouth's teams collaborating on adjustments. A brief refresher was held on the quantitative tool on June 9, followed by the start of fieldwork on 12 June. Data collection was staggered, with field teams starting first and phone-based interviews beginning slightly later; data collection continued until 7 July.

The qualitative and quantitative training proceeded separately, as enumerators were not tasked with conducting qualitative interviews. The qualitative life history tool (Phase II) was initially piloted on 2 June by the team's Fieldwork Managers in Hargeisa, with the goal of improving and contextualising the questionnaire. Following the pilot, several adjustments were made to individual questions, including those on community resilience, motherhood, assertiveness/agency, and COVID-19. Training took place on 6 June, during which the three Team Leaders were trained on the qualitative tool. Training covered: the project's objectives; methods of identifying and recruiting respondents; a deep review of the tool and each question; review of a pilot interview transcript that allowed the group time to critique and improve upon the administration; consent and research ethics; COVID-19 protocols; and quality assurance methods. Qualitative data collection began on 13 June.

4.2. Geography and Mode of Interviewing

The team settled on a dual-mode approach – both CATI and Computer-Assisted Personal Interviewing (CAPI i.e., "face-to-face" interviewing) – to avoid excluding any potential respondents from the sample frame while limiting the logistical and cost burden of visiting many remote villages. The nature of the project amplified the logistical burden of face-to-face interviews because the girls comprising the sample frame were originally sampled from 51 rural villages, but a large number have since migrated for work, school, or family reasons. For example, 51.7% of women in the final sample have migrated at some point, and 41.2% currently live outside their home village. An informal review of the stated location of girls in the sample frame showed that girls were located in widely disparate areas: some had migrated to nearby urban centres (e.g., Burco and Ceerigaabo); others had migrated to urban areas far outside the original programme's implementation area (e.g., Borama, Garowe, and Mogadishu); and some had migrated to new villages either near or distant from their original village.

The result was a sample frame of girls occupying at least 75 distinct locations; visiting all such locations was cost prohibitive.

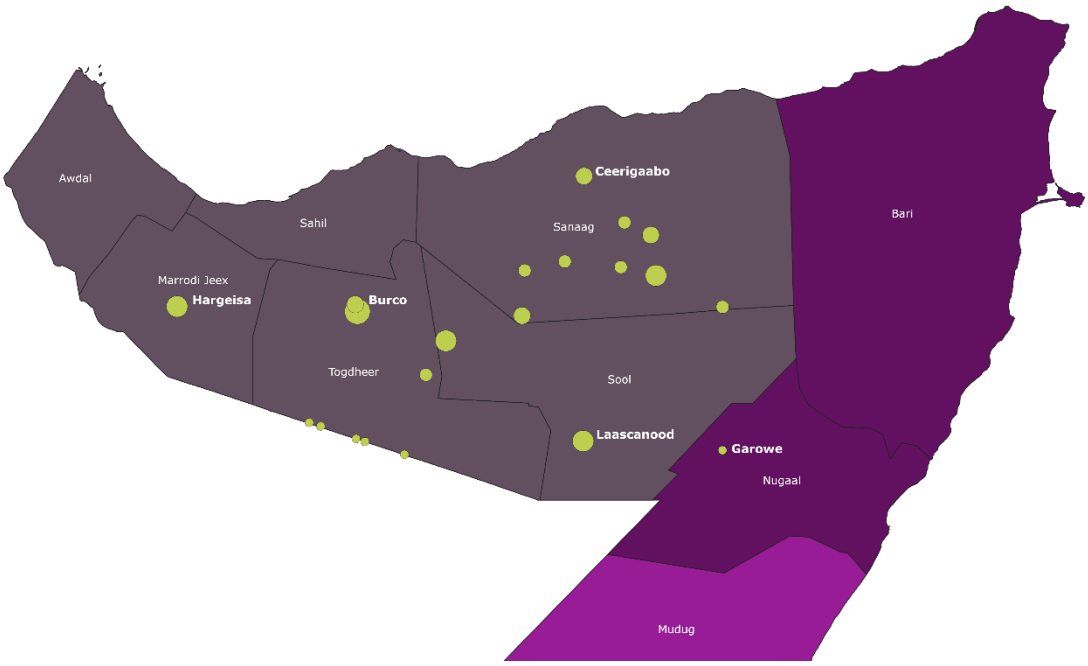
At the same time, we sought to maximise the number of interviews completed face-to-face, for both quality assurance and practical reasons. From a quality assurance perspective, face-to-face interviewing allows enumerators to verify a respondent's attention and lack of distraction in a manner that is more difficult for phone-based interviews. From a practical standpoint, phone-based interviews are more convenient logistically, but long telephone conversations can be difficult for individuals in rural areas, where electricity access is limited; respondents may need to be recharge their phone to continue talking, but may be unable to do so with regularity, imposing additional burden on the respondent.

One option for maximising face-to-face interviews was to restrict the sample to those girls who were clustered in comparatively few locations – major cities, and villages with, at minimum, several respondents still present. However, we placed a higher priority on minimising bias that would inevitably result from selecting the sample based on current location, as migration is likely to be correlated with several important outcomes of interest. Therefore, it was important that the sample not be restricted by a girl's current geographic location. Instead, we drew the sample without any reference to the girl's current location (in other words, location did not influence the probability of selection, beyond stratification at the level of regions, discussed in more detail below), and then identified which set of girls could be cost-effectively interviewed face-to-face.

Following the final sample draw, Consilient's Fieldwork Managers identified the locations that included enough girls to make it cost-effective to visit. We did not apply a hard-and-fast rule for this decision; rather, we balanced the number of women present and the proximity of the location to other locations that we planned to visit. The number of women present is a critical parameter for field visits, because a field team consists of four researchers and a driver. Dispatching a team to a village to interview five respondents requires 5-10 person-days (depending on the remoteness of the village) of effort, while interviewing the same five respondents over the phone would typically require between 1 and 2 days of enumerator time.

The proximity of the village to other locations could make visits to borderline locations feasible. For instance, one village (Bodacad) with just five women in the sample was visited because it was situated along the path of an 85-kilometre drive between Ceel Afweyn and Damala Xagare, which included 11 and 10 respondents, respectively. The same village, situated in an area that required a separate day of travel to reach, would likely not have been included in the face-to-face sample.

Figure 2: Map of fieldwork locations for face-to-face interviews



The final sample includes 185 face-to-face and 223 CATI interviews (45.3% versus 54.7% of the sample). Figure 2, above, maps the geographic distribution of face-to-face interviews, in which the markers for individual locations are scaled by the number of face-to-face interviews completed in each location (i.e., larger markers indicate more completions). Two of the largest circles are in Burco and Hargeisa, where 48 and 21 interviews were completed, respectively.[38] The map of in-person interviews, naturally, understates the geographic extent of the sample, because most of the more far-flung respondents were interviewed by phone. Briefly, the overall sample included women who now live in each of Somaliland's six regions, each region of Puntland, two respondents who now reside in Galmudug, and one respondent who resides in Ethiopia.

The CATI share of the sample – which is greater than we planned at the outset of fieldwork – was also driven up by our prioritisation of re-contact rates. The CATI mode was occasionally used to interview women in "face-to-face locations" – those where we sent field teams – who were out of the area temporarily; who were not available during the day and could only be interviewed late in the evening; or who otherwise could not be contacted during the fieldwork period in a given location. For example, our team spent one week collecting data in Burco but still interviewed 11 of the 82 Burco respondents via CATI for the reasons outlined above. Where teams spent less time –

[38] Burco includes two overlapping circles, as several interviews were conducted in the Koosaar IDP camp approximately five kilometres north of the city.

villages and smaller towns that were visited for just one day – utilising the flexibility of CATI administration became even more important for maximising re-contact rates.

As with other choices, such as the stratification of the sample, the use of CATI balanced disparate goals but was often necessary in order to maximise re-contact rates and avoid exclusion of women who are busier, leave town more frequently, are more difficult to contact, or live in less secure locations.[39] While surveys administered via CATI have unique challenges, literature in survey methodology documents the major shortcomings and advantages of the method and tends to focus on response rates (which are low for CATI surveys in developed countries but not relevant to our study).[40] The impact of CATI use on response choice is less clear, though it tends to result in more positive responses, as in self-assessments of well-being.[41] One quality advantage of CATI administration, in our context, is the extra quality control that CATI interviews undergo; we record CATI interviews and spot-check question administration using these recordings, providing a further check on quality that is specific to CATI surveys.

In our sample, there are occasional differences in response distributions across survey mode, but we cannot attribute this to the mode itself, as respondents were not randomised into CATI or non-CATI surveys and those who participated via CATI are systematically different in other ways that could explain differential response patterns. More importantly, our key results throughout the report are robust to the inclusion of a variable controlling for survey mode.

The field-based teams visited 19 distinct locations, listed in Table 3, and previously documented in Figure 2.

[39] Only a few of the locations visited have significant security challenges. However, insecurity occasionally impacted survey administration choices when a woman could only be interviewed in the evening but lived in a settlement outside town or in an area that could not be safely visited at night.

[40] See, e.g.: Daikeler, Jessica, Michael Bosnjak, and Katja Lozar Manfreda. 2020. "Web Versus Other Survey Modes: An Updated and Extended Meta-Analysis Comparing Response Rates." *Journal of Survey Statistics and Methodology* 8 (3): 513-539.

[41] See, e.g.: Dolan, Paul, and Georgios Kavetsos. 2016. "Happy Talk: Mode of Administration Effects on Subjective Well-Being." *Journal of Happiness Studies* 17: 1273-1291; Ye, Cong, Jenna Fulton, and Roger Tourangeau. 2011. "More positive or More Extreme? A Meta-Analysis of Mode Differences in Response Choice." *Public Opinion Quarterly* 75 (2): 349-365.

Table 3: Fieldwork locations for face-to-face interviews

Region	District or Nearest Major Town	Village/Location
Togdheer	Burco	Burco
Togdheer	Burco	Koosar
Togdheer	Balidhiig	Balidhiig
Togdheer	Odweyne	Odweyne
Togdheer	Odweyne	Xaji Salah
Togdheer	Odweyne	Laanmulaaxo
Togdheer	Odweyne	Yucub yaboh
Togdheer	Odweyne	Qudhac kudle
Togdheer	Odweyne	Abdifarah
Togdheer	Burco	Kiridh
Maroodi Jeex	Hargeisa	Hargeisa
Sool	Aynabo	Waridaad
Sool	Laascanood	Laascanood
Sanaag	Ceel Afweyn	Garadag
Sanaag	Ceel Afweyn	Ceel Afweyn
Sanaag	Ceel Afweyn	Damala xagare
Sanaag	Ceel Afweyn	Laasdomare
Sanaag	Ceerigaabo	Ceerigaabo
Sanaag	Ceelbuh	Shimbiraale
Sanaag	Ceelbuh	Bodacade
Sanaag	Dhahar	Baragaha Qol
Nugaal	Garowe	Garowe

Table 4 describes the geographic distribution of the sample. The middle column documents where women lived in 2015/6 when they were last interviewed – these locations are tied to the schools in which SOMGEP was being implemented. The right-most column documents where women live now, at the time of their interview in 2022. Notably, none of the original SOMGEP schools were in Awdal, Maroodi Jeex, or Sahil regions, but women have moved to these regions over the following six years; Maroodi Jeex has seen the most in-migration, as it includes Hargeisa, the capital of Somaliland. Although none of the original schools were in this area, 39 of our 408 respondents have relocated to Hargeisa (Maroodi Jeex).

The table also shows the extent to which the sample is dominated by schools in Somaliland. SOMGEP and SOMGEP-T were both implemented in three areas: Somaliland, Puntland, and Galmudug, the latter two of which are now recognised Federal Member States under the Federal Government of Somalia. However, schools and girls in Somaliland made up the bulk of both programmes, and this is reflected in the sample. In total, Somaliland's regions comprise 80.1% of the original sample.[42] The remainder of the sample is drawn from women who originally lived in the Bari and Mudug regions of Puntland.[43] Later in this annex, we address whether the final sample is geographically representative of SOMGEP's original regions, or if differential attrition and re-contact rates have led to over- or under-representation of some regions.

Table 4: Sample composition, by original (2015/6) and current (2022) region

Region	Original (2015/6) Region – Share of Sample (n)	Current (2022) Region – Share of Sample (n)
Awdal, Somaliland	N/A	1.0% (4)
Bari, Puntland	2.0% (8)	3.7% (15)
Ethiopia	N/A	0.3% (1)
Maroodi Jeex, Somaliland	N/A	9.6 (39)
Mudug, Puntland	17.8% (73)	16.4% (67)
Mudug, Galmudug	N/A	0.5% (2)
Nugal, Puntland	N/A	1.7% (7)
Sahil, Somaliland	N/A	0.5% (2)
Sanaag, Somaliland	33.3% (136)	24.8% (101)
Sool, Somaliland	15.2% (62)	13.7% (56)
Togdheer, Somaliland	31.6% (129)	27.9% (114)
Total	100.0% (408)	100.0% (408)

[42] We note that two the regions – Sool and Sanaag – attributed to Somaliland in the table are disputed between Somaliland and Puntland. The exact line of control between the two administrations is often unclear and has moved significantly since SOMGEP was implemented. During SOMGEP and SOMGEP-T implementation, some of the schools in eastern Sool and Sanaag were under the control of Puntland's administration, including its Ministry of Education. We refer to Sool and Sanaag as part of Somaliland because this reflects both the view of Somaliland and the Federal Government of Somalia, the latter of which uses the border between British Somaliland and Italian Somaliland as its own *internal* border between the Autonomous Region of Somaliland and Puntland State.

[43] Mudug is one of the original 18 regions of Somalia but has been effectively divided between Puntland and Galmudug States. The women sampled for this project were drawn from the northern, Puntland, portion of Mudug.

5. Sample Characteristics and Representativeness

5.1. Quantitative Sample Characteristics

In this section, we briefly describe the quantitative sample, to aid understanding of the "type" of woman to which our analysis applies. In general, the sample is well-educated, in comparison to regional standards. Overall, 42.4% of women in the sample remain enrolled in school, although most respondents are 18 years old or older. As shown in the left panel of Figure 3, the age range of the sample is 15 to 31 years, with a mean of 19 years. Most respondents – 90.7% – fall between the ages of 16 and 22. Just 39.5% of women in the sample did not complete primary school, a relatively high achievement rate; more impressive is the fact that around one-quarter (24.0%) of respondents have completed secondary school and nearly one-third (32.4%) of respondents over the age of 18 have completed secondary school.

Figure 3: Distribution of age (left) and highest grade completed (right) in the final sample

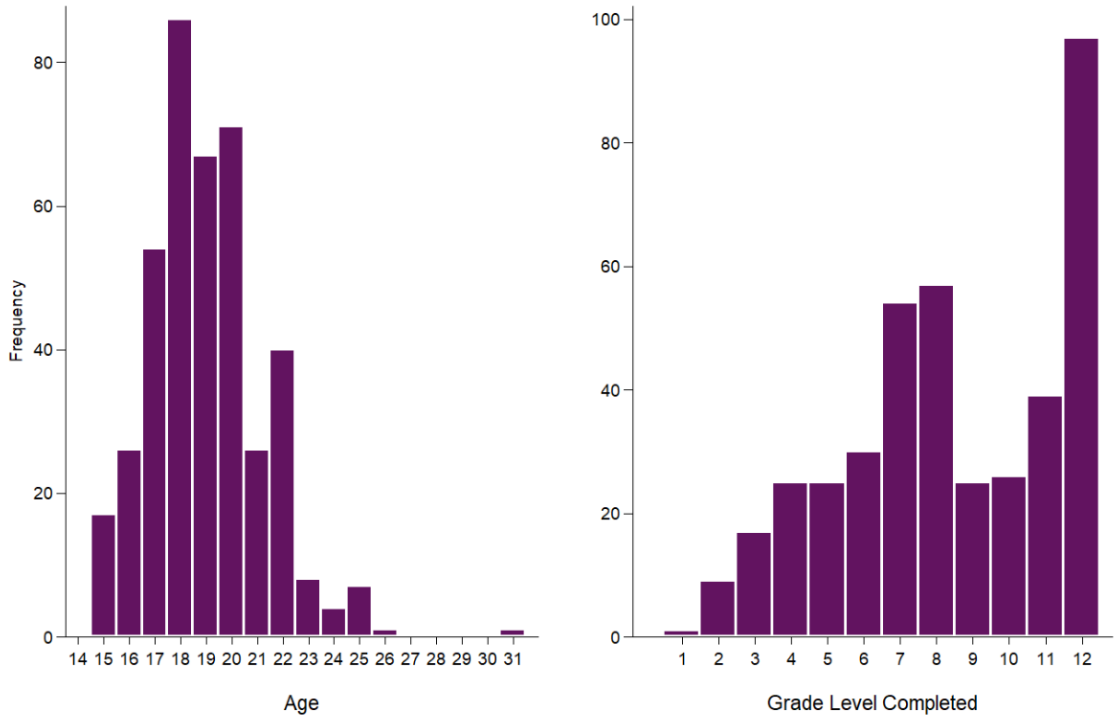


Table 5 also documents marriage and related outcomes among the sample. Just over one-quarter of respondents have been or are currently married, while 22.3% of respondents have at least one child. Most respondents who are mothers have one or two children, but several women have already given birth to more than two children. This is partly attributable to the young age at which some women married – as young as 13 or 14 years old in a few cases – and the fact that 10 women in the sample had already given birth by the time they were 16 years old. Employment is relatively rare,

though many women have been employed in the past – in total 11.3% of women worked in the past but no longer do, while 6.9% are currently working.

As we described in the previous section, the sample is heavily weighted toward women who originated – i.e., who lived, in 2015/6 – in Sanaag and Togdheer. In terms of current residence, the sample is more diverse: nearly 1 in 10 (9.6%) of women have migrated from their home villages to Hargeisa (Maroodi Jeex), and 3.9% have migrated to regions not originally included in the SOMGEP programme. Despite the broadly rural focus of SOMGEP, most women live in urban areas, but this definition includes towns that most would not consider true urban areas in other contexts.[44]

Table 5: Sample Demographic and Educational Characteristics

Characteristic	Share of Sample
Educational Attainment	
Currently enrolled	42.4%
Highest education: did not complete primary school	39.5%
Highest education: completed primary school	14.0%
Highest education: some secondary school	22.1%
Highest education: completed secondary school or higher	23.8%
Demographic Characteristics	
Married	19.4%
Ever Married (incl. divorced/widowed)	26.5%
Has children	22.3%
Pregnant	5.4%
Currently employed	6.9%
Ever employed (including now)	18.1%
Region of Origin	
Original region: Togdheer	31.6%

[44] The SOMGEP regions, in general, are sparsely populated. Their towns also tend to be compact, both for security reasons and because they are not oriented around settled agriculture, with plots interspersed with homes. The result are compact, city-like environments that are often very small. For instance, Goldogob is a district capital and would be considered an urban area by most respondents, but measures just three-square kilometres in total area.

Characteristic	Share of Sample
Original region: Sanaag	33.3%
Original region: Sool	15.2%
Original region: Bari (Puntland)	2.0%
Original region: Mudug (Puntland)	17.9%
Characteristics of Current Location	
Current region: Maroodi Jeex	9.6%
Current region: Togdheer	27.9%
Current region: Sanaag	24.8%
Current region: Sool	13.7%
Current region: Bari	3.7%
Current region: Mudug	16.4%
Current region: Other	3.9%
Residence: Urban	65.7%
Ever Migrated	51.8%
Currently living away from original village	41.2%
Household Characteristics	
Female-headed Household	53.9%[45]
Household's main source of income is pastoralism	11.0%
Parent's Educational Attainment	
Father has no formal education	24.3%
Father completed at least primary school	66.8%

[45] The share of households that are female-headed is relatively high. It is possible that the framing of this question, which opened with a definition of "household head" shaped responses. Respondents were told "The head of the household is the main person who makes decisions for the household, such as how money is spent" before being asked who heads their household. This may have pushed respondents to focus on smaller-scale household decisions that are more likely to be controlled by women. It is also important to note that related evaluations have found relatively higher rates of female headship – e.g., 47.5% of households across four rounds of the SOMGEP-T evaluation were female-headed, using a different question construction – but our rate is still an outlier.

Characteristic	Share of Sample
Father completed at least secondary school	46.3%
Mother has no formal education	41.7%
Mother completed at least primary school	38.3%
Mother completed at least secondary school	11.9%

Migration rates among the sample are very high. Over half (51.8%) of respondents have migrated away from their home village at some point, and 41.2% of respondents no longer live in the same village as in 2015/6. Migration is driven primarily by the pursuit of education, in part because many SOMGEP villages did not have a secondary school. Only 8.5% of migrants report having moved because of marriage, and a small number also cite drought and insecurity; nonetheless, the most cited reason (cited by 54.9% of migrants) is for educational purposes. In total, 21.1% of respondents have moved across regional borders; most of these cases involve movement to one of the major cities in the area – Hargeisa, Burco, Bosasso, and Garowe, in order of the number of migrants.

Alongside the impressive current educational attainment of the sample, the bottom panel of the table shows that sampled women tend to have fathers and mothers who have received at least *some* schooling. For instance, only 24.3% of women have fathers who did not attend primary school at all. It is important to note that respondents' judgment of the educational attainment of their parents – the source of this data – may be inflated, because parental education appears greater in our data than in the SOMGEP evaluations from 2015/6.[46] Nonetheless, the typical respondent in our sample is comparatively well-educated, as are their parents, when compared to typical educational attainment in the same regions.

5.2. Differential Attrition and Effects on Sample Composition

The discussion, to this point, regarding sampling has highlighted the complex nature of re-contacting respondents for this project. Despite re-contact rates that were higher than we expected, the amount of attrition from the full sample universe to the final

[46] This disjuncture could also arise from the fact that the SOMGEP evaluations assessed the educational attainment of a girl's head of household and primary caregiver, which are different positions from "father" and "mother," particularly in the Somali context, in which children often live away from their parents, with extended family.

sample opens the possibility of systematic bias arising from differential attrition.[47] If types of women were less likely to be located or more likely to be replaced during fieldwork, it would alter our sample's composition and potentially affect our conclusions.

Table 6 reports re-contact rates for the two periods of the project during which attrition could occur. As the top row shows, we successfully located and contacted 71.1% of all women from the sample universe during the first phase of re-contacting; during fieldwork, our success rate for completing interviews – from a sample draw of 410 women – was 85.1%. The first figure describes straightforward attrition during the re-contacting phase – no replacement was possible, and this attrition simply reduced the available sample frame. The second figure describes attrition during fieldwork, when replacement of women was possible; thus, re-contact rates in the second case have little impact on overall sample size but impact sample composition due to the substitution of sampled respondents with replacements.

As the top panel in the table shows, re-contact rates in Phase I/II were much higher in Sanaag, Togdheer, and Sool, when compared to Mudug and Bari. As noted above, this pattern contributed directly to the underrepresentation of Mudug in the final sample. Notably, this pattern only applies to Phase I/II re-contacting; during fieldwork, re-contact rates converged to a much tighter range (75-87%).

Table 6: Re-contact rates, in Phase I/II and during fieldwork, by region of origin and age

Subgroup	Phase I and II Re-Contact Rate Share of sample universe (n=861) included in eventual sample frame (n=612)	Fieldwork Re-Contact Rate Share of sample draw (n=410) included in final sample, without replacement
Overall	71.1%	85.1%
Original Region		
Togdheer	81.7%	86.8%

[47] Final sample composition might also differ from the broader sample universe as a function of sampling variation. However, sampling variation is a standard feature of sample-based statistics and is likely to be a small contributor to any differences in composition in this case, because the sample draw of n = 410 comprised such a large share of the sample frame (n = 548). There are good theoretical reasons to expect attrition during re-contacting, restriction of the sample frame by age, and attrition during fieldwork to be greater sources of bias than sampling variation, especially since the sample was drawn randomly and is unbiased in expectation.

Subgroup	Phase I and II Re-Contact Rate Share of sample universe (n=861) included in eventual sample frame (n=612)	Fieldwork Re-Contact Rate Share of sample draw (n=410) included in final sample, without replacement
Sanaag	89.6%	86%
Sool	72.6%	85.3%
Bari	46.2%	75%
Mudug	42.1%	83.6%
Age Group		
15 years and under	84.4%	29.4%
16 years	76.8%	50%
17 years	67.8%	90.7%
18 years	73.5%	89.5%
19 years	70.3%	89.4%
20 years	72.2%	90.1%
21 years	66.3%	96.2%
22 years	70%	90%
23 years and over	78.6%	95.2%

In the bottom panel of the table, a similar pattern emerges related to age. We had greater success re-contacting the youngest respondents in the sample universe during Phase I/II, particularly women who are presently 13-16 years old. Phase I/II success was lower among older age groups, though re-contact rates did not fall continually with age; rather, there is a structural difference between the youngest age group and all other members of the sample universe.

However, this pattern changed during fieldwork. As the right column shows, respondents in the youngest age groups were much less likely to be re-contacted and more likely to be replaced than women 17 years and up.

Varying patterns in re-contact success across Phase I/II and the fieldwork phase is interesting, because it suggests different mechanisms driving re-contact success in the two stages. During Phase I/II, we were able to reliably locate the youngest respondents, probably because they are less likely to have migrated or married, and are more likely to remain enrolled in school, which increases their visibility to some of the community-based informants who assisted us with re-contacting. Older women were more difficult to locate but – once located – were less likely to refuse an interview or fall out of contact during fieldwork.

Varying patterns also make clear that proper analysis of sample representativeness should focus on the aggregate: the composition of the final sample versus the composition of the sample universe. Rather than investigate the predictors of successful re-contact in each phase separately, our interest is in aggregate representativeness – how closely does the final sample represent the sample universe? To the extent that there are systematic differences between the sample and the universe, the source of these differences – whether from sampling variation, differential attrition during Phase I/II, differential attrition during fieldwork, or the restriction of the sample frame by age – is not of particular concern.

To assess the representativeness of the achieved sample (hereafter, "the sample"), we study the likelihood of inclusion in the sample as a function of a woman's characteristics in 2015/6.[48] For instance, the mean age in the sample is slightly higher than in the sample universe, which means that increased age increases the likelihood a woman will appear in the final sample. Our approach consists of estimating a linear regression model predicting inclusion in the final sample, where we analyse the entire sample universe (n = 861), with 408 women included in the final sample. We study the factors that predict increased or decreased likelihood of inclusion, including a woman's history of schooling, her household's wealth, and her views of education, as reported in 2015/6.

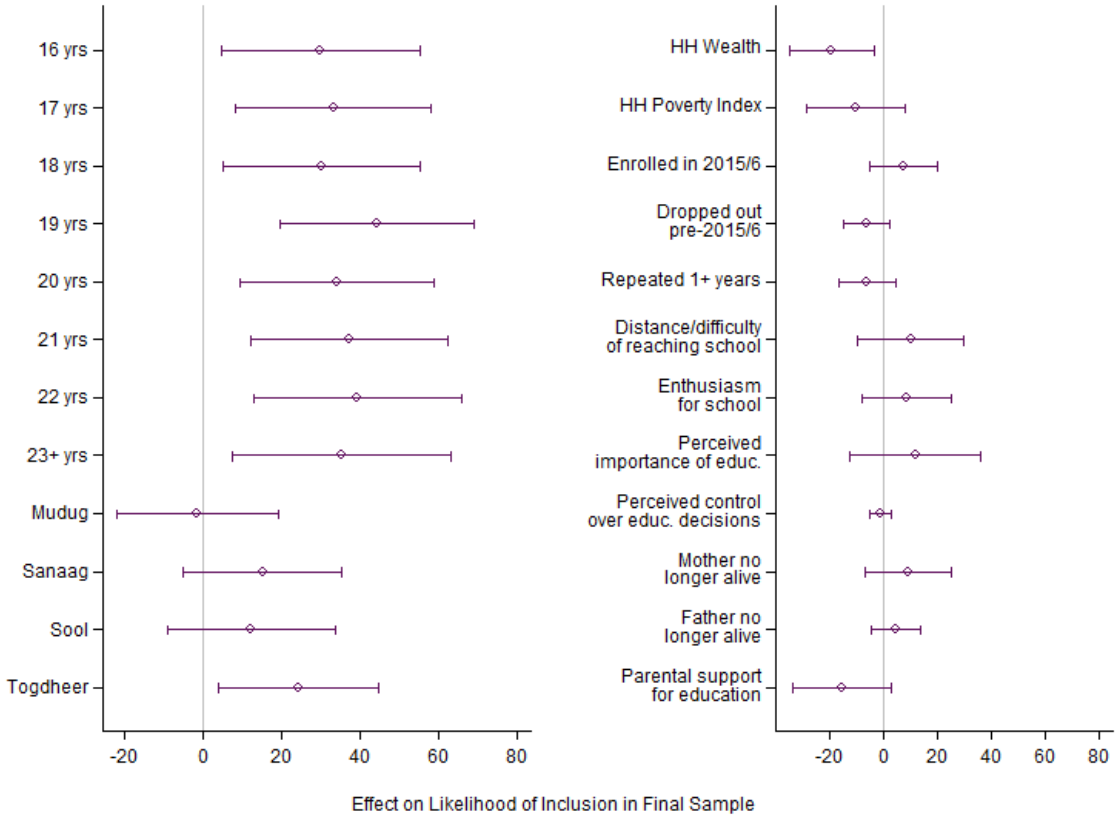
Figure 4 below documents the results of one such model, which captures the most interesting and meaningful predictors of inclusion in the final sample. Each dot represents how a given variable affects the probability of inclusion, with a 95% confidence interval around each estimate. For instance, greater household wealth reduces the likelihood of inclusion. The results in the left panel of the figure are all reported relative to an omitted category. To illustrate: the figure shows that women

[48] We cannot assess the relationship between a woman's characteristics in 2022 and inclusion in the sample because data from 2022 is only available for those women who appear in the final sample.

aged 16 years old have a higher likelihood of inclusion; this effect is *relative* to the inclusion rate of women aged 15 years or under, which is the omitted category. Each age level is measured relative to women aged 15 years or under; likewise, the likelihood of inclusion for each region is measured relative to Bari, the omitted regional category.

The results in the left panel further confirm trends regarding age and region-of-origin that our early analysis suggested. In general, age does not affect the likelihood of inclusion – there is little difference in inclusion rates between women aged 16 and 23, for instance – but the youngest age group (15 years and under) are the least likely to be included. Across regions, women in Sanaag, Sool, and Togdheer are systematically more likely to be included in the final sample.

Figure 4: Predictors of successful overall re-contact and inclusion in sample



The right panel of the figure expands our analysis into new areas. Household wealth is negatively correlated with inclusion – moving from the 25th percentile of household wealth to the 75th percentile reduces a woman's likelihood of inclusion by 8.8 percentage points. While we did not have strong *a priori* expectations regarding the impact of wealth on re-contact success, this finding is still slightly surprising – it is possible that women from wealthier households are more likely to migrate, particularly across region or country borders, which could cause links to their home village to be

severed, limiting our ability to locate them. Substantively, this relationship produces a sample with average household wealth of 0.38 (on a 0-1 scale), compared to average household wealth of 0.42 in the sample universe.

Also compelling is the relationship between educational experience, in 2015/6, and inclusion rates. Women who were enrolled in 2015/6, had never previously dropped out of school, and had never repeated a year of schooling were all more likely to be included in the final sample. This finding is compelling because it may help explain the impressive educational attainment of women in our sample – women in the final sample who were enrolled in 2015/6 and who consistently attended school prior to that point tended to complete more education by the time of our survey in 2022. If this relationship holds more generally – which we would expect, theoretically – our sample may overestimate the extent of educational attainment in the sample universe.

With that said, the substantive effect on the sample of these processes is very small. To the extent that our sample overrepresents women who were enrolled in 2015/6, it only shifts the sample composition slightly. In the final sample, 88.2% of respondents had been enrolled in 2015/6; in the sample universe, this rate is 87.8%. Similarly, the rate of grade-repeaters in the final sample was 11.2%, compared to 12.2% in the sample universe. In other words, while having repeated a grade in the past does predict slightly lower inclusion rates, this relationship is not statistically significant and has only a marginal impact on the composition of our sample.

Overall, the sample's geographic composition differs from the sample universe; we have discussed this issue and the reason for it at length. Beyond regional composition, there are several small differences between the sample and the sample universe that arise as a function of differential re-contact success. However, these differences are uniformly too small to make us question the representativeness of the sample. Indeed, in most cases, the gap between the final sample and the sample universe is smaller than we would expect from routine sampling variation. Given that routine, random sampling variation does not cause undue concern regarding sample representativeness, there is little evidence that our sample is not broadly representative of the targeted sample universe.

5.3. Qualitative versus Quantitative Sample

In total, 40 women completed life history interviews as part of the primary qualitative sample. The procedure by which the qualitative sample was selected is described in Section 3.6 of the main report. Briefly, the 40 qualitative interviewees were selected from within the quantitative sample, based on their willingness to participate and the ability of team leaders to coordinate interviews, while seeking to match the underlying geographic distribution of the quantitative sample. In other words, we sought to mimic

the regional allocation of the sample *in terms of women's current regions* in the qualitative sample.

In practice, most quantitative respondents consented to participate in the life histories, meaning that ultimate selection for inclusion was a function of coordinating schedules and gaining final consent at the time of the interview. As we noted in Section 3.6, this approach could result in systematic differences between the qualitative and quantitative samples. Qualitative respondents were – as we showed previously – slightly older and better-educated than the overall quantitative sample.

In Table 7 below we extend this analysis to assess the differences between those who completed qualitative interviews and those who did not, for a wide range of demographic, geographic, and attitudinal characteristics. The table is divided into panels (e.g., the top panel capturing demographic characteristics) organised by topical area. For each characteristic or outcome, we report in the first column the value in the non-qualitative portion of the quantitative sample, i.e., the set of quantitative respondents who did *not* complete a qualitative interview. The next column reports the frequency or total of the same outcome for the qualitative sample. The final column reports p-values from a two-sided t-test, which assesses the difference between the two samples. P-values that are statistically significant are denoted with asterisks corresponding to their significance level (* < 0.10, ** < 0.05, *** < 0.01), with three asterisks representing the strongest evidence of difference.

As discussed, the qualitative sample is slightly older and more educated than the broader sample, a fact which is recapitulated in the table. However, the age gap is not statistically significant, with a p-value of 0.17. The difference in educational attainment, on the other hand, is significant: qualitative interviewees have completed 3.1 additional years of schooling, on average, and have been enrolled for an extra 0.6 years during the period 2015-2022. Even where the difference is not statistically significant – such as in the share of women who finished secondary school – the difference is part of a trend in which qualitative interviewees are concentrated in the higher end of the educational spectrum, relative to the broader sample.

In the next panel, we investigate differences in regional composition between the two samples. Unsurprisingly, the qualitative sample does not mirror the composition of the broader sample according to a woman's region of origin, because we selected qualitative respondents as a function of their *current* region. In the context of current region, the qualitative sample underrepresents Mudug and overrepresents Togdheer and Maroodi Jeex, which likely stems from the lengthy fieldwork period in Burco (Togdheer) and the fact that interviews in Hargeisa (Maroodi Jeex) could be organised at any time, as Consilient staff reside in Hargeisa. The additional time spent in Burco does not reflect an intentional oversampling of Burco residents for qualitative interviewing; rather, the number of quantitative respondents in the area necessitated lengthy

fieldwork in Burco, making it easier to organise qualitative interviews, because the team could afford to be more flexible with potential interviewees. In contrast, fieldwork in Mudug was briefer, leaving less room for flexibility and reducing the odds of interviewing Mudug residents.

Table 7: Comparison of qualitative and non-qualitative samples

Characteristic	Non-Qualitative Sample n = 368	Qualitative Sample n = 40	P-Value of Difference
Demographic Characteristics			
Age in 2022	19.0 years	19.5 years	0.17
Married	20.4%	10.0%	0.12
Ever Married (incl. divorced/widowed)	26.6%	25.0%	0.82
Age at First Marriage	17.3 years	17.1 years	0.77
Has at least One Child	22.0%	25.0%	0.67
Number of Children (among Mothers)	1.9 children	1.3 children	0.07*
Currently Pregnant	5.7%	2.5%	0.40
Currently Employed	7.1%	5.0%	0.62
Ever Employed	18.5%	15.0%	0.59
Educational Attainment			
Some Primary School	42.1%	15.0%	0.00***
Completed Primary School	13.3%	20.0%	0.25
Some Secondary School	21.2%	30.0%	0.2
Completed Secondary School	22.8%	32.5%	0.17
Years Enrolled (2015-2022)	4.9 years	5.5 years	0.23
Highest Grade Completed	8.7	11.8	0.03**
Geographic Location			
Residence: Urban	65.8%	65.0%	0.92
Ever Migrated	51.8%	52.5%	0.93
Original Region: Togdheer	30.7%	40.0%	0.23

Characteristic	Non-Qualitative Sample n = 368	Qualitative Sample n = 40	P-Value of Difference
Original Region: Sanaag	33.4%	32.5%	0.91
Original Region: Sool	15.5%	12.5%	0.62
Original Region: Bari	1.9%	2.5%	0.8
Original Region: Mudug	18.5%	12.5%	0.35
Current Region: Maroodi Jeex	9.2%	12.5%	0.51
Current Region: Togdheer	27.4%	32.5%	0.5
Current Region: Sanaag	25.0%	22.5%	0.73
Current Region: Sool	13.6%	15.0%	0.81
Current Region: Bari	3.8%	2.5%	0.68
Current Region: Mudug	17.4%	7.5%	0.11
Current Region: Other	3.5%	7.5%	0.22
Household Marginalisation and Wealth			
Lives with at least One Parent	68.8%	62.5%	0.42
Lives in Female-Headed Household	50.8%	65.0%	0.09*
Chopped Meat Consumption, Typical Week	0.38 times per week	0.41 times per week	0.46
Whole Meat Consumption, Typical Week	0.24 times per week	0.27 times per week	0.36
Gave Charity last Ramadan	79.9%	75.0%	0.47
Household Owns Livestock	54.9%	45.0%	0.23
Household Wealth Index (0-1) in 2022	0.38	0.39	0.93
Media Consumption			
Listen to Radio Weekly or More Often	15.5%	27.5%	0.05*
Watches TV Weekly or More Often	15.8%	27.5%	0.06*
Reads Newspaper/Magazine Weekly or More Often	16.8%	32.5%	0.02**
Uses Internet Weekly or More Often	67.7%	82.5%	0.05*

Characteristic	Non-Qualitative Sample n = 368	Qualitative Sample n = 40	P-Value of Difference
Confidence, Attitudes, and Tolerance of IPV			
Very likely would be chosen as leader of women's savings group	72.0%	90.0%	0.01***
Very likely other women would Confide in Me	84.5%	87.5%	0.65
Would vote for female political candidate	47.3%	57.5%	0.22
Tolerance of IPV Index (0-3)	0.48	0.17	0.03**
Attitudes toward Gender Roles in Marriage (0-1)	0.73	0.73	0.99
Empowerment - Sole Decision-Making Power	0.28	0.32	0.37
Empowerment - Joint Decision-Making Power	0.54	0.58	0.44
Would want daughter circumcised	55.2%	45.0%	0.47
Believes circumcision required by Islam	59.5%	45.0%	0.08*

The final three panels of the table reveal an important overarching difference between the qualitative and non-qualitative samples. Qualitative interviewees are more likely (65.0% versus 50.8% for qualitative versus non-qualitative respondents) to live in a female-headed household currently. At the same time, qualitative interviewees consume media significantly more often; for instance, they are around twice as likely to read a newspaper or magazine at least weekly.[49] Furthermore, qualitative interviewees – as the bottom panel shows – are more likely to view themselves as leaders in their communities (e.g., heading a hypothetical savings group), are more likely to vote for a female political candidate, are less tolerant of IPV, and are less likely to believe Islam

[49] Importantly, qualitative interviewees do not self-report higher rates of literacy when we asked whether they would be able to read an SMS message or a Somali poem. Therefore, we interpret greater media consumption less as a statement about *ability* to read or consume media and more as a statement about qualitative interviewees' interest in reading, using the internet, and listening to the radio. The fact that qualitative interviewees are not just more likely to read newspapers but also more likely to listen to the radio – which does not have an obvious relationship with literacy – also supports this interpretation.

mandates FGM/C. Combined, these findings paint a picture of the qualitative sample as somewhat more educated, slightly more empowered, with somewhat more liberal gender attitudes, on the whole.

It is important not to overstate the differences between the two samples. For instance, while qualitative interviewees are clearly less tolerant of IPV, their views on other aspects of gender norms within a marriage ("attitudes toward gender roles in marriage") are very similar to the quantitative sample. Even in the absence of any systematic difference between the two samples, statistical theory indicates that we should occasionally observe statistically significant differences between the two samples as a function of random variation.[50] However, aggregating across the characteristics and attitudes in the bottom panel suggests a small but systematic difference between the samples. This is suggested by the three differences which are statistically significant: self-reported likelihood of being selected as a leader; tolerance for IPV; and beliefs regarding Islam and FGM/C. It is further suggested by three additional differences that cannot be statistically distinguished from a null effect, but which – in each case – lean toward more liberal attitudes among qualitative interviewees: likelihood of supporting a female candidate, empowerment in household decision-making, and opposition to circumcision for one's daughter. Again, the overall difference between the qualitative and broader samples does not appear to be large, but one should bear the more liberal attitudes among qualitative interviewees in mind when interpreting the qualitative evidence in the main report.

[50] This is true of all statistical tests. Setting the significance level to 0.05, for instance, means that we will find "false positive" differences 5% of the time, even in the absence of any systematic difference. Therefore, when testing differences across many characteristics, it is important to temper concerns that might arise from one or a few differences, as occasional differences are not symptomatic of systematic bias.

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Annex 4:

Qualitative and Quantitative Tools

Annex 4: Qualitative and Quantitative Tools

This annex provides an overview of the development of the qualitative and quantitative tools used for Phase 2 of the research. Phase 1 generated early, exploratory findings, while Phase 2 provides the core data analysed in the main report. This annex also includes details on the training, pilot activities, and later adjustments to the tools. The final tools are also provided.

1. Initial Tool Development

Study Phase 2 of data collection included qualitative interviews (life histories) and the core quantitative survey that comprise the main data analysed in the report. This phase follows Study Phase 1 of data collection, which included 19 qualitative interviews with women from Burco and Hargeisa, findings from which fed into the development and refinement of subsequent qualitative and quantitative data collection tools. Phase 1 also included preliminary recontact activities for the broader quantitative data collection process, through which a final sample frame was developed. The present stage (Phase 2) includes quantitative data collection with a sample of 408 women and qualitative data collection with a subsample of 40 quantitative respondents.

Qualitative and quantitative tools were developed as a group effort by the entire team, but the tools were treated separately. In other words, the team did not view the qualitative questionnaire as merely an extension of the survey tool, or an opportunity to expand slightly on the quantitative data collection. Instead, we approached both tools with the goal of generating the best possible evidence to address the project's two main research questions.

In line with the overall conceptual framework, the initial quantitative tools drew – in part – from Consilient's experience collecting data related to moderating factors that may (or may not) impact outcome of education on SOMGEP women's life outcomes today. These included household characteristics, empowerment and agency, gendered norms, and intimate partner violence in the Somali context.

The tools were developed with the age range of the targeted young women – primarily 16-23 years – in mind, with questions related to major life events (e.g., marriage, childbirth) that the women in that age range are likely to have experienced recently. Questions on topics like intra-household decision-making were tailored to the two possible household circumstances in which women might find themselves: living with parents or other relatives as a minor or pseudo-minor or living with a husband as a wife. The tools underwent two rounds of internal discussion and revision, at which point

a near-final version was provided to Tetra Tech. Further revisions were made during training and following a pilot test, as detailed below.

The qualitative life history guides were developed concurrently, led by the University of Portsmouth with contextual inputs from Consilient. Life history tools are designed to provide a deeper look into women's perceptions of their lives and inter-generational change. During initial review and revisions, the questions were reviewed by Consilient's in-country technical staff and Fieldwork Managers for the project, the latter of whom have several years of experience conducting qualitative interviews, including for GEC, GEC-T, and similar female empowerment programmes.

Translation of all tools were completed by Consilient's local research team using conventional back-translation methods to check for consistency. A team-based consensus approach was used to resolve any inconsistencies following back-translation; the same approach was used proactively to come to consensus on particularly sensitive or difficult-to-translate concepts (e.g., those related to IPV). Tools were translated exclusively into the af-Mahatiri dialect of Somali, as no data collection occurred in areas where other dialects (e.g., af-Maay) are widely spoken. All interviews were completed in Somali.

The researchers and technical staff involved in qualitative and quantitative training and piloting included: Research Lead, On-site Project Manager, Fieldwork Managers, three researchers and 12 enumerators.

1.1. Qualitative Pilot and Tool Revisions

The life history tool was piloted on 2 June 2022 in Hargeisa, Somaliland. Two interviews were conducted in Hargeisa by the fieldwork managers, noted above. The pilot took place prior to training, for two primary reasons: first, we expected to make significant changes to the tools after piloting, based on feedback from interviewers and interviewees, and wanted the tools to be as close to finalised as possible prior to training. This would reduce the potential for confusion among the qualitative researchers and reduce time wasted covering questions that were later removed or adjusted. Second, this order allowed the Fieldwork Managers – among Consilient's most experienced researchers – to pilot the tool and provide deeper feedback on the questions, their framing, and so forth than they had provided during their initial reviews.[51]

[51] This deeper feedback should not be underestimated. In our experience, even after close review of questions by field researchers during tool development or training, the experience of asking the questions generates new insights and suggested revisions, because this process illustrates the myriad ways

Following the pilot, several adjustments were made to individual questions including:

- **Questions on community resilience:** The concept of community-wide challenges did not translate well and/or the question did not prompt strong reactions from participants. Location-specific challenges were identified for each community, as tangible examples upon which these women could build.
- **Removed / adjusted overlapping questions:** Several questions related to motherhood and fatherhood were adjusted based on their perceived repetitiveness.
- **Enhanced confidence / agency questions:** The tools were revised to include a stronger focus on assertiveness and agency and the pilot highlighted the need to emphasise – in training – the need to better understand differences in confidence levels as well as perceptions of women in the workforce.
- **COVID-19:** Questions related to COVID and its impact on women and their families were added to the tool.

1.2. Qualitative Training

Following the pilot and subsequent tool adjustments, three qualitative researchers were trained on the life history tool on 6 May at Consilient offices in Hargeisa. The fieldwork managers led the training, with support from the on-site project manager.

Fieldwork teams were organised with a team leader and three enumerators; enumerators focused on quantitative data collection, while the team leader was the backstop for quantitative data collection (overseeing the re-contact and replacement process and performing in-field quality assurance) and conducted qualitative interviews. This team structure was important because it allowed us to provide better geographic representation within the qualitative sample. The quantitative sample included women in remote rural villages as well as larger cities, such as Burco and Hargeisa. One concern during the inception phase was that dispatching qualitative researchers to remote villages would be cost-prohibitive, as it would require travelling long distances with a hired car to complete a single interview. This would produce a qualitative sample that overrepresented young women who had migrated to urban areas, who have very different life outcomes from those who remain in their home villages. By incorporating qualitative researchers into the quantitative team structure, we were able to send them to a number of rural villages and provide much better representation within the qualitative sample.

respondents interpret (or misinterpret) questions. Again, we wanted to ensure that Consilient's most experienced and thoughtful researchers conducted the pilot, knowing that this would yield the most detailed feedback.

The training of the team leaders/qualitative researchers included the following modules:

- Introduction to the research questions and objectives

This overview of the project and its research questions is extremely important because it frames the more specific review of individual questions that follows. If researchers have a strong grasp of what the project's goals are, they can suggest more effective probing questions or topics and potential life outcomes that were neglected during tool development.

- Sampling methods

Qualitative interviewees were sampled from among the set of women who completed the quantitative survey. This module covered how women would provide consent to be re-contacted for a qualitative interview during the quantitative survey, and which women should be prioritised for interviews. After obtaining initial consent at the end of the quantitative survey, women were selected for participation on the basis of their availability and location-specific targets, which are described in the Re-Contact and Sampling Annex.

- Tool review

The team reviewed each question and/or line of inquiry in the tool (both in English and Somali) to clarify the objectives, discuss potential probes and examples, and consider any potential interpretation issues with the translations.

- Pilot data review

Together, the team reviewed notes from one of the pilot interviews and discussed points at which the researcher could have better probed for more detailed responses. Following this group critique, team leaders were asked to review the second pilot interview notes and follow the same process individually – identifying areas where researchers could have built upon responses to generate more nuanced and deeper insights. The group then came back together to discuss and reflect on these suggestions.

- New line of inquiry brainstorm

Fieldwork managers and team leaders discussed additional lines of inquiry that are likely to elicit strong or detailed responses from participants. These were included as potential questions if/when a respondent is not sufficiently prompted by the existing lines of inquiry.

- **Informed consent, ethics, and safeguarding policies**

Given the nature of the topics covered, particular attention was given to consent, ethics, and safeguarding.[52] This module also included data security procedures, with audio files uploaded to Consilient's Google Drive via an encrypted upload link; upon confirmation that audio files were received, they were deleted from the researcher's phone.

- **COVID precautions and protocols**

Topics included Consilient's standard practices, developed early in the COVID-19 pandemic in 2020, for maintaining the safety of staff, interviewees, and community members. This includes the use of Personal Protective Equipment (PPE), the provision of hand sanitiser and masks to interviewees, and the use of social distancing.

- **Quality control measures and daily communication expectations**

This module primary described how Consilient's Fieldwork Managers would review the interview audio files; how quickly researchers could expect feedback and follow-up questions; and how soon after completing an interview the audio file should be submitted to the Google Drive for review.

1.3. Quantitative Training

Training for the quantitative tool was conducted on 5 June at Consilient offices in Hargeisa. The training was led by the fieldwork managers and supported by the on-site fieldwork manager. Training materials and agenda were developed by the research lead. All enumerators were selected based on extensive past experience conducting quantitative data collection and using ODK Collect; most of the enumerators had specifically participated in past Girls' Education Challenge (GEC) evaluations in Somalia or Somaliland, including SOMGEP and SOMGEP-T. There were 13 participants in the training, including the three team leaders. The training included the following modules:

- Introduction to the research questions and objectives
- ODK use refresher
- Informed consent, ethical considerations, and safeguarding policies
- Data security and handling
- Tool review
- How to use the tracking sheets
- Sampling methods, recontact strategy, and replacement procedures
- Identifying participants for qualitative interviews
- COVID precautions and protocols

[52] The interviewees had already provided consent to complete the quantitative survey and had consented to be contacted for a qualitative interview. Nonetheless, they were asked to re-consent to a qualitative interview and provided additional information regarding their ability to opt out of the interview at any time.

- Tool practice
- Logistics and fieldwork organisation
- Quality control measures and daily communication expectations

Because all the enumerators had participated in many recent projects with Consilient, modules such as how to use ODK Collect and how to use the tracking sheets were treated as a refresher and moved quickly. Most of the training was focused on tool review and practice, described in further detail below.

1.4. Tool review

The team reviewed each question in the tool, discussing the choice options, the administration methods (e.g., whether or not to read choice options aloud; any "hints" or explanations that can be provided to the respondent, etc.), and any associated skip-logic. The questions are reviewed in both Somali and English to provide an opportunity for the team to identify any translation issues. During the training, the team sought to identify any potential issues related to translation, possible misinterpretation by respondents, skip-logic errors, and questions they expected to be sensitive or elicit negative responses from interviewees.

1.5. Tool practice

Enumerators practiced administering the tool with a partner and brought forward questions and/or issues to the fieldwork managers. Scripting errors were passed to and corrected by the research lead, while the fieldwork managers corrected translation issues. All issues related to interpretation and question sensitivity were discussed between the research lead, in-country project manager, and fieldwork managers, until a consensus was reached regarding revision.

In addition to the training of enumerators and team leaders, the Fieldwork Managers held a brief, separate training for the quality control team the day before fieldwork began. The quality control team consisted of permanent, full-time Consilient staff with extensive experience conducting back-office quality control, consisting of listening to audio transcripts of interviews to review question administration and ensure answers are filled accurately. As a result, the training provided only a brief refresher on the process of quality control and focused, instead, on reviewing questions the Fieldwork Manager and Research Lead viewed as problematic for enumerators. This included:

- Open-ended responses (where enumerators often summarise responses too succinctly)
- Select multiple questions with many response options (where enumerators have incentives to not read response options, read them too quickly, or accept the first response and move on)

- Questions with randomised ordering of response options, which may be read incorrectly by enumerators if they are operating from memory
- Sensitive questions, such as questions regarding childbirth, knowledge of and access to birth control when applied to unmarried women, FGM/C, and IPV

1.6. Quantitative Pilot and Tool Revisions

Enumerators conducted the pilot in Hargeisa with women aged 18 – 25 years, on 7 June. A total of 14 surveys were conducted by seven enumerators. The survey durations ranged from 40 to 66 minutes, with a mean of 47 minutes. Following the pilot survey, a debriefing session was held with the fieldwork managers, on-site project manager, team leaders, and enumerators to discuss issues related to survey administration (skip/filter logic, re-contact processes) and content (sensitive questions, adjustment of translations, etc.).

During the debriefing, enumerators expressed some concern regarding the length of the survey, noting that survey durations were shorter than they will be during fieldwork because pilot respondents were not SOMGEP participants and the survey's migration module did not function correctly for women who were not included in the sample frame. Both factors reduced the set of questions in the pilot version of the survey. Enumerators also raised concerns about several specific questions included in the pilot survey, which they felt were too sensitive or would be viewed as inappropriately personal.[53]

Following the pilot survey, several adjustments to the tools were made, with the goal of streamlining the survey, reducing the sensitivity of some lines of questioning, and ensuring all topics of interest were given adequate attention. This process was led by Consilient's Research Lead, consulting with all team members for their views. Revisions made included:

- Adjustment or removal of sensitive questions

The team adjusted the following questions after discussion with the fieldwork managers. Each of the three questions below were viewed as sensitive, either because a woman would feel uncomfortable answering the question, because it would be unsafe answering the question if her husband might overhear, or because answering would reveal socially stigmatised behaviour.

[53] In particular, enumerators expressed concern that sensitive questions regarding sexual relations between a husband and wife and regarding contraception knowledge among unmarried girls/women would colour later responses. They also argued that the survey's contents would rapidly become known to others in the area and reduce their access to and ability to re-contact later respondents, particularly in rural villages.

Question 1:

The original question read:

> *"I am going to read you a list of statements. Please tell me how much you personally agree or disagree with the statement. There are no right or wrong answers. It is the wife's obligation to have sex with her husband whenever he wants it, except when she is sick or menstruating."*

Outcome: Removed question. We considered providing women with an option that read "this question cannot be asked because the husband is present or nearby." However, the team believed the number of responses they would receive would be too small to facilitate analysis, and that it would be better to remove the question. Other similar questions in this module (regarding a wife's duties) were not altered.

Question 2

The original question read:

> *"In your opinion, is a husband justified in hitting or beating his wife in the following situations? If she refuses to have sex with him?"*

Outcome: Removed question because it was viewed as too sensitive. Substituted with "Are there any situations where it is acceptable for a husband to hit or beat his wife?" Other questions in this module (regarding specific circumstances when a husband would be justified in beating his wife) were not altered.

Question 3:

The original question read:

> *"Now I would like to talk about birth spacing - the various ways or methods that a couple can use to delay or avoid a pregnancy. Please tell me all the methods of birth control or spacing you know about."*

Outcome: Enumerators expressed concern about asking unmarried women about birth control methods, thereby implying that they are sexually active. After discussion and clarification that the question was focused on knowledge, rather than use, of birth control methods, the question was left in the survey. A restriction was added to the question so that it was only asked of young women who were over the age of 16 years old, including those who were unmarried.

- ### Non-Revision of Zaad/Mobile Finance Questions

Prior to the pilot, we considered removing questions regarding the use of mobile money services, such as Zaad, as these services are ubiquitous in Hargeisa and most major

cities. However, the fieldwork managers pointed out that the young women in the study were still young (16-23 years old) and that Zaad penetration is lower among adolescents and, especially, in rural areas. Given this, questions regarding the ownership of Zaad accounts were left in place.

- Addition of Questions

Questions were added to capture information on a woman's status in the community and to more completely capture the educational attainment of those in her household and immediate family. In addition, questions were added to assess how respondents would react to severe forms of IPV, with the related purpose of indicating a respondent's confidence in local courts and her ability to access justice. These questions tie in with significant recent research on access to justice in Somalia and Somaliland related to IPV and non-partner sexual assault, which shows both low reporting rates and limited confidence in the competence of district courts.[54] Added questions:

1. IPV and Access to Justice: Imagine one day that Abdirahman injures Amina very badly and she is in the hospital for several days. Would you recommend Amina to report her husband to the police or local court?
    a. Yes
    b. No

2. IPV and Access to Justice: How confident are you that the district court would be fair to Amina?
    a. Very confident
    b. Somewhat confident
    c. Not confident at all

3. Husband's Education: How much education did your husband complete?
    a. Did not complete any formal schooling
    b. Attended primary school but did not complete it
    c. Completed primary school
    d. Attended secondary school but did not complete it
    e. Completed secondary school
    f. Attended university or higher education
    g. I don't know how much education they completed

4. Respondent's Status in Community: Now I would like to ask you about your position in your community and among your friends and family. Imagine you

[54] See, e.g.: Consilient and First Call Partners. 2021. "Somalia Security and Justice Programme II Design Research"; Zaki, Manar, and Annika Nolte. 2021. "Gender Dimensions of Informal justice in Somalia"; Expanding Access to Justice (EAJ). 2020. "Access to Justice Assessment Tool: Somaliland Baseline Study".

were part of a savings group and the group needed to choose a leader. Often leaders are chosen because they are trusted and competent. How likely is it that you would be chosen?
    a. Very likely
    b. Somewhat likely
    c. Not likely at all

5. Respondent's Status in Community: When a woman has a problem with her husband, or has a difficult decision to make, they will often ask for advice from a friend or a family member. Now imagine a friend your age: how likely is it that a friend would ask for your advice on a difficult decision?
    a. Very likely
    b. Somewhat likely
    c. Not likely at all

- Removal of questions for length

The survey was shortened in one small way, with an adjustment to the child roster. Rather than asking the age of every child the woman has given birth to, we now ask the total number of children she has given birth to and the age of the oldest child only. Information on the age of younger children does not affect our calculation of the age at which she first became a mother and is not otherwise used in the survey.

- Changes to skip logic and demographic questions

Many minor adjustments to the survey's filtering logic were implemented post-pilot. In addition, questions to facilitate identification of the young women, including a more expansive re-contact and replacement module (the latter to ensure replacement respondents are selected properly and the replacement process is documented clearly) were added to the survey.

- Tool revisions during fieldwork

The revisions to the quantitative tool described above were completed following the pilot and prior to the start of fieldwork. No substantive revisions were made after the start of fieldwork. However, several minor errors were corrected during fieldwork, specifically:

1. The set of districts included as response options when respondents were asked where they currently live was expanded, as several districts were initially excluded

2. The set of subclans included as response options – when respondents were asked the clan of their father, mother, and husband – was expanded in response to feedback from enumerators

3. A scripting error in the migration module prevented 68 respondents (of n = 408) from completing portions of the module.[55] The affected respondents were all those interviewed in the first 3-4 days of fieldwork

2. Final Quantitative & Qualitative Tools

The following are the qualitative and quantitative tools used in Phase 2.

Table 1: Qualitative Tool – Phase 2

Thematic Area	Questions - English
Headline	Do you mind if I ask you some questions about yourself? Can you tell me when and where you were born? Are you married?
Marriage	**If YES Married:** Tell me about your husband? How did you come to get married? What kind of marriage was it? Did you move locations to be with your husband when you got married? If YES: Can you tell us about what that was like? What qualities or traits were you hoping for in a husband? What do you think makes a good husband? What do you think makes a good wife?
Marriage	**If YES Married:** What qualities or traits were you hoping for in a husband? What do you think makes a good husband? What do you think makes a good wife? What advice would you give to your friends who are not yet married?
Marriage	**If YES Married:** Is your husband close with the rest of your family? Does your family think he is a good husband for you? What is your relationship like with the rest of your husband's family? Who are you closest to in his family? Tell us about that relationship.
Marriage	**If YES Married:** Sometimes married couples face difficult periods. If you are having a difficult period

[55] We were still able to capture the migration status of the affected respondents. However, the error prevented us from capturing the full migration history (multiple instances of migration; circular migration; and reasons for migration) for this subset of respondents.

Thematic Area	Questions - English
	in your marriage, who would you turn to? Are they in this community or elsewhere? If you felt that your husband was not supporting, you (and your children) who would you go to? How confident are you that they would be able to help? What about if there were challenges with someone else in your family or household. How do you think you could find help or support in overcoming those challenges?
Marriage	**If NOT Married:** Do you plan to get married? What do you think is a good age to get married? Do you think you will want to move to be with your husband if/when you get married? Why or why not? Think about other women your age - do most of them move when they get married? How do you think they feel about this? How would you feel?
Marriage	**If NOT Married:** What do you think is a good way to find a good husband? What qualities or traits are you hoping for in a husband? What do you think makes a good husband? What do you think makes a good wife?
Marriage	**ALL:** Do you know any women who do not want to get married? Why do you think they feel this way? What do you think a woman's life is like if she doesn't get married? Do you think marriage is important? Why or why not?
Children	Do you have children?
Children	**If YES children:** Can you tell us about your kids? How many do you have, how old are they, and what is their gender? How would you describe each of your children's personalities? Even if they are very young, tell us a bit about them. Are they very attached to their mum, or do they like to explore a lot? What are their names and why did you choose those names?
Children	**If YES children:** Do you think you will have more children? Do you want to? Why or why not? How many children would you like to have? What about your husband? Does he want more children? How many does he want?
Children	**If YES children:** Can you tell us about your husband's relationship with the kids? What are some of the changes you have seen in your husband since he became a father, if any? What are some of the changes you have felt in yourself since becoming a mother, if any?
Children	**If YES children:** What do you think are the traits that make a good father? Why do you think they are important? What do you think are the traits that make a good mother? When you think of someone who is a very good mother, who do you think of and why? How do you try and be like them?

Thematic Area	Questions - English
Children	**If YES children:** What are some of the things, you hope for your children's lives? Do you think your children's' life will be different from yours? Are there things you will do to make their life different from yours? If so, what? What do you think you will try and keep the same between your childhood and their childhood?
Children	**If NO children**: How many children do you want to have? What do you think would be a good age to start having children for you? Is this something you would discuss with your husband before getting married? Have you heard of any women who disagreed with their husband on the number of children to have? How did they react? What would you do or how would you feel?
Children	**If NO children**: What do you think are the traits that make a good father? Why do you think they are important? What do you think are the traits that make a good mother? When you think of someone who is a very good mother, who do you think of and why?
Children	**If NO children**: What do you think are some of the differences between children now and when you were young? Do you think most of these changes are positive or negative? Why? What aspects of your childhood would you want to make sure is the same for your children? What would you want to be different for your children, if/when you have them?
Income	In some households, there are several different types of income. This can include a job or labour, production of livestock, remittances, or other livelihood types. Can you tell me about the different types of income in your household? Which members of the household are involved in each? What are you involved in? Do you enjoy it? What other types of livelihood types do you think you would want to participate in or learn to do?
Parents	We have talked about how children now may have different experiences than you did when you were a child. Now I want you to think about differences between your childhood and the childhood of your mother. Please tell me what you know about the early life of your parents and grandparents. What are the main differences between their childhood life and yours?
Parents	Now we may think about differences in adulthood between you and your mother. Thinking to your mother / grandmother and their lives, do they marry younger or older than you? Why is this do you think? Do you think the changes are mostly positive or negative? Why? Are the expectations for your life and achievements different from those placed on your mother and grandmother? Please explain and reflect on why they are different or not.

Thematic Area	Questions - English
Parents	Please give an example of something you have been able to do, and enjoyed, which your parents or grandparents could not do. Why were they unable to do this do you think?
Parents	How often do you see or speak with your mother? What do you usually talk about? What's something that you and your mother have in common? What is one of the biggest differences between you two? What about your grandmother?
Household	I am interested in learning about more aspects of your life. Can you tell me about who you live with? How would you describe the environment in your household? Do you think you prefer living in a house with many people or few? Why? Who are you closest with in the house?
Household	Walk me through a typical day for you, in as much detail as possible - what are the different responsibilities you have throughout the day? Who are you spending most of your time with? Which are your favourite and least favourite parts of the day?
Household	Now I want you think about 'jobs' people have in the house that don't earn money but contribute in other ways. This could mean producing goat milk or growing vegetables. It could also include cooking, cleaning, childcare, etc. What are the other 'jobs' that household members have? What are your household 'jobs'?
Household	Thinking back to the last big change in your household – moving, marrying, selling assets etc. – who makes these decisions? Why do you think this is?
Household	Can you think back to the last time your household went through a stressful shift. What was the reason for this? And how did your household change and respond to it?
Household	How important are your friends? Tell me about the people you are closest to outside of your family. What do you share with them? How often do you see them/spend time with them? Do they help you with struggles? How? Please give an example of a problem or difficulty that you have shared with your friends. Describe what they said to you. Did it help you? How?
Community	What have been some of the major challenges in your community in your lifetime? How did this affect your family? Consider all of the ways this changed or affected day-to-day life. What about your neighbours? Do you think your life was affected more than your neighbours or less? Why? What are some of the different ways you saw other people respond? If you faced a similar challenge again, what do you think you would do?

Thematic Area	Questions - English
Education	Can you remember your first day of school? What was it like and how did you feel? If you can't remember your very first day, what are some of the things you remember about school from when you were very young? Think about how you felt about other students, the teachers, what the place looked like, if you were nervous, etc.
Education	Did you have a favourite teacher? Why were they your favourite? Can you tell us about a memory you have of that teacher? We want to hear the story in as much detail as possible, including what happened and how you felt.
Education	Did you have a least favourite teacher? Or was there a teacher that many of the children did not like? Why was that? Can you tell us a story from your memory about them?
Education	Do you have mostly positive or negative feelings about school? How many years did you go and how many different schools did you go to?
Education	Thinking back to SOMGEP (or any school experience if they cannot recall SOMGEP), what were the most useful things education has done for you today, that you could not imagine doing if you had not gone to SOMGEP / school? What differences did it make to your life / other people at schools' lives? Please give clear examples.
Education	Can you think back and describe one or two positive experiences in SOMGEP / school, and the impact they had on you? How did school change you?
Education	What or who has helped you most in your education / being or staying at SOMGEP / school? Can you tell me in what ways / how they helped?
Education	If you are still studying, what is your plan for the future regarding education? How important to you is / was your schooling? How important was it to your family / community? Why? Thinking about your level of education, do you have more or less education than your mother / grandmother? What do you think are the reasons for this?
covid19	Has anyone in your family been exposed to COVID19? If so, how did you deal with it?
covid19	How COVID19 has affected your community in general?
covid19	What did your community do to prevent COVID19?

3. Quantitative Tool

The quantitative tool used in Study Phase 2 is reproduced in a readable format below. Note that some questions appear to have duplicate response options; this occurs when the response ordering is randomised and does not represent a scripting error.

Begin Group: pre_survey		
enum_name	**Enter Enumerator Name**	
select one		
101	Abdishakour Shekh Mohamud	
202	Amran Ahmed Cali	
302	Hana Aden Colhaye	
102	Cali Hussien Suleiman	
201	Guled Mohamed Hassan	
203	Ridwaan Hussien	
204	Suldaan Ahmed Maxamud	
103	Asia Ahmed Mohammed	
301	Mohamed Hussein Ismail	
104	Hamda Hussien Ibrahim	
401	Fariido Geele	
501	Mustafe Duulane	
601	Saamiya Abaas	
701	Hana Aden Colhaye	
702	Abdifataah Mohamed Ibrahim	
703	Mohamuud Bahnan	
704	Mohamed Hussein Ismail	
enum_name2	**Enter Enumerator Name again**	
select one		
101	Abdishakour Shekh Mohamud	
202	Amran Ahmed Cali	
302	Hana Aden Colhaye	
102	Cali Hussien Suleiman	
201	Guled Mohamed Hassan	
203	Ridwaan Hussien	
204	Suldaan Ahmed Maxamud	
103	Asia Ahmed Mohammed	
301	Mohamed Hussein Ismail	
104	Hamda Hussien Ibrahim	
401	Fariido Geele	
501	Mustafe Duulane	
601	Saamiya Abaas	
701	Hana Aden Colhaye	

702	Abdifataah Mohamed Ibrahim	
703	Mohamuud Bahnan	
704	Mohamed Hussein Ismail	
cati	**Are you completing this survey by calling the respondent or face-to-face?**	
select one		
0	In-person or face-to-face	
1	Over the phone (CATI/call centre)	
school_name	**5. School**	
select one		
60	Abdi Farax	
24	Agaaran	
49	Al Hikma	
34	Ardaa	
29	Aynu Shamsi	
40	Ba'adwein	
35	Badweyn	
2	Balidhiig	
25	Baraagaha Qol	
17	Bodacad	
20	Ceelcadde	
11	Coodanle	
4	Dabagoryaale	
50	Dabataag primary school	
18	Damalaxagare	
56	Dharkayn Geenyo primary school	
58	Dhoqoshay	
51	Dhumay primary school	
36	Durdur	
33	Galoolay	
19	Garadag	
30	General Cade	
52	God'aalo primary school	
55	Habarshiro primary school	
3	Harasheekh	
39	Hingalool primary school	
7	Imam Nawawi	
13	Imam Shafi	
37	Imamu Shafici	
1	Ina-afmadoobe	
54	Irro primary	
9	Kiridh	
59	Koosaar	

5	Laanmulaaxo	
57	Laasdoomaare	
14	Lafaweyne	
12	Qudhac Kudle	
28	Rigoomane primary	
53	Shaaca primary school	
38	Shamsu Hudaa	
16	Shimbiraale	
27	Tayo	
10	Waridaad	
6	Xaaji Saalax	
21	Xamilka	
32	Yucubyabooh	
school_code	**Select the school code**	
select one		
1	1	
2	2	
3	3	
4	4	
5	5	
6	6	
7	7	
9	9	
10	10	
11	11	
12	12	
13	13	
14	14	
16	16	
17	17	
18	18	
19	19	
20	20	
21	21	
24	24	
25	25	
27	27	
28	28	
29	29	
30	30	
32	32	
33	33	

34	34	
35	35	
36	36	
37	37	
38	38	
39	39	
40	40	
49	49	
50	50	
51	51	
52	52	
53	53	
54	54	
55	55	
56	56	
57	57	
58	58	
59	59	
60	60	
orig_name	**Select the girl's name from the list. If no girl appears on the next screen, you may have chosen the wrong school!**	
select one		
Begin Group: pre_survey		
enum_name	**Enter Enumerator Name**	
select one		
101	Abdishakour Shekh Mohamud	
202	Amran Ahmed Cali	
302	Hana Aden Colhaye	
102	Cali Hussien Suleiman	
201	Guled Mohamed Hassan	
203	Ridwaan Hussien	
204	Suldaan Ahmed Maxamud	
103	Asia Ahmed Mohammed	
301	Mohamed Hussein Ismail	
104	Hamda Hussien Ibrahim	
401	Fariido Geele	
501	Mustafe Duulane	
601	Saamiya Abaas	
701	Hana Aden Colhaye	
702	Abdifataah Mohamed Ibrahim	
703	Mohamuud Bahnan	

704	Mohamed Hussein Ismail	
enum_name2	**Enter Enumerator Name again**	
select one		
101	Abdishakour Shekh Mohamud	
202	Amran Ahmed Cali	
302	Hana Aden Colhaye	
102	Cali Hussien Suleiman	
201	Guled Mohamed Hassan	
203	Ridwaan Hussien	
204	Suldaan Ahmed Maxamud	
103	Asia Ahmed Mohammed	
301	Mohamed Hussein Ismail	
104	Hamda Hussien Ibrahim	
401	Fariido Geele	
501	Mustafe Duulane	
601	Saamiya Abaas	
701	Hana Aden Colhaye	
702	Abdifataah Mohamed Ibrahim	
703	Mohamuud Bahnan	
704	Mohamed Hussein Ismail	
cati	**Are you completing this survey by calling the respondent or face-to-face?**	
select one		
0	In-person or face-to-face	
1	Over the phone (CATI/call center)	
school_name	**5. School**	
select one		
60	Abdi Farax	
24	Agaaran	
49	Al Hikma	
34	Ardaa	
29	Aynu Shamsi	
40	Ba'adwein	
35	Badweyn	
2	Balidhiig	
25	Baraagaha Qol	
17	Bodacad	
20	Ceelcadde	
11	Coodanle	
4	Dabagoryaale	
50	Dabataag primary school	
18	Damalaxagare	
56	Dharkayn Geenyo primary school	

58	Dhoqoshay	
51	Dhumay primary school	
36	Durdur	
33	Galoolay	
19	Garadag	
30	General Cade	
52	God'aalo primary school	
55	Habarshiro primary school	
3	Harasheekh	
39	Hingalool primary school	
7	Imam Nawawi	
13	Imam Shafi	
37	Imamu Shafici	
1	Ina-afmadoobe	
54	Irro primary	
9	Kiridh	
59	Koosaar	
5	Laanmulaaxo	
57	Laasdoomaare	
14	Lafaweyne	
12	Qudhac Kudle	
28	Rigoomane primary	
53	Shaaca primary school	
38	Shamsu Hudaa	
16	Shimbiraale	
27	Tayo	
10	Waridaad	
6	Xaaji Saalax	
21	Xamilka	
32	Yucubyabooh	
school_code	**Select the school code**	
select one		
1	1	
2	2	
3	3	
4	4	
5	5	
6	6	
7	7	
9	9	
10	10	
11	11	

12	12	
13	13	
14	14	
16	16	
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29	29	
30	30	
32	32	
33	33	
34	34	
35	35	
36	36	
37	37	
38	38	
39	39	
40	40	
49	49	
50	50	
51	51	
52	52	
53	53	
54	54	
55	55	
56	56	
57	57	
58	58	
59	59	
60	60	
orig_name	**Select the girl's name from the list. If no girl appears on the next screen, you may have chosen the wrong school!**	
select one		
1	Girl's name (pulled from csv)	
orig_uniqueid	**Select the girl's unique ID from the list**	
select one		

orig_uniqueid	[List suppressed to save space]	
Note:	**This screen will give you the girl's information. Please confirm this information against her tracking sheet!** **Girl's name: ${orig_name}** **Caregiver name: ${calc_name_caregiver}** **Head of household name: ${calc_name_hoh}** **Phone #1: ${calc_phone1}** **Phone #2: ${calc_phone2}** **Phone #3: ${calc_phone3}**	
End Group: pre_survey		
Begin Group: recontact		
girl_found	**Did you contact and talk to ${orig_name}?**	
select one		
0	No	
1	Yes	
ref_reasons	**Why is ${orig_name} not available for an interview?**	${girl_found}=0
select one		
1	Could not contact girl	
2	Girl is sick	
3	Girl was too busy to participate	
4	Girl refused to participate	
5	Someone else (husband, mother, etc.) refused to let girl participate	
	Or other, please specify:_____	
ref_confirm	**You did not find ${orig_name}. Your team leader will replace her. Is that correct?**	${girl_found}=0
select one		
0	No	
1	Yes	
rep_uniqueid	**Select the replacement girl's unique ID**	${girl_found}=0
select one		
rep_uniqueid	[List suppressed to save space]	
rep_name	**What is the replacement girl's name?**	${girl_found}=0
select one		
1	Girl's name (pulled from csv)	
Note:	**You will be interviewing ${fingirl_name} (${uniqueid}). That is the original girl. Please confirm you are interviewing the correct girl!**	**${girl_found}=1**

Note:	**You will be interviewing ${fingirl_name} (${uniqueid}). That is a replacement for the original girl (${orig_uniqueid}). Please confirm you are interviewing the correct girl!** **Her information is:** **Girl's name: ${rep_name}** **Caregiver name: ${calc_repname_caregiver}** **Head of household name: ${calc_repname_hoh}** **Phone #1: ${calc_rep_phone1}** **Phone #2: ${calc_rep_phone2}** **Phone #3: ${calc_rep_phone3}**	**${girl_found}=0**
End Group: recontact		
Note:	**rand_order1 = ${rand_order1}** **rand_order2 = ${rand_order2}** **rand_order3 = ${rand_order3}** **village = ${village}** **moved = ${moved}** **age = ${cl_age}**	
region_f2f	**What is the region where the respondent lives?**	${cati}=0
select one		
1	Maroodi Jeex	
2	Togdheer	
3	Sanaag	
4	Awdal	
5	Sool	
6	Saaxil	
7	Bari	
8	Mudug (Puntland)	
9	Mudug (Galmudug)	
10	Nugaal	
11	Middle Shabelle	
12	Lower Shabelle	
13	Lower Juba	
14	Middle Juba	
15	Gedo	
16	Hiraan	
17	Bay	
18	Bakool	
19	Banadir	
20	Galgaduud	
95	Outside Somalia and Somaliland	
district_f2f	**What is the district where the respondent lives?**	${cati}=0 and (${region_f2f}<9 or ${region_f2f}=10)
select one		
1	Adhicadeeye	
2	Agabar	

3	Allaybaday	
4	Arabsiyo	
5	Aw-boogays	
6	Badhan	
7	Baki	
8	Bali-Cabane	
9	Baligubad	
10	Bali-Mataan	
11	Bayla	
12	Bebera	
13	Bohol	
14	Boocame	
15	Boon	
16	Boorame	
17	Bossaso	
18	Buhodle	
19	Bulaxaar	
20	Burco	
201	Bursalah	
21	Burtinle	
22	Cadaaley	
23	Cali-xaydh	
24	Calula	
25	Caroolay	
26	Caynabo	
27	Ceegaag	
28	Ceelaayo	
29	Ceel-afwayn	
30	Ceelal	
31	Ceergaabo	
32	Daarasalaam	
33	Dacarta	
34	Dangorayo	
35	Dararwayne	
36	Dhahar	
37	Dhanaano	
38	Dharkayngeeye	
39	Dhoqoshay	
40	Dilla	
41	Duruqsi	
42	Eyl	
43	Faraweyne	

44	Fiqi-ayuub	
45	Fiqi-fuliye	
46	Gabiley	
47	Gabo-gabo	
48	Galkayo	
49	Gar-adag	
50	Garbo-dadar	
51	Garowe	
52	Geed-Balaadh	
53	Go'dawayn	
54	God-aalo	
55	Godob	
56	Goldogob	
57	Goof-badarsalaam	
58	Gudmo-biyo Cas	
59	Gumburaha	
60	Harfo	
61	Hargeisa	
62	Haro-sheekh	
63	Huluul	
64	Iskushuban	
65	Kala-baydh	
66	Kalbar	
67	Laas Geel	
68	Laasa-dawaco	
69	Laasa-surad	
70	Laas-caanood	
71	Laas-ciidle	
72	Laas-qoray	
73	Lughaya	
74	Magaalo-cad	
75	Mandheera	
76	Masalaha Gorad	
77	Maydh	
78	Nasiye	
79	Odweyne	
80	Oog	
81	Qandala	
82	Qardho	
83	Qol-ujeed	
84	Qori-lugud	
85	Qoryaale	

86	Qoyta	
87	Rayadab-khaatumo	
88	Riyo-xidho	
89	Sabawanaag	
90	Salaxley	
91	Sarmaanyo	
92	Saylab-Barri	
93	Saylac	
94	Sh. Xasan Geele	
95	Shaxda	
96	Sheekh	
97	Taleex	
98	Ufayn	
99	Wadaamo goo	
100	Wajaale	
101	Waraabeeye	
102	War-cimraan	
103	War-Idaad	
104	Widh-widh	
105	Xaaji Saalax	
202	Xafun	
106	Xagal	
107	Xalin	
108	Xamar Iagu Xidh	
109	Xariirad	
110	Xeego	
111	Xiingalool	
112	Xiis	
113	Xudun	
114	Yagoori	
115	Yube	
116	Yufle	
urban_f2f	**Describe where the respondent lives.**	${cati}=0
select one		
1	A city	
2	A town	
3	A village	
4	A rural area	

consent	**Hello. Thank you for taking part in our survey. We are going to ask you some questions and record your answers. We will not share them with other people such as your parents, husband, or teachers. We are studying girls like you, including your schooling and your views of education. We will also ask you questions about your household. This information will only be used for our research. If there are any questions that you do not wish to answer, please let us know, and we will skip these questions. You can also stop this interview at any time.** **Is it okay to continue the interview?**	
select one		
0	No	
1	Yes	
Begin Group: consent_group		${consent}=1
Begin Group: demographics		
text input	**What is your full name?**	
age	**How old are you?**	
hh_members	**Who lives with you in this household?**	
select multiple	Hint: Select all that apply	
1	Husband	
2	Father	
3	Mother	
4	Brother	
5	Sister	
6	Mother-in-law	
7	Father-in-law	
8	My child or children	
9	Niece or nephew	
10	Other female relative (e.g. Aunt/grandmother)	
11	Other male relative (e.g. Uncle / grandfather)	
12	Other, non-relative	
95	No one else lives with me	
hoh	**The head of the household is the main person who makes decisions for the household, such as how money is spent. Who is the head of this household?**	
select one		
1	I am	
2	My husband	
3	My father	

4	My mother	
5	My brother	
6	My sister	
7	Other female relative (e.g. Aunt/grandmother)	
8	Other male relative (e.g., Uncle / grandfather)	
9	Other, non-relative	
region	**What region do you live in?**	${cati}=1
select one		
1	Maroodi Jeex	
2	Togdheer	
3	Sanaag	
4	Awdal	
5	Sool	
6	Saaxil	
7	Bari	
8	Mudug (Puntland)	
9	Mudug (Galmudug)	
10	Nugaal	
11	Middle Shabelle	
12	Lower Shabelle	
13	Lower Juba	
14	Middle Juba	
15	Gedo	
16	Hiraan	
17	Bay	
18	Bakool	
19	Banadir	
20	Galgaduud	
95	Outside Somalia and Somaliland	
district	**What district do you live in?**	${cati}=1 and (${region}<9 or ${region}=10)
select one		
1	Adhicadeeye	
2	Agabar	
3	Allaybaday	
4	Arabsiyo	
5	Aw-boogays	
6	Badhan	
7	Baki	
8	Bali-Cabane	
9	Baligubad	
10	Bali-Mataan	
11	Bayla	

12	Bebera	
13	Bohol	
14	Boocame	
15	Boon	
16	Boorame	
17	Bossaso	
18	Buhodle	
19	Bulaxaar	
20	Burco	
201	Bursalah	
21	Burtinle	
22	Cadaaley	
23	Cali-xaydh	
24	Calula	
25	Caroolay	
26	Caynabo	
27	Ceegaag	
28	Ceelaayo	
29	Ceel-afwayn	
30	Ceelal	
31	Ceergaabo	
32	Daarasalaam	
33	Dacarta	
34	Dangorayo	
35	Dararwayne	
36	Dhahar	
37	Dhanaano	
38	Dharkayngeeye	
39	Dhoqoshay	
40	Dilla	
41	Duruqsi	
42	Eyl	
43	Faraweyne	
44	Fiqi-ayuub	
45	Fiqi-fuliye	
46	Gabiley	
47	Gabo-gabo	
48	Galkayo	
49	Gar-adag	
50	Garbo-dadar	
51	Garowe	
52	Geed-Balaadh	

53	Go’dawayn	
54	God-aalo	
55	Godob	
56	Goldogob	
57	Goof-badarsalaam	
58	Gudmo-biyo Cas	
59	Gumburaha	
60	Harfo	
61	Hargeisa	
62	Haro-sheekh	
63	Huluul	
64	Iskushuban	
65	Kala-baydh	
66	Kalbar	
67	Laas Geel	
68	Laasa-dawaco	
69	Laasa-surad	
70	Laas-caanood	
71	Laas-ciidle	
72	Laas-qoray	
73	Lughaya	
74	Magaalo-cad	
75	Mandheera	
76	Masalaha Gorad	
77	Maydh	
78	Nasiye	
79	Odweyne	
80	Oog	
81	Qandala	
82	Qardho	
83	Qol-ujeed	
84	Qori-lugud	
85	Qoryaale	
86	Qoyta	
87	Rayadab-khaatumo	
88	Riyo-xidho	
89	Sabawanaag	
90	Salaxley	
91	Sarmaanyo	
92	Saylab-Barri	
93	Saylac	
94	Sh. Xasan Geele	

95	Shaxda	
96	Sheekh	
97	Taleex	
98	Ufayn	
99	Wadaamo goo	
100	Wajaale	
101	Waraabeeye	
102	War-cimraan	
103	War-Idaad	
104	Widh-widh	
105	Xaaji Saalax	
202	Xafun	
106	Xagal	
107	Xalin	
108	Xamar lagu Xidh	
109	Xariirad	
110	Xeego	
111	Xiingalool	
112	Xiis	
113	Xudun	
114	Yagoori	
115	Yube	
116	Yufle	
urban_cati	**What type of area do you live in?**	${cati}=1
select one		
1	A city	
2	A town	
3	A village	
4	A rural area	
End Group: demographics		
Begin Group: education		
enrol_current	**Now I would like you ask you about the time you spent in school. By "school," we mean formal primary school, secondary school, or university. Are you currently attending school?**	
select one		
0	No	
1	Yes	
grade_current	**What grade are you currently in?**	${enrol_current}=1
select one		
1	Grade 1 (Primary Level 1)	

2	Grade 2 (Primary Level 2)	
3	Grade 3 (Primary Level 3)	
4	Grade 4 (Primary Level 4)	
5	Grade 5 (Primary Level 5)	
6	Grade 6 (Primary Level 6)	
7	Grade 7 (Primary Level 7)	
8	Grade 8 (Primary Level 8)	
9	Grade 9 (Secondary Level 1)	
10	Grade 10 (Secondary Level 2)	
11	Grade 11 (Secondary Level 3)	
12	Grade 12 (Secondary Level 4)	
13	University or College	
14	Vocational or technical education	
Begin Group: enrol_years		
Note:	**We are interested in your experience of schooling since 2015. For each year, please tell me whether you were enrolled in school.**	
enrol_2015	**Were you enrolled in school in 2015?**	
select one		
0	No, I was not in school	
1	Yes, I was in school	
grade_2015	**What grade were you in during 2015?**	${enrol_2015}=1
select one		
1	Grade 1 (Primary Level 1)	
2	Grade 2 (Primary Level 2)	
3	Grade 3 (Primary Level 3)	
4	Grade 4 (Primary Level 4)	
5	Grade 5 (Primary Level 5)	
6	Grade 6 (Primary Level 6)	
7	Grade 7 (Primary Level 7)	
8	Grade 8 (Primary Level 8)	
9	Grade 9 (Secondary Level 1)	
10	Grade 10 (Secondary Level 2)	
11	Grade 11 (Secondary Level 3)	
12	Grade 12 (Secondary Level 4)	
13	University or College	
14	Vocational or technical education	
99	I don't remember	
enrol_2016	**Were you enrolled in school in 2016?**	
select one		
0	No, I was not in school	
1	Yes, I was in school	
grade_2016	**What grade were you in during 2016?**	${enrol_2016}=1

select one		
1	Grade 1 (Primary Level 1)	
2	Grade 2 (Primary Level 2)	
3	Grade 3 (Primary Level 3)	
4	Grade 4 (Primary Level 4)	
5	Grade 5 (Primary Level 5)	
6	Grade 6 (Primary Level 6)	
7	Grade 7 (Primary Level 7)	
8	Grade 8 (Primary Level 8)	
9	Grade 9 (Secondary Level 1)	
10	Grade 10 (Secondary Level 2)	
11	Grade 11 (Secondary Level 3)	
12	Grade 12 (Secondary Level 4)	
13	University or College	
14	Vocational or technical education	
99	I don't remember	
enrol_2017	**Were you enrolled in school in 2017?**	
select one		
0	No, I was not in school	
1	Yes, I was in school	
grade_2017	**What grade were you in during 2017?**	${enrol_2017}=1
select one		
1	Grade 1 (Primary Level 1)	
2	Grade 2 (Primary Level 2)	
3	Grade 3 (Primary Level 3)	
4	Grade 4 (Primary Level 4)	
5	Grade 5 (Primary Level 5)	
6	Grade 6 (Primary Level 6)	
7	Grade 7 (Primary Level 7)	
8	Grade 8 (Primary Level 8)	
9	Grade 9 (Secondary Level 1)	
10	Grade 10 (Secondary Level 2)	
11	Grade 11 (Secondary Level 3)	
12	Grade 12 (Secondary Level 4)	
13	University or College	
14	Vocational or technical education	
99	I don't remember	
enrol_2018	**Were you enrolled in school in 2018?**	
select one		
0	No, I was not in school	
1	Yes, I was in school	
grade_2018	**What grade were you in during 2018?**	${enrol_2018}=1

select one		
1	Grade 1 (Primary Level 1)	
2	Grade 2 (Primary Level 2)	
3	Grade 3 (Primary Level 3)	
4	Grade 4 (Primary Level 4)	
5	Grade 5 (Primary Level 5)	
6	Grade 6 (Primary Level 6)	
7	Grade 7 (Primary Level 7)	
8	Grade 8 (Primary Level 8)	
9	Grade 9 (Secondary Level 1)	
10	Grade 10 (Secondary Level 2)	
11	Grade 11 (Secondary Level 3)	
12	Grade 12 (Secondary Level 4)	
13	University or College	
14	Vocational or technical education	
99	I don't remember	
enrol_2019	**Were you enrolled in school in 2019?**	
select one		
0	No, I was not in school	
1	Yes, I was in school	
grade_2019	**What grade were you in during 2019?**	${enrol_2019}=1
select one		
1	Grade 1 (Primary Level 1)	
2	Grade 2 (Primary Level 2)	
3	Grade 3 (Primary Level 3)	
4	Grade 4 (Primary Level 4)	
5	Grade 5 (Primary Level 5)	
6	Grade 6 (Primary Level 6)	
7	Grade 7 (Primary Level 7)	
8	Grade 8 (Primary Level 8)	
9	Grade 9 (Secondary Level 1)	
10	Grade 10 (Secondary Level 2)	
11	Grade 11 (Secondary Level 3)	
12	Grade 12 (Secondary Level 4)	
13	University or College	
14	Vocational or technical education	
99	I don't remember	
enrol_2020	**Were you enrolled in school in 2020?**	
select one		
0	No, I was not in school	
1	Yes, I was in school	
grade_2020	**What grade were you in during 2020?**	${enrol_2020}=1

select one		
1	Grade 1 (Primary Level 1)	
2	Grade 2 (Primary Level 2)	
3	Grade 3 (Primary Level 3)	
4	Grade 4 (Primary Level 4)	
5	Grade 5 (Primary Level 5)	
6	Grade 6 (Primary Level 6)	
7	Grade 7 (Primary Level 7)	
8	Grade 8 (Primary Level 8)	
9	Grade 9 (Secondary Level 1)	
10	Grade 10 (Secondary Level 2)	
11	Grade 11 (Secondary Level 3)	
12	Grade 12 (Secondary Level 4)	
13	University or College	
14	Vocational or technical education	
99	I don't remember	
enrol_2021	**Were you enrolled in school in 2021?**	
select one		
0	No, I was not in school	
1	Yes, I was in school	
grade_2021	**What grade were you in during 2021?**	${enrol_2021}=1
select one		
1	Grade 1 (Primary Level 1)	
2	Grade 2 (Primary Level 2)	
3	Grade 3 (Primary Level 3)	
4	Grade 4 (Primary Level 4)	
5	Grade 5 (Primary Level 5)	
6	Grade 6 (Primary Level 6)	
7	Grade 7 (Primary Level 7)	
8	Grade 8 (Primary Level 8)	
9	Grade 9 (Secondary Level 1)	
10	Grade 10 (Secondary Level 2)	
11	Grade 11 (Secondary Level 3)	
12	Grade 12 (Secondary Level 4)	
13	University or College	
14	Vocational or technical education	
99	I don't remember	
End Group: enrol_years		
grade_last	**What is the highest level of school you completed?**	
select one		
1	Grade 1 (Primary Level 1)	

2	Grade 2 (Primary Level 2)	
3	Grade 3 (Primary Level 3)	
4	Grade 4 (Primary Level 4)	
5	Grade 5 (Primary Level 5)	
6	Grade 6 (Primary Level 6)	
7	Grade 7 (Primary Level 7)	
8	Grade 8 (Primary Level 8)	
9	Grade 9 (Secondary Level 1)	
10	Grade 10 (Secondary Level 2)	
11	Grade 11 (Secondary Level 3)	
12	Grade 12 (Secondary Level 4)	
13	University or College	
14	Vocational or technical education	
99	I don't remember	
Note:	**We are interested in how your schooling has affected your ability to read and do maths. I am going to ask you a few questions that ask you to add, subtract, or multiply. It is okay if you cannot answer or you get the answer wrong. We just want to see whether your experience in school gave you skills you can use in your daily life.**	
num1	**You go to the market with $15. You spend $8 on meat. How much money do you have left?:_____ (integer input)** **Hint: 99 = ma garanyo**	
num2	**You are saving money to buy a goat for your family. You have $125 for the goat. Today you earned $25 and add it to your savings. How much money do you have now?:_____ (integer input)** **Hint: 99 = ma garanyo**	
num3	**Three women arrive at a shop and ask for 9 tomatoes each. How many tomatoes, in total, have the women purchased?:_____ (integer input)** **Hint: 99 = ma garanyo**	
lit1	**Please imagine a friend sent you an SMS. Would you be able to read it?**	
select one		
1	Yes, it would be easy	
2	Yes, but it would be difficult	
3	No	
lit2	**Now imagine you were given a Somali poem to read. Would you be able to read it?**	
select one		
1	Yes, it would be easy	
2	Yes, but it would be difficult	
3	No	
End Group: education		

Begin Group: status		
leader	**Now I would like to ask you about your position in your community and among your friends and family.** **Imagine you were part of a savings group and the group needed to choose a leader. Often leaders are chosen because they are trusted and competent. How likely is it that you would be chosen?**	
select one		
1	Very likely	
2	Somewhat likely	
3	Not likely at all	
confidante	**When a woman has a problem with her husband, or has a difficult decision to make, they will often ask for advice from a friend or a family member. Now imagine a friend your age: how likely is it that a friend would ask for your advice on a difficult decision?**	
select one		
1	Very likely	
2	Somewhat likely	
3	Not likely at all	
candidate	**I am going to tell you about two hypothetical candidates for a district council election. I would like to know which candidate you would support. The first is Fatuma Jamac, who is 42 years old and has worked for the government for 5 years. The second is Abdifatah Suleiman, who is 50 years old and has mostly worked for NGOs for the last 15 years.** **Which candidate are you more likely to support?**	
select one		
1	Faadumo Jaamac	
0	Cabdifataax Sulaymaan	
0	Cabdifataax Sulaymaan	
1	Faadumo Jaamac	
End Group: status		
Begin Group: children		
married	**What is your current marital status?**	
select one		
1	Single	
2	Married	
3	Divorced or Widowed	

marr_age	**How old were you when you first married?**	${married}=2 or ${married}=3
marr_age_future	**Please think about yourself and what you want in the future. What would be the best age to get married?:_____ (integer input) Hint: 99 = does not want to get married**	${married}=1
marr_age_reasons	**Why do you think this would be a good age to be married?**	${married}=1
select multiple		
1	Most girls in my community marry at that age	
2	Men in my community want to marry girls at that age	
3	My parents want me to get married by that age	
4	My mother married at that age	
5	I will be mature enough to get married at that age	
6	I will have completed my schooling by that age	
7	I want to get married by that age so I can start a family	
	Or other, please specify:_____	
marr_age_comp1	**Please think about your mother and aunts. Do you think they were older or younger than you (${marr_age}) when they married?**	${married}=2 or ${married}=3
select one		
1	Older	
2	Younger	
3	About the same	
marr_age_comp2	**Please think about your mother and aunts. Do you think they were older or younger than ${marr_age_future} when they married?**	${married}=1
select one		
1	Older	
2	Younger	
3	About the same	
mother	**Have you ever given birth, even if the child is no longer alive?**	${married}=2 or ${married}=3
select one		
0	No	
1	Yes	
birth_age	**How old were you the first time you gave birth?**	${mother}=1
num_children	**How many children have you had?:_____ (integer input) Hint: Please include all live births, even if child is no longer living.**	${mother}=1
oldest_child	**How old is your oldest child? [Enter in years. If child is less than 1 year old, enter "0"]:_____ (integer input) Hint: If woman gave birth once , but the child is no longer living, DO NOT ask this question. Enter 99**	${mother}=1
pregnant	**Are you currently pregnant?**	${married}=2 or ${married}=3

select one		
0	No	
1	Yes	
bc_knowledge	**Now I would like to talk about birth spacing - the various ways or methods that a couple can use to delay or avoid a pregnancy. Please tell me all the methods of birth control or spacing you know about. [DO NOT read options]**	${age}>16
select multiple		
1	IUD (intra-uterine device)	
2	Injectables	
3	Implants	
4	Pill	
5	Condom (male condom)	
6	Female condom	
7	Rhythm method	
8	Withdrawal	
95	Does not know any methods	
	Or other, please specify:_____	
bc_access	**Now please imagine that you and your husband wanted to use a method of birth spacing. Do you know of a place where you can obtain a method of birth spacing?**	not(selected(${bc_knowledge},'95')) and ${age}>16
select one		
0	No	
1	Yes	
birth_spacing1	**After you have your first child, you and your husband will decide how long to wait before trying to have another child. If you could choose, how long would you wait before becoming pregnant again?**	${mother}=0
select one		
1	Less than 1 year	
2	1 year	
3	1.5 years	
4	2 years	
5	2.5 years	
6	3 years	
7	3.5 years	
8	4 years	
9	More than 4 years	
birth_spacing2	**After you have your next child, you and your husband will decide how long to wait before trying to have another child. If you could choose, how long would you wait before becoming pregnant again?**	${mother}=1

select one		
1	Less than 1 year	
2	1 year	
3	1.5 years	
4	2 years	
5	2.5 years	
6	3 years	
7	3.5 years	
8	4 years	
9	More than 4 years	
intra_hh0	**Imagine your husband wanted to have another child soon. You also want to have a child, but you want to wait another year. Who would decide whether to use a method of birth control or birth spacing?**	${married}=2
select one		
1	I would decide	
2	My husband would decide	
3	We would decide together	
2	My husband would decide	
1	I would decide	
3	We would decide together	
intra_hh1	**Imagine that you and your husband agree to wait another year to have a child. Who would decide which method of birth control you would use?**	${married}=2
select one		
1	I would decide	
2	My husband would decide	
3	We would decide together	
2	My husband would decide	
1	I would decide	
3	We would decide together	
marr_age_hypo	**I would like you to think about a younger girl you know, around age 12. This could be a younger sister, cousin, or a neighbour. Imagine that she asked you about being an adult and wanted to know when she should get married. What age would you tell her is the best age to marry?**	
mother_age_hypo	**In your opinion, what is the right age for a woman to have her first child?**	
End Group: children		
Begin Group: raising_children		
child_int1	**Parents are often busy with jobs and household work. Please think about a child who is 2 years old. How important**	

	is it to tell stories, sing songs, and play games with the child every day?	
select one		
1	Very important	
2	Somewhat important	
3	Not that important	
4	Not important at all	
child_int2	**Thinking about the same child, who is 2 years old, how important do you think it is to read to them each day?**	
select one		
1	Very important	
2	Somewhat important	
3	Not that important	
4	Not important at all	
child_int3	**In your opinion, how often should a parent play games and sing songs with a child?**	
select one		
1	Every day	
2	A few days per week	
3	One or two days per week	
4	Less than one day per week	
child_int4	**Now please think about an older child, who is 8 years old. How important do you think it is to help them with their schoolwork?**	
select one		
1	Very important	
2	Somewhat important	
3	Not that important	
4	Not important at all	
child_int5	**Does your household own any storybooks or books for children?**	
select one		
0	No	
1	Yes	
school_priority	**Parents often have to decide when their child should start school and when they should enrol in Quranic school. In your opinion, which should come first?**	
select one	Hint: Read all options!	
1	They should start Quranic school first	
2	They should start Quranic and formal school at the same time	
3	They should start formal school first	

support_educ1	**Please imagine you have a daughter who is 5 years old. You were planning for her to start school this year and you have saved some money for her school fees. A relative calls you and tells you that your aunt is ill and needs money to visit the hospital. In order to help your aunt, which of the following would you do?**	
select one		
1	Sell an animal or some household goods	
2	Withdraw your daughter for a few months to save school fees	
3	Don't know	
support_educ2	**Imagine your niece, Nimco, who is 16 years old. She goes to school most years, but she is not a very good student. She is currently in Grade 6. She has an offer of marriage from a man in her village. What would you recommend Nimco should do?**	
select one		
1	Continue schooling	
2	Accept proposal	
3	Both	
99	Don't know	
support_educ3	**To what extent do you agree "a girl is just as likely to use her education as a boy"**	
select one		
1	Strongly agree	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
End Group: raising_children		
Begin Group: economics		
employed	**Do you currently work outside your home?**	
select one		
0	No	
1	Yes	
emp_type	**What is your position?**	${employed}=1
select one		
1	I own a small business [shop, market stall, etc.]	
2	I have a full-time job	
3	I have a part-time job	
4	I help a family member or friend with their business, but I am not paid	

5	I help a family member or friend in their household, but I am not paid	
emp_past	**Have you ever worked outside your home?**	${employed}=0
select one		
0	No	
1	Yes	
emp_past_type	**What was your position?**	${emp_past}=1
select one		
1	I owned a small business [shop, market stall, etc.]	
2	I had a full-time job	
3	I had a part-time job	
4	I helped a family member or friend with their business, but I am not paid	
5	I helped a family member or friend in their household, but I am not paid	
emp_past_left	**Why did you leave this job?**	${emp_past}=1
select one		
1	I no longer liked the job	
2	It was only a short-term job	
3	Migrated away from the area	
4	Got married	
5	Became pregnant	
6	My husband / father no longer wanted me to work	
	Or other, please specify:_____	
emp_future	**Do you hope to have a job in the future?**	${employed}=0
select one		
0	No	
1	Yes	
income_source	**What is the main source of income for your household?**	
select one		
1	My job	
2	My business	
3	A full-time job of another household member (husband, mother, etc.)	
4	A business owned by another household member	
5	Raising animals	
6	Farming	
7	Remittances	
	Or other, please specify:_____	
livestock	**Does your household own any livestock?**	
select one	Hint: including camels, sheep, goats, cows.	
0	No	

1	Yes	
camels	**How many camels does your household own?**	${livestock}=1
cows	**How many cows does your household own?**	${livestock}=1
goats	**How many goats does your household own?**	${livestock}=1
sheep	**How many sheep does your household own?**	${livestock}=1
phone	**Does any member of your household own a phone?**	
select one		
1	Yes, I personally own a phone	
2	Yes, someone in my household owns a phone	
3	No	
99	Don't know	
phone_access	**Do you have access to the phone if you want to use it?**	
select one		
0	No	
1	Yes	
zaad	**Do you have a Zaad, e-Dahab, EVC, or other mobile money account?**	
select one		
0	No	
1	Yes	
zaad_name	**Is the account listed under your name?**	${zaad}=1
select one		
0	No	
1	Yes	
bank	**Do you have an account at a bank?**	
select one		
0	No	
1	Yes	
bank_own	**Are you the owner or part-owner of the account? In other words, is the account listed under your name?**	${bank}=1
select one		
1	The account is in my name	
2	The account has my name and someone else's name (husband, etc.)	
3	The account does not include my name	
cash_help	**Please imagine a cousin or friend was sick and needed to pay their hospital bill. It is $500. Right now, how much money could you or your household contribute to help your friend/cousin?**	
End Group: economics		
Begin Group: intra_hh		
Note:	**Now I would like to ask you about how decisions are made in your household.**	**${married}=1 or ${married}=2**

Note:	**Now I would like to ask you about how decisions are made in your household. For these questions, please think about how decisions were made when you were married.**	**${married}=3**
Begin Group: intra_hh_married		${married}=2 or ${married}=3
intra_hh2	**If you were feeling sick for several days, who would decide whether you should see a doctor or go to the hospital?**	
select one		
1	I would decide	
2	My husband would decide	
3	We would decide together	
2	My husband would decide	
1	I would decide	
3	We would decide together	
intra_hh2b	**Imagine you wanted to see a doctor but your husband did not think it was necessary. What would be the outcome?**	
select one		
1	I would see a doctor now	
2	I would wait to see a doctor later if I still felt sick	
3	I would not see a doctor	
intra_hh3	**A friend who works at a local organization has offered you a part-time job in their office. Who would decide if you should accept the job?**	
select one		
1	I would decide	
2	My husband would decide	
3	We would decide together	
2	My husband would decide	
1	I would decide	
3	We would decide together	
intra_hh3b	**Imagine you wanted to accept the job, because you could save the money for future expenses. Your husband does not want you to take the job. What would be the outcome?**	
select one		
1	I would take the job	
2	I would not take the job	
intra_hh4	**Imagine a member of your family – your uncle or aunt – who is in the diaspora visited last year. Recently, they sent you some money to help you and your family. Who would decide how the money should be spent?**	
select one		
1	I would decide	

2	My husband would decide	
3	We would decide together	
2	My husband would decide	
1	I would decide	
3	We would decide together	
intra_hh5	**Who usually decides how the money you earn will be used: you, your husband, or you and your husband jointly?**	
select one		
1	I do (respondent)	
2	Husband	
3	Respondent and husband jointly	
4	Someone Else (I.E. Father / Brother)	
intra_hh6	**Who usually makes decisions about making major household purchases?**	
select one		
1	I do (respondent)	
2	Husband	
3	Respondent and husband jointly	
4	Someone Else (I.E. Father / Brother)	
intra_hh7	**When you are going out, who do you usually ask permission?**	
select one		
1	I give myself permission	
2	My husband	
3	Myself and my husband jointly	
4	Someone else	
2	My husband	
1	I give myself permission	
3	Myself and my husband jointly	
4	Someone else	
End Group: intra_hh_married		
Begin Group: intra_hh_single		${married}=1
intra_hh11	**A friend who works at a local organization has offered you a part-time job in their office. Who would decide if you should accept the job?**	
select one		
1	I would decide	
2	My parents would decide	
3	We would decide together	
2	My parents would decide	
1	I would decide	
3	We would decide together	

intra_hh11b	**Imagine you wanted to accept the job, because you could save the money for future expenses. Your father does not want you to take the job. What would be the outcome?**	
select one		
1	I would take the job	
2	I would not take the job	
intra_hh12	**Imagine your aunt owns a small shop in this area. She travelled outside the area for a month and asked you to run her shop while she was gone. When she returned, she gave you $200 for your work and told you to use it for your future. Who would decide how the money should be spent?**	
select one		
1	I would decide	
2	My parents would decide	
3	We would decide together	
2	My parents would decide	
1	I would decide	
3	We would decide together	
intra_hh13	**Imagine a man in your area recently asked your parents to marry you. The man has a job and he is ten years older than you. Who would decide whether to accept his offer of marriage?**	
select one		
1	I would decide	
2	My parents would decide	
3	We would decide together	
2	My parents would decide	
1	I would decide	
3	We would decide together	
intra_hh13b	**Imagine you did not want to marry the man, because he lives in a distant city and you have friends and school or work in this area. Your father wants you to marry the man. What would be the outcome?**	
select one		
1	I would marry the man	
2	I would not marry the man	
intra_hh14	**When you are going out, who do you usually ask permission?**	
select one		
1	I give myself permission	
2	My father or other male family member	

3	My mother or other female family member	
4	Myself and another family member jointly	
5	Someone else	
2	My father or other male family member	
3	My mother or other female family member	
1	I give myself permission	
4	Myself and another family member jointly	
5	Someone else	
End Group: intra_hh_single		
End Group: intra_hh		
Begin Group: fgm		
Begin Group: fgm_fieldlist		
Note:	**Now I would like to ask you about a sensitive topic: female genital cutting or female circumcision.**	
fgm_pref1	**Please think about your own daughter or a daughter you might have in the future. Do you think your daughter should be circumcised?**	
select one		
0	No	
1	Yes	
95	I am not sure	
End Group: fgm_fieldlist		
fgm_reasons1	**Why do you feel your daughter should be circumcised?**	${fgm_pref1}=1
select one		
1	It is our tradition (all our female relatives were circumcised)	
2	Islam requires it	
3	It is expected by other people in our community	
4	Her future husband will expect her to be circumcised	
5	Circumcision is a sign that she is moral and modest	
6	Circumcision is a sign that she is clean	
6	Circumcision is a sign that she is clean	
5	Circumcision is a sign that she is moral and modest	
4	Her future husband will expect her to be circumcised	
3	It is expected by other people in our community	
2	Islam requires it	
1	It is our tradition (all our female relatives were circumcised)	
	Or other, please specify:_____	
fgm_pref2	**Would you expect a future daughter in law to be circumcised?**	

select one		
0	No	
1	Yes	
95	I am not sure	
fgm_reasons2	**Why do you feel a future daughter-in-law should be circumcised?**	${fgm_pref2}=1
select one		
1	It is our tradition (all our female relatives were circumcised)	
2	Islam requires it	
3	It is expected by other people in our community	
4	Her future husband will expect her to be circumcised	
5	Circumcision is a sign that she is moral and modest	
6	Circumcision is a sign that she is clean	
6	Circumcision is a sign that she is clean	
5	Circumcision is a sign that she is moral and modest	
4	Her future husband will expect her to be circumcised	
3	It is expected by other people in our community	
2	Islam requires it	
1	It is our tradition (all our female relatives were circumcised)	
	Or other, please specify:_____	
fgm_pref3	**In your view, is female circumcision required by Islam?**	
select one		
0	No	
1	Yes	
95	I am not sure	
fgm_pref4	**We would like to know your opinion of whether female circumcision should continue or be stopped. Which of the following would you prefer?**	
select one	Hint: Read all options!	
1	All forms of female circumcision should be allowed and continue	
2	Pharaonic circumcision should be stopped, but other forms of circumcision should continue	
3	All forms of female circumcision should be stopped	
End Group: fgm		
Begin Group: ipv		
Begin Group: ipv_fieldlist		
Note:	**Now I will ask you about conflict between men and women -- a husband and wife, or two people who are dating.**	
ipv_type	**What does domestic violence mean to you? Does it mean:**	

select multiple	Hint: [read all options to respondent]	
1	Physical abuse?	
2	No participation in decision-making for household?	
3	No participation in decision-making for children?	
4	Better treatment of males than females?	
5	Failing to meet basic living costs?	
6	Denial of education? Forced marriage?	
7	Rape?	
8	Sexual harassment?	
9	Denial of inheritance?	
95	None of these	
End Group: ipv_fieldlist		
Begin Group: ipv_fieldlist2		
Note:	**In this community and elsewhere, people have different ideas about men and women and what is acceptable behaviour for men and women in the home. I am going to read you a list of statements. Please tell me how much you personally agree or disagree with the statement. There are no right or wrong answers.**	
ipv_agree1	**Women and men should share authority in the family.**	
select one		
1	Agree strongly	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
4	Do not agree at all	
3	Agree a little	
2	Agree somewhat	
1	Agree strongly	
ipv_agree2	**A woman's most important role is to take care of her home, cook for her family and take care of the children.**	
select one		
1	Agree strongly	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
4	Do not agree at all	
3	Agree a little	
2	Agree somewhat	
1	Agree strongly	

ipv_agree4	**A wife should obey her husband even if she disagrees.**	
select one		
1	Agree strongly	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
4	Do not agree at all	
3	Agree a little	
2	Agree somewhat	
1	Agree strongly	
ipv_agree5	**A woman should tolerate violence to keep her family together**	
select one		
1	Agree strongly	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
4	Do not agree at all	
3	Agree a little	
2	Agree somewhat	
1	Agree strongly	
End Group: ipv_fieldlist2		
Begin Group: ipv_fieldlist3		
Note:	**In your opinion, is a husband justified in hitting or beating his wife in the following situations?**	
ipv_beat1	**If she goes out without telling him?**	
select one		
0	No (he is not justified in hitting/beating his wife)	
1	Yes (he is justified in hitting/beating his wife)	
99	Don't know	
1	Yes (he is justified in hitting/beating his wife)	
0	No (he is not justified in hitting/beating his wife)	
99	Don't know	
ipv_beat2	**If she argues with him?**	
select one		
0	No (he is not justified in hitting/beating his wife)	
1	Yes (he is justified in hitting/beating his wife)	
99	Don't know	
1	Yes (he is justified in hitting/beating his wife)	
0	No (he is not justified in hitting/beating his wife)	
99	Don't know	

ipv_beat3	**If she neglects household duties, including cooking?**	
select one		
0	No (he is not justified in hitting/beating his wife)	
1	Yes (he is justified in hitting/beating his wife)	
99	Don't know	
1	Yes (he is justified in hitting/beating his wife)	
0	No (he is not justified in hitting/beating his wife)	
99	Don't know	
ipv_beat4_any	**Are there any situations where it is acceptable for a husband to hit or beat his wife?**	${ipv_beat1}=0 and ${ipv_beat2}=0 and ${ipv_beat3}=0
select one		
0	No	
1	Yes	
End Group: ipv_fieldlist3		
ipv_divorce	**Now please imagine you have a friend named Amina. She is 25 years old and is married to Abdirahman.** **Sometimes Abdirahman beats her, especially when he does not like the dinner she prepared. If Amina is at the market or a friend's house when he arrives at home, he always beats her. He has injured her in the past. Amina is not sure what to do. If Amina asked your opinion, what would you suggest?**	
select one		
1	I would support Amina strongly to divorce Abdirahman	
2	I would support Amina somewhat to divorce Abdirahman	
3	I would not support Amina to divorce Abdirahman	
court	**Imagine one day that Abdirahman injures Amina very badly and she is in the hospital for several days. Would you recommend Amina to report her husband to the police or local court?**	
select one		
0	No	
1	Yes	
court_conf	**How confident are you that the district court would be fair to Amina?**	
select one		
1	Very confident	
2	Somewhat confident	
3	Not at all confident	
End Group: ipv		

Begin Group: media		
Begin Group: media_fieldlist		
Note:	**Thank you for answering those questions. The rest of our questions are easier.**	
newspaper	**How often do you read a newspaper/magazine?**	
select one		
1	At least once per week	
2	Occasionally, but less than once per week	
3	Never	
3	Never	
2	Occasionally, but less than once per week	
1	At least once per week	
End Group: media_fieldlist		
radio	**How often do you listen to the radio?**	
select one		
1	At least once per week	
2	Occasionally, but less than once per week	
3	Never	
3	Never	
2	Occasionally, but less than once per week	
1	At least once per week	
tv	**How often do you watch television?**	
select one		
1	At least once per week	
2	Occasionally, but less than once per week	
3	Never	
3	Never	
2	Occasionally, but less than once per week	
1	At least once per week	
internet	**Have you ever used the internet? The internet includes social media, such as Facebook.**	
select one		
0	No	
1	Yes	
99	Don't know	
internet_freq	**How often do you use the internet?**	${internet}=1
select one		
1	Daily	
2	Weekly	
3	Monthly	
4	Occasionally	

5	Never	
End Group: media		
Begin Group: somgep		
prog1	**From 2014-2016, CARE and its partners implemented a programme called SOMGEP or "Mashuurca Kobcinta Waxbarashada Gabdhaha". Do you recall participating in that programme?**	
select one		
0	No	
1	Yes	
prog2	**Please think back to the time 2014-2016. Do you remember your family receiving any of these items through a program?**	${prog1}=0
select multiple	Hint: Read all options	
1	Cash stipend to your family	
2	Bursary for you to attend school	
3	Soap	
4	Oil	
5	Books/pens	
6	Sanitary kits	
7	Uniforms	
95	None of these	
	Or other, please specify:_____	
prog3	**What do you remember about the program?**	${prog1}=1
select multiple	Hint: Read all options	
1	We received a cash stipend	
2	We received a bursary to attend school	
3	We received oil	
4	We received soap	
5	We received books/pens	
6	We received sanitary kits	
7	We received uniforms	
8	There were girls clubs to attend	
9	We were listened to and asked about our lives	
99	I don't remember anything specific	
	Or other, please specify:_____	
prog4	**In your opinion, if this program had not been running in your community, would you have gone to school anyway?**	${prog1}=1
select one		
0	No	
1	Yes	
99	Don't know	

prog5	**In your opinion, did the program help you complete more schooling than you would have without it?**	${prog1}=1
select one		
0	No	
1	Yes	
prog6a	**Do you agree or disagree? Participating in SOMGEP gave me useful knowledge and skills**	${prog1}=1
select one		
1	Strongly agree	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
prog6b	**Do you agree or disagree? My education gave me useful knowledge and skills**	${prog1}=0
select one		
1	Strongly agree	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
prog7a	**When I finished SOMGEP I had hope for better things in my future**	${prog1}=1
select one		
1	Strongly agree	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
prog7b	**When I finished my education I had hope for better things in my future**	${prog1}=0
select one		
1	Strongly agree	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
prog8a	**SOMGEP helped me be more confident in my life**	${prog1}=1
select one		
1	Strongly agree	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
prog8b	**School helped me be more confident in my life**	${prog1}=0
select one		
1	Strongly agree	

2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
prog9a	**I have used or will use some of the skills I learned in SOMGEP in the future**	${prog1}=1
select one		
1	Strongly agree	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
prog9b	**I have used or will use some of the skills I learned in school in the future**	${prog1}=0
select one		
1	Strongly agree	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
prog10	**I will make a more confident mother because of my education**	
select one		
1	Strongly agree	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
prog11	**I will have a stronger voice in decision-making at home because of my education**	
select one		
1	Strongly agree	
2	Agree somewhat	
3	Agree a little	
4	Do not agree at all	
prog12	**Please think about girls like you in your village or in other communities, who did not participate in SOMGEP. For instance, girls who were a little older or younger than you or grew up in a different village where SOMGEP was not active. Do you think they would have any challenges completing the same amount of education as you?**	${prog1}=1
select multiple		
1	Difficulty paying for a uniform, books, or other learning materials	
2	Difficulty getting their parents to agree to let them attend school	
3	Without support from the program (cash stipend/bursary), they would not be able to go to school	

95	They would not face any more challenges than me	
	Or other, please specify:_____	
prog13	**Overall, do you think your experience in SOMGEP positively or negatively affected your life?**	${prog1}=1
select one		
1	Strong positive impact	
2	Some positive impact	
3	No impact	
4	Some negative impact	
5	Strong negative impact	
End Group: somgep		
Begin Group: migration		
Note:	**We are almost done with the interview. We have a few questions about your household and the people in it.**	
mig	**When we interviewed you before, you lived in this village. Between that time and now, did you ever migrate to a new village or city, even if it was only temporary?**	${moved}="She still lives in this village"
select one		
0	No	
1	Yes	
mig_times1	**How many total times did you migrate to a new village or city? For example, if you moved from ${village} to Berbera and then moved back to ${village}, you moved two times in total.**	${mig}=1
mig_times2	**When we interviewed you before, you lived in ${village}. Between that time and now, how many total times did you migrate to a new village or city, even if it was only temporary? For example, if you moved from ${village} to Berbera and then later moved to this area, you moved two times in total.**	${moved}="She moved and lives somewhere else"
Begin Group: mig1_dist_list		${mig_times1}>0 or ${mig_times2}>0
mig1_reg	**Now I would like to ask you about the first time you moved. This was when you left ${village} the first time. What district did you move to?** **[Enumerator: choose the region first, then choose the district]**	${mig_times1}>0 or ${mig_times2}>0
select one		
1	Maroodi Jeex	
2	Togdheer	
3	Sanaag	
4	Awdal	
5	Sool	

6	Saaxil	
7	Bari	
8	Mudug (Puntland)	
9	Mudug (Galmudug)	
10	Nugaal	
11	Middle Shabelle	
12	Lower Shabelle	
13	Lower Juba	
14	Middle Juba	
15	Gedo	
16	Hiraan	
17	Bay	
18	Bakool	
19	Banadir	
20	Galgaduud	
95	Outside Somalia and Somaliland	
mig1_dist	**District**	(${mig_times1}>0 or ${mig_times2}>0) and (${mig1_reg} < 9 or ${mig1_reg}=10)
select one		
1	Adhicadeeye	
2	Agabar	
3	Allaybaday	
4	Arabsiyo	
5	Aw-boogays	
6	Badhan	
7	Baki	
8	Bali-Cabane	
9	Baligubad	
10	Bali-Mataan	
11	Bayla	
12	Bebera	
13	Bohol	
14	Boocame	
15	Boon	
16	Boorame	
17	Bossaso	
18	Buhodle	
19	Bulaxaar	
20	Burco	
201	Bursalah	
21	Burtinle	
22	Cadaaley	

23	Cali-xaydh	
24	Calula	
25	Caroolay	
26	Caynabo	
27	Ceegaag	
28	Ceelaayo	
29	Ceel-afwayn	
30	Ceelal	
31	Ceergaabo	
32	Daarasalaam	
33	Dacarta	
34	Dangorayo	
35	Dararwayne	
36	Dhahar	
37	Dhanaano	
38	Dharkayngeeye	
39	Dhoqoshay	
40	Dilla	
41	Duruqsi	
42	Eyl	
43	Faraweyne	
44	Fiqi-ayuub	
45	Fiqi-fuliye	
46	Gabiley	
47	Gabo-gabo	
48	Galkayo	
49	Gar-adag	
50	Garbo-dadar	
51	Garowe	
52	Geed-Balaadh	
53	Go'dawayn	
54	God-aalo	
55	Godob	
56	Goldogob	
57	Goof-badarsalaam	
58	Gudmo-biyo Cas	
59	Gumburaha	
60	Harfo	
61	Hargeisa	
62	Haro-sheekh	
63	Huluul	
64	Iskushuban	

65	Kala-baydh	
66	Kalbar	
67	Laas Geel	
68	Laasa-dawaco	
69	Laasa-surad	
70	Laas-caanood	
71	Laas-ciidle	
72	Laas-qoray	
73	Lughaya	
74	Magaalo-cad	
75	Mandheera	
76	Masalaha Gorad	
77	Maydh	
78	Nasiye	
79	Odweyne	
80	Oog	
81	Qandala	
82	Qardho	
83	Qol-ujeed	
84	Qori-lugud	
85	Qoryaale	
86	Qoyta	
87	Rayadab-khaatumo	
88	Riyo-xidho	
89	Sabawanaag	
90	Salaxley	
91	Sarmaanyo	
92	Saylab-Barri	
93	Saylac	
94	Sh. Xasan Geele	
95	Shaxda	
96	Sheekh	
97	Taleex	
98	Ufayn	
99	Wadaamo goo	
100	Wajaale	
101	Waraabeeye	
102	War-cimraan	
103	War-Idaad	
104	Widh-widh	
105	Xaaji Saalax	
202	Xafun	

106	Xagal	
107	Xalin	
108	Xamar Iagu Xidh	
109	Xariirad	
110	Xeego	
111	Xiingalool	
112	Xiis	
113	Xudun	
114	Yagoori	
115	Yube	
116	Yufle	
End Group: mig1_dist_list		
mig1_urban	**Now think about the place you moved TO. What type of area was your home in?**	${mig_times1}>0 or ${mig_times2}>0
select one		
1	A city	
2	A town	
3	A village	
4	A rural area	
mig1_reason	**What caused you to move away from ${village}?**	${mig_times1}>0 or ${mig_times2}>0
select multiple	Hint: Read all response options	
1	Moved to attend secondary school	
2	Moved to attend university, vocational training, or other schooling	
3	Moved to find employment or start a business	
4	Moved to live with my husband	
5	Moved to live with other family members	
6	Moved due to drought	
7	Moved due to conflict or insecurity	
97	Other	
Begin Group: mig2_dist_list		${mig_times1}>1 or ${mig_times2}>1
mig2_reg	**Now I would like to ask you about the second time you moved. This was when you moved away from ${mig1_dist_str} [refer to destination of prior move]. What district did you move to?** **[Enumerator: choose the region first, then choose the district]**	${mig_times1}>1 or ${mig_times2}>1
select one		
1	Maroodi Jeex	
2	Togdheer	
3	Sanaag	
4	Awdal	

5	Sool	
6	Saaxil	
7	Bari	
8	Mudug (Puntland)	
9	Mudug (Galmudug)	
10	Nugaal	
11	Middle Shabelle	
12	Lower Shabelle	
13	Lower Juba	
14	Middle Juba	
15	Gedo	
16	Hiraan	
17	Bay	
18	Bakool	
19	Banadir	
20	Galgaduud	
95	Outside Somalia and Somaliland	
mig2_dist	**District**	(${mig_times1}>1 or ${mig_times2}>1) and (${mig2_reg} < 9 or ${mig2_reg}=10)
select one		
1	Adhicadeeye	
2	Agabar	
3	Allaybaday	
4	Arabsiyo	
5	Aw-boogays	
6	Badhan	
7	Baki	
8	Bali-Cabane	
9	Baligubad	
10	Bali-Mataan	
11	Bayla	
12	Bebera	
13	Bohol	
14	Boocame	
15	Boon	
16	Boorame	
17	Bossaso	
18	Buhodle	
19	Bulaxaar	
20	Burco	
201	Bursalah	
21	Burtinle	

22	Cadaaley	
23	Cali-xaydh	
24	Calula	
25	Caroolay	
26	Caynabo	
27	Ceegaag	
28	Ceelaayo	
29	Ceel-afwayn	
30	Ceelal	
31	Ceergaabo	
32	Daarasalaam	
33	Dacarta	
34	Dangorayo	
35	Dararwayne	
36	Dhahar	
37	Dhanaano	
38	Dharkayngeeye	
39	Dhoqoshay	
40	Dilla	
41	Duruqsi	
42	Eyl	
43	Faraweyne	
44	Fiqi-ayuub	
45	Fiqi-fuliye	
46	Gabiley	
47	Gabo-gabo	
48	Galkayo	
49	Gar-adag	
50	Garbo-dadar	
51	Garowe	
52	Geed-Balaadh	
53	Go'dawayn	
54	God-aalo	
55	Godob	
56	Goldogob	
57	Goof-badarsalaam	
58	Gudmo-biyo Cas	
59	Gumburaha	
60	Harfo	
61	Hargeisa	
62	Haro-sheekh	
63	Huluul	

64	Iskushuban	
65	Kala-baydh	
66	Kalbar	
67	Laas Geel	
68	Laasa-dawaco	
69	Laasa-surad	
70	Laas-caanood	
71	Laas-ciidle	
72	Laas-qoray	
73	Lughaya	
74	Magaalo-cad	
75	Mandheera	
76	Masalaha Gorad	
77	Maydh	
78	Nasiye	
79	Odweyne	
80	Oog	
81	Qandala	
82	Qardho	
83	Qol-ujeed	
84	Qori-lugud	
85	Qoryaale	
86	Qoyta	
87	Rayadab-khaatumo	
88	Riyo-xidho	
89	Sabawanaag	
90	Salaxley	
91	Sarmaanyo	
92	Saylab-Barri	
93	Saylac	
94	Sh. Xasan Geele	
95	Shaxda	
96	Sheekh	
97	Taleex	
98	Ufayn	
99	Wadaamo goo	
100	Wajaale	
101	Waraabeeye	
102	War-cimraan	
103	War-Idaad	
104	Widh-widh	
105	Xaaji Saalax	

202	Xafun	
106	Xagal	
107	Xalin	
108	Xamar Iagu Xidh	
109	Xariirad	
110	Xeego	
111	Xiingalool	
112	Xiis	
113	Xudun	
114	Yagoori	
115	Yube	
116	Yufle	
End Group: mig2_dist_list		
mig2_urban	**Now think about the place you moved TO. What type of area was your home in?**	${mig_times1}>1 or ${mig_times2}>1
select one		
1	A city	
2	A town	
3	A village	
4	A rural area	
mig2_reason	**What caused you to move the second time?**	${mig_times1}>1 or ${mig_times2}>1
select multiple	Hint: Read all response options	
1	Moved to attend secondary school	
2	Moved to attend university, vocational training, or other schooling	
3	Moved to find employment or start a business	
4	Moved to live with my husband	
5	Moved to live with other family members	
6	Moved due to drought	
7	Moved due to conflict or insecurity	
97	Other	
Begin Group: mig3_dist_list		${mig_times1}>2 or ${mig_times2}>2
mig3_reg	**Now I would like to ask you about the third time you moved. This was when you moved away from ${mig2_dist_str} [refer to destination of prior move]. What district did you move to?** **[Enumerator: choose the region first, then choose the district]**	${mig_times1}>2 or ${mig_times2}>2
select one		
1	Maroodi Jeex	
2	Togdheer	
3	Sanaag	

4	Awdal	
5	Sool	
6	Saaxil	
7	Bari	
8	Mudug (Puntland)	
9	Mudug (Galmudug)	
10	Nugaal	
11	Middle Shabelle	
12	Lower Shabelle	
13	Lower Juba	
14	Middle Juba	
15	Gedo	
16	Hiraan	
17	Bay	
18	Bakool	
19	Banadir	
20	Galgaduud	
95	Outside Somalia and Somaliland	
mig3_dist	**District**	
select one		
1	Adhicadeeye	
2	Agabar	
3	Allaybaday	
4	Arabsiyo	
5	Aw-boogays	
6	Badhan	
7	Baki	
8	Bali-Cabane	
9	Baligubad	
10	Bali-Mataan	
11	Bayla	
12	Bebera	
13	Bohol	
14	Boocame	
15	Boon	
16	Boorame	
17	Bossaso	
18	Buhodle	
19	Bulaxaar	
20	Burco	
201	Bursalah	
21	Burtinle	

22	Cadaaley	
23	Cali-xaydh	
24	Calula	
25	Caroolay	
26	Caynabo	
27	Ceegaag	
28	Ceelaayo	
29	Ceel-afwayn	
30	Ceelal	
31	Ceergaabo	
32	Daarasalaam	
33	Dacarta	
34	Dangorayo	
35	Dararwayne	
36	Dhahar	
37	Dhanaano	
38	Dharkayngeeye	
39	Dhoqoshay	
40	Dilla	
41	Duruqsi	
42	Eyl	
43	Faraweyne	
44	Fiqi-ayuub	
45	Fiqi-fuliye	
46	Gabiley	
47	Gabo-gabo	
48	Galkayo	
49	Gar-adag	
50	Garbo-dadar	
51	Garowe	
52	Geed-Balaadh	
53	Go'dawayn	
54	God-aalo	
55	Godob	
56	Goldogob	
57	Goof-badarsalaam	
58	Gudmo-biyo Cas	
59	Gumburaha	
60	Harfo	
61	Hargeisa	
62	Haro-sheekh	
63	Huluul	

64	Iskushuban	
65	Kala-baydh	
66	Kalbar	
67	Laas Geel	
68	Laasa-dawaco	
69	Laasa-surad	
70	Laas-caanood	
71	Laas-ciidle	
72	Laas-qoray	
73	Lughaya	
74	Magaalo-cad	
75	Mandheera	
76	Masalaha Gorad	
77	Maydh	
78	Nasiye	
79	Odweyne	
80	Oog	
81	Qandala	
82	Qardho	
83	Qol-ujeed	
84	Qori-lugud	
85	Qoryaale	
86	Qoyta	
87	Rayadab-khaatumo	
88	Riyo-xidho	
89	Sabawanaag	
90	Salaxley	
91	Sarmaanyo	
92	Saylab-Barri	
93	Saylac	
94	Sh. Xasan Geele	
95	Shaxda	
96	Sheekh	
97	Taleex	
98	Ufayn	
99	Wadaamo goo	
100	Wajaale	
101	Waraabeeye	
102	War-cimraan	
103	War-Idaad	
104	Widh-widh	
105	Xaaji Saalax	

202	Xafun	
106	Xagal	
107	Xalin	
108	Xamar Iagu Xidh	
109	Xariirad	
110	Xeego	
111	Xiingalool	
112	Xiis	
113	Xudun	
114	Yagoori	
115	Yube	
116	Yufle	
End Group: mig3_dist_list		
mig3_urban	**Now think about the place you moved TO. What type of area was your home in?**	${mig_times1}>2 or ${mig_times2}>2
select one		
1	A city	
2	A town	
3	A village	
4	A rural area	
mig3_reason	**What caused you to move the third time?**	${mig_times1}>2 or ${mig_times2}>2
select multiple	Hint: Read all response options	
1	Moved to attend secondary school	
2	Moved to attend university, vocational training, or other schooling	
3	Moved to find employment or start a business	
4	Moved to live with my husband	
5	Moved to live with other family members	
6	Moved due to drought	
7	Moved due to conflict or insecurity	
97	Other	
father_educ	**Now I would like to ask you about the other members of the household where you grew up. Please think about the man who ran your household. For most people, this is your father, but it could also be an uncle or someone else. How much education did this person complete?**	
select one	Hint: Select all that apply!	
1	Did not complete any formal schooling	
2	Attended primary school but did not complete it	
3	Completed primary school	
4	Attended secondary school but did not complete it	

5	Completed secondary school	
6	Attended university or higher education	
99	I don't know how much education they completed	
mother_educ	**Now think about the woman who ran your household. For most people, this is your mother, but it could be an aunt or someone else. How much education did this person complete?**	
select one		
1	Did not complete any formal schooling	
2	Attended primary school but did not complete it	
3	Completed primary school	
4	Attended secondary school but did not complete it	
5	Completed secondary school	
6	Attended university or higher education	
99	I don't know how much education they completed	
husband_educ	**How much education did your husband complete?**	${married}=2
select one		
1	Did not complete any formal schooling	
2	Attended primary school but did not complete it	
3	Completed primary school	
4	Attended secondary school but did not complete it	
5	Completed secondary school	
6	Attended university or higher education	
99	I don't know how much education they completed	
num_eligible	**We want to know more about your brothers and sisters. How many siblings do you have who are currently 16 years or older?:_____ (integer input) Hint: If they are not sure the age of one of their brothers/sisters, they can estimate the age.**	
Note:	**Please think about your brothers and sisters, starting with the oldest one you included in the previous question.**	**${num_eligible}>0**
Begin Group: sibling_group		${num_eligible}>0
Begin Group: sibling_loop		
gender_sib	**Who is sibling #${sib_num}?**	${sib_num}<=${num_eligible}
select one		
0	Brother	
1	Sister	
age_sib	**How old is sibling #${sib_num}?:_____ (integer input) Hint: 11 = don't know**	${sib_num}<=${num_eligible}
educ_sib	**How much education did sibling #${sib_num} complete?**	${sib_num}<=${num_eligible}

select one	Hint: If the brother/sister is still in school, enter how much education they have completed SO FAR	
1	Did not complete any formal schooling	
2	Attended primary school but did not complete it	
3	Completed primary school	
4	Attended secondary school but did not complete it	
5	Completed secondary school	
6	Attended university or higher education	
99	I don't know how much education they completed	
End Group: sibling_loop		
End Group: sibling_group		
End Group: migration		
Begin Group: demographics_part2		
zakat	**As you know, Ramadan just ended. Many people were not able to give Zakat this year because of the drought and other financial hardship. Was your household able to give Zakat this year?**	
select one		
0	No	
1	Yes	
chopped_meat	**Now I would like you to think about the eating habits in your household. How many times per week do you typically eat chopped meat (suqar)?**	
whole_meat	**How many times per week do you typically eat whole meat (Maraq iyo hilib)?**	
covid	**How was your family affected by the COVID-19 crisis? [MARK ALL THAT APPLY; DON'T READ THE ANSWERS]**	
select multiple		
0	Was not affected at all	
1	Lost a job	
2	Unable to conduct business or lost customers	
3	Sickness (her own/ family members)	
8	Lost family members/ relatives	
4	Stress	
6	Dropped out of school	
7	Increased workload	
99	Don't know	
Begin Group: fclan		
clan_father	**What is your father's clan?**	
select one		
1	Isaaq - Arap	

2	Isaaq - Ayub	
3	Isaaq - Eidegalle	
4	Isaaq - Habar Jeclo	
5	Isaaq - Habar Yonis	
6	Isaaq - Issa Muse	
7	Isaaq - Sacad Muse	
8	Isaaq - Tol Jeclo	
9	Other Isaaq clan	
101	Gabooye, Madhiban, Midgaan	
201	Daarood - Harti - Dhulbahante	
202	Daarood - Harti - Dishiishe	
203	Daarood - Harti - Majeerteen	
204	Daarood - Harti - Warsangeli	
205	Daarood - Sadde - Marehan	
209	Darood - Awrtable	
208	Darood - Jidwaaq	
207	Darood - Leelkase	
206	Darood - Ogaden	
299	Other Darood Clan	
997	Other	
clan_father2	**What is your father's clan?**	${clan_father}=997
select one		
1	Abaajibil (Awajibil)	
2	Ajuuraan	
3	Barawan	
4	Benadiri	
12	Dir - Biyomaal (Bimaal)	
13	Dir - Gadabursi	
14	Dir - Issa	
15	Hawiye - Abgaal	
16	Hawiye - Baadicade	
17	Hawiye - Gaaljecel	
18	Hawiye - Gorgate - Silcis	
19	Hawiye - Habar Gedir	
24	Hawiye - Hawadle	
25	Hawiye - Mobleyn	
26	Hawiye - Murusade	
27	Hawiye - Sheekhaal	
28	Hawiye - Wacdaan	
29	Hintire	
38	Jareer	
39	Jareer - Eylo (Sab-Eyle)	

40	Jareer - Shiidle	
41	Madhibaan	
42	Midgaan	
43	Rahanweyn - Digil	
56	Rahanweyn - Mirifle	
77	Gabooye	
997	Other	
text input	**What is the Isaaq subclan?**	${clan_father}=9
text input	**What is the Darood subclan?**	${clan_father}=299
text input	**Other, specify**	${clan_father2}=997
End Group: fclan		
Begin Group: mclan		
clan_mother	**What is your mother's clan?**	
select one		
1	Isaaq - Arap	
2	Isaaq - Ayub	
3	Isaaq - Eidegalle	
4	Isaaq - Habar Jeclo	
5	Isaaq - Habar Yonis	
6	Isaaq - Issa Muse	
7	Isaaq - Sacad Muse	
8	Isaaq - Tol Jeclo	
9	Other Isaaq clan	
101	Gabooye, Madhiban, Midgaan	
201	Daarood - Harti - Dhulbahante	
202	Daarood - Harti - Dishiishe	
203	Daarood - Harti - Majeerteen	
204	Daarood - Harti - Warsangeli	
205	Daarood - Sadde - Marehan	
209	Darood - Awrtable	
208	Darood - Jidwaaq	
207	Darood - Leelkase	
206	Darood - Ogaden	
299	Other Darood Clan	
997	Other	
clan_mother2	**What is your mother's clan?**	${clan_mother}=997
select one		
1	Abaajibil (Awajibil)	
2	Ajuuraan	
3	Barawan	
4	Benadiri	
12	Dir - Biyomaal (Bimaal)	

13	Dir - Gadabursi	
14	Dir - Issa	
15	Hawiye - Abgaal	
16	Hawiye - Baadicade	
17	Hawiye - Gaaljecel	
18	Hawiye - Gorgate - Silcis	
19	Hawiye - Habar Gedir	
24	Hawiye - Hawadle	
25	Hawiye - Mobleyn	
26	Hawiye - Murusade	
27	Hawiye - Sheekhaal	
28	Hawiye - Wacdaan	
29	Hintire	
38	Jareer	
39	Jareer - Eylo (Sab-Eyle)	
40	Jareer - Shiidle	
41	Madhibaan	
42	Midgaan	
43	Rahanweyn - Digil	
56	Rahanweyn - Mirifle	
77	Gabooye	
997	Other	
text input	**What is the Isaaq subclan?**	${clan_mother}=9
text input	**What is the Darood subclan?**	${clan_mother}=299
text input	**Other, specify**	${clan_mother2}=997
End Group: mclan		
Begin Group: hclan		
clan_husband	**What is your husband's clan?**	${married}=2
select one		
1	Isaaq - Arap	
2	Isaaq - Ayub	
3	Isaaq - Eidegalle	
4	Isaaq - Habar Jeclo	
5	Isaaq - Habar Yonis	
6	Isaaq - Issa Muse	
7	Isaaq - Sacad Muse	
8	Isaaq - Tol Jeclo	
9	Other Isaaq clan	
101	Gabooye, Madhiban, Midgaan	
201	Daarood - Harti - Dhulbahante	
202	Daarood - Harti - Dishiishe	
203	Daarood - Harti - Majeerteen	

204	Daarood - Harti - Warsangeli	
205	Daarood - Sadde - Marehan	
209	Darood - Awrtable	
208	Darood - Jidwaaq	
207	Darood - Leelkase	
206	Darood - Ogaden	
299	Other Darood Clan	
997	Other	
clan_husband2	**What is your husband's clan?**	${clan_husband}=997
select one		
1	Abaajibil (Awajibil)	
2	Ajuuraan	
3	Barawan	
4	Benadiri	
12	Dir - Biyomaal (Bimaal)	
13	Dir - Gadabursi	
14	Dir - Issa	
15	Hawiye - Abgaal	
16	Hawiye - Baadicade	
17	Hawiye - Gaaljecel	
18	Hawiye - Gorgate - Silcis	
19	Hawiye - Habar Gedir	
24	Hawiye - Hawadle	
25	Hawiye - Mobleyn	
26	Hawiye - Murusade	
27	Hawiye - Sheekhaal	
28	Hawiye - Wacdaan	
29	Hintire	
38	Jareer	
39	Jareer - Eylo (Sab-Eyle)	
40	Jareer - Shiidle	
41	Madhibaan	
42	Midgaan	
43	Rahanweyn - Digil	
56	Rahanweyn - Mirifle	
77	Gabooye	
997	Other	
text input	**What is the Isaaq subclan?**	${clan_husband}=9
text input	**What is the Darood subclan?**	${clan_husband}=299
text input	**Other, specify**	${clan_husband2}=997
End Group: hclan		
End Group: demographics_part2		

End Group: consent_group		
qual_consent	**We are also conducting more detailed interviews with some girls/women who participated in SOMGEP. The goal is to hear more about your life. Would you be willing to participate in an additional interview sometime in the next 1-2 days?**	${consent}=1
select one	Hint: Adjust number of days depending on how long you will be in the village!	
0	No	
1	Yes	
phone	**Thank you. One of my colleagues will contact you soon. What is the best phone number to use to reach you?**	${qual_consent}=1
agegap_conf	**Based on the last time we spoke to ${name}, we expected her age to be ${cl_age} years. You said she is ${age} years. How confident are you that ${name} is actually ${age} years old?**	(${age_diff}>1 or ${age_diff}<-1) and ${consent}=1
select one		
1	Very confident	
2	Somewhat confident	
3	Not at all confident	
agegap_direction	**In your opinion, is the girl older or younger than ${age} years?**	${agegap_conf}=2 or ${agegap_conf}=3
select one		
1	Much older (3+ years older than ${age})	
2	Older (1-2 years older than ${age})	
3	Younger (1-2 years younger than ${age})	
4	Much younger (3+ years younger than ${age})	
Note:	**That is the end of the survey. Thank the participant again!**	

Annex 5:

What We Measured

Annex 5: What We Measured

This annex provides a more detailed description of the various proxy measures and indices used in our analysis and reporting.

1. Introduction

Based on our conceptual framework and the varied research questions this study addresses, we measured a wide range of outcomes and individual- and household-level characteristics. The complex, multidimensional nature of many of the concepts of interest necessitated the use of both proxy measures and aggregate indices for outcomes, such as household wealth. For instance, we measured household wealth in 2015/6 as an index aggregating eight individual measures of home/abode construction quality, household ownership of durable assets, and occupation.

Before describing the measurement approach for specific outcomes, it is important to motivate the use of proxies and indices – rationales which are shared across measures. First, we use proxy measures of outcomes that cannot be measured directly, or which are prohibitively difficult to measure directly. Even if our interest was in household consumption or household income – as opposed to markers of more durable wealth – a full accounting of household consumption is extremely time-consuming and cannot be incorporated into a survey in which it is not the primary focus. Proxy measures capture the bulk – but certainly not all – of the important variation across respondents or households but have other advantages. Depending on their construction, these advantages can include:

- Requiring less time to collect, because one or a few proxy measures can be substituted for a much more detailed survey module
- Shorter recall periods or other strategies to improve the accuracy of responses
- A focus on tangible outcomes that respondents are more likely to recall and which are less subject to idiosyncratic biases and intra-respondent variation[56]
- Capturing variation (when well-contextualised) that would be missed by lengthier but more generalisable questionnaires

Second, we use indices to capture multidimensional outcomes. Female empowerment and support for education – to take two examples – cannot be captured by any single

[56] For instance, asking a respondent to assess their level of empowerment might produce responses that vary widely *within the same respondent* as a function of the day, the enumerator asking the question, etc. A recent positive or negative experience at home can frame the question and powerfully alter response patterns. Asking about tangible outcomes or specific scenarios reduces the variability in how respondents interpret a question or concept and helps to anchor their responses, reducing the impact of priming, framing effects, short-term mood, and other factors that can shape responses.

measure because they are inherently multidimensional. An individual's support for education will vary depending on the context: whose education, at what level, what trade-offs are required to encourage education, and so forth. Indices that aggregate multiple measures help us – as far as is possible – to better measure multidimensional outcomes.

Third, indices that aggregate multiple correlated outcomes increase statistical power, when all outcomes are related, in the same direction, to a given predictor (Kling and Liebman). Put simply, if two measures of the same underlying concept are correlated, and each is correlated with a predictor, such as household wealth during childhood, we will be better able to identify the effect, statistically, using an index combining the two measures than studying each measure separately. Given our relatively small sample, combining multiple measures into sensible indices improves our ability to identify meaningful relationships in the data.

2. Overview of Measures Used

Table 1 provides an overview of the proxies we employed across several topical areas, for each data collection period. The sections that follow unpack these measures in more detail providing information on how indices were constructed. Note that our measures often differ between the 2015/6 and 2022 rounds, largely because we did not design the survey tools used in 2015/6. Wherever possible, our tools in 2022 made use of improved measures of household income/wealth, female empowerment, etc., which were not used in 2015/6.

More importantly, given the goal of our study, there is no theoretical or statistical need for measures to be identical across the two time periods. Our study is not a baseline-to-endline, pre-post comparison, as is common in programme evaluations. Our goal is not to analyse change in a particular outcome over time – drawing conclusions about trends in the population – which would require identical measures. Rather, we use data from 2015/6 to predict outcomes in 2022. In the most common case, we are interested in whether an individual or household characteristic – e.g., household wealth – in 2015/6 predicts a woman's eventual educational attainment. In this case, there is no need for identical measures of wealth across time, because household wealth in 2022 is not relevant and is not included in our model.

The less common case also involves the link between 2015/6 and 2022 outcomes but uses more closely-related outcomes. Specifically, we test whether household wealth in 2015/6 is correlated with household wealth in 2022. Even here, identical measures of wealth are not necessary, because our goal is not to report changes in wealth levels over time, but to understand how wealth in one period predicts wealth in another. At worst, the use of slightly different measures makes the relationship between wealth in the two periods slightly noisier. However, just as there is no methodological problem

with analysing correlation between two different measures of the same concept, there is no objection to performing the same analysis across two time periods.[57]

Table 1: Proxies measured and compared across data collection periods

Area	Proxies 2015/2016	Proxies 2022
Household Wealth / Poverty	<u>Wealth / Durable Assets</u> 1. HH has an improved roof 2. HH has an improved (cement, tile, etc.) floor 3. Number of rooms in house 4. HH has its own toilet for sole use 5. HH has access to electricity 6. HH owns a bed 7. HH owns a radio 8. HH is non-pastoral (does not own livestock) <u>Short-Term Deprivation / Poverty</u> 1. HH head is unemployed or pastoralist 2. Primary caregiver unemployed or pastoralist 3. HH is unable to meet basic needs without charity 4. HH has experienced hunger many/most days in last year 5. HH has gone without clean water many/most days in last year 6. HH has gone without cash income many/most days in last year	<u>Wealth & Income</u> 1. Source of HH income – HH does not rely primarily on pastoralism 2. HH ownership of large livestock – camels, cows 3. HH ownership of medium livestock - goats, sheep 4. Access to money to pay for short-term healthcare costs 5. Eating of chopped meat, meals per week 6. Eating of "whole" meat, meals per week 7. Ability to give zakat this year

[57] Perhaps even clearer are cases where measures have changed over time in response to major increases in standards. For instance, analysing whether primary school completion (one measure of educational attainment) by one's parents is correlated with a higher likelihood of university education (a different measure of educational attainment) is reasonable, especially if primary completion is no longer a useful distinction – i.e., if primary completion is almost universal among the latter generation. Again, this analysis tests for correlation between two different measures of the same overall construct in the same way we have outlined for household wealth in our less-common use case.

Area	Proxies 2015/2016	Proxies 2022
Agency / Empowerment	Girl's self-perceived control of educational decisions: 1. Whether girl has control over whether to stay in school 2. Whether girl makes decisions about her schooling	1. Influence or control over household decision-making – including birth spacing, method of birth control, right to work, how to spend money that comes to her, whether to seek healthcare, who she will marry, major household purchases, whether she is allowed to leave house
Gender / Social Norms		1. Tolerance of IPV in scenarios in which a woman has gone out without telling her husband; argued with her husband; neglected household duties 2. Support for female politician 3. Whether there are any scenarios in which IPV is justified 4. Whether IPV is sufficient grounds for divorce 5. Preferences for / against FGM/C for one's daughter and daughter-in-law 6. Opinions on the religious justification for FGM/C and whether public policy regarding FGM/C should be changed.

In the sections below, we describe the variables – and survey questions, where they are not standard survey measures – that, collectively, form each index. We also describe how each component of the index is re-coded and re-scaled, how the components are aggregated (typically additive), the possible range of the final index, and its Cronbach's α (alpha) score, which is a measure of correlation between the components of an index.

Our most common approach involved re-scaling each component of an index to a 0-1 score using a min-max transformation, with the former maximum value equal to 1. A variable scored on a 1-4 scale would be transformed to the unit (0,1) interval, such that:

- Original score of 1 becomes 0/3 or 0
- Original score of 2 becomes 1/3
- Original score of 3 becomes 2/3
- Original score of 4 becomes 3/3 or 1

In the sections that follow, we refer to this process as a min-max transformation to a 0-1 scale and explicitly note where we deviate from this approach.

3. Index Construction in 2022 Data

3.1. Household Wealth / Income

The 2022 round of data collection used several new measures of household wealth, income, or poverty. The components of a household wealth / income index were:

- HH does not rely primarily on pastoralism for income – (0 = HH relies on pastoralism; 1 = HH does not rely on pastoralism)
- HH ownership of large livestock (camels, cows) – ranged from 0 to 200
- HH ownership of medium livestock (goats, sheep) – ranged from 0 to 500
- Access to money to pay for short-term healthcare costs – ranged from $0 to $500
    - Question text: "Please imagine a cousin or friend was sick and needed to pay their hospital bill. It is $500. Right now, how much money could you or your household contribute to help your friend/cousin?"
- Eating of chopped meat, meals per week – ranged from 0 to 7 times per week
- Eating of "whole" meat, meals per week – ranged from 0 to 7 times per week
- Ability to give zakat this year (0 = no; 1 = yes)
    - Question text: "As you know, Ramadan just ended. Many people were not able to give Zakat this year because of the drought and other financial hardship. Was your household able to give Zakat this year?"

Re-Scaling of Components: min-max transformation to a 0-1 scale
Aggregation of Components: Mean of components (0-1 scale, continuous)
Direction of Score: Higher scores represent higher levels of household wealth / income.
Cronbach's α: 0.41

3.2. Tolerance of IPV

We constructed an index of "tolerance" of IPV based on the number of circumstances in which a respondent felt a husband hitting or beating his wife would be justified. The components of the index were:

- In your opinion, is a husband justified in hitting or beating his wife in the following situations: If she goes out without telling him?
- In your opinion, is a husband justified in hitting or beating his wife in the following situations: If she argues with him?
- In your opinion, is a husband justified in hitting or beating his wife in the following situations: If she neglects household duties, including cooking?

Each component was scored 1 if a woman felt IPV was justified and 0 otherwise. The final index was maintained on a 0-3 scale, without re-scaling, to maintain the straightforward interpretation provided by the 0-3 scale: a respondent's score is simply the number of scenarios in which she felt IPV was justified.

Re-Scaling of Components: none (0 = IPV not justified; 1 = IPV justified)
Aggregation of Components: Sum of components (0-3 scale, interval)
Direction of Score: Higher scores represent greater tolerance of IPV
Cronbach's α: 0.67

3.3. Women's Empowerment in Decision-Making

We constructed an index of control over decision-making based on women's perceived influence over several types of decisions. Given the fact that married women typically live away from their parents and unmarried women typically live with their parents, single and married women were presented with a slightly different set of scenarios and response options.

For single women, respondents indicated whether they would make the decision, their parents would make the decision, or the decision would be made jointly. The components of the index were:

- A friend who works at a local organization has offered you a part-time job in their office. Who would decide if you should accept the job?
- Imagine your aunt owns a small shop in this area. She travelled outside the area for a month and asked you to run her shop while she was gone. When she returned, she gave you $200 for your work and told you to use it for your future. Who would decide how the money should be spent?
- Imagine a man in your area recently asked your parents to marry you. The man has a job and he is ten years older than you. Who would decide whether to accept his offer of marriage?
- When you are going out, who do you usually ask permission?

For married or previously-married women, respondents indicated whether they or their husband would make the decision, or whether they would make the decision jointly. The components of the index were:

- If you were feeling sick for several days, who would decide whether you should see a doctor or go to the hospital?
- A friend who works at a local organization has offered you a part-time job in their office. Who would decide if you should accept the job?

- Imagine a member of your family – your uncle or aunt – who is in the diaspora visited last year. Recently, they sent you some money to help you and your family. Who would decide how the money should be spent?
- Who usually decides how the money you earn will be used: you, your husband, or you and your husband jointly?
- Who usually makes decisions about making major household purchases?
- When you are going out, who do you usually ask permission?

Our main index is based on **sole control** of the decision. For each scenario, a woman receives a score of 1 if she reports she would make the decision and 0 otherwise. Because the number of scenarios differed as a function of a woman's marital status, we first calculated the scores for ever married and single women separately and transformed the scores to a 0-1 scale separately, to ensure that scores were not affected by differences in the number of scenarios presented.

Re-Scaling of Components: To binary 0/1 scale (1 = sole control; 0 = husband/parents control or joint control)
Aggregation of Components: Sum of components, followed by a min-max transformation to a 0-1 continuous scale. Because the number of scenarios differed as a function of a woman's marital status, the transformation was completed separately for married and single women to prevent married women's higher score totals from affecting the scale applied to single women. The final result was a continuous 0-1 scale for all women.
Direction of Score: Higher scores represent greater control over decision-making
Cronbach's α: 0.42 among married women; 0.53 among single women

We also constructed and used a scale based on **sole or joint control**, in which women received a score of 1 if she would make the decision or she would share decision-making control (Cronbach's α = 0.54 among married women; 0.55 among single women).

3.4. Willingness to Invest in Early Childhood Development

Women were asked several questions about how much time and energy should be spent playing games, singing songs, and reading with young children and how important it is to be able to help an older child with their schoolwork. This index is intended to capture a woman's interest in investing in the cognitive and educational development of their children, present or future. The components of the index were:

- Importance of telling stories, playing games, and singing songs with a young child (4 = very important; 3 = somewhat important; 2 = Not that important; 1 = Not important at all)

    - Question Text: “Parents are often busy with jobs and household work. Please think about a child who is 2 years old. How important is it to tell stories, sing songs, and play games with the child every day?”
- Importance of reading to a young child daily (4 = very important; 3 = somewhat important; 2 = Not that important; 1 = Not important at all)
    - Question Text: “Thinking about the same child, who is 2 years old, how important do you think it is to read to them each day?”
- Frequency of playing games and singing songs with a young child (4 = every day; 3 = a few days per week; 2 = one or two days per week; 1 = less than one day per week)
    - Question Text: “In your opinion, how often should a parent play games and sing songs with a child?”
- Importance of helping older child with schoolwork (4 = very important; 3 = somewhat important; 2 = Not that important; 1 = Not important at all)
    - Question Text: “Now please think about an older child, who is 8 years old. How important do you think it is to help them with their schoolwork?”

Re-Scaling of Components: Min-max transformation to a 0/1 continuous scale
Aggregation of Components: Mean of components, (0-1 continuous scale)
Direction of Score: Higher scores represent more support for child development
Cronbach’s α: 0.40

3.5. Support for Girls’ Education

This index measures a woman’s support for girls’ education.

- Support for a girl’s enrolment in school when faced with financial trade-off
    - Question Text: “Please imagine you have a daughter who is 5 years old. You were planning for her to start school this year and you have saved some money for her school fees. A relative calls you and tells you that your aunt is ill and needs money to visit the hospital. In order to help your aunt, which of the following would you do?”
    - Scored: 1 = sell an animal or household goods; 0 = withdraw daughter from school for a few months
- Support for a girl’s enrolment in school over marriage
    - Question Text: “Imagine your niece, Nimco, who is 16 years old. She goes to school most years, but she is not a very good student. She is currently in Grade 6. She has an offer of marriage from a man in her village. What would you recommend Nimco should do?”
    - Scored: 1 = continue schooling; 0 = accept marriage proposal or “both”
- Belief that girls are likely to use their education

- Question Text: “To what extent do you agree “a girl is just as likely to use her education as a boy”
- Scored: 1 = strongly agree; 0 = agree somewhat/a little/not at all

Re-Scaling of Components: No re-scaling (binary 0/1 scale)
Aggregation of Components: Mean of components, (0-1 continuous scale)
Direction of Score: Higher scores represent greater support for girls’ education
Cronbach’s α: 0.02

4. Index Construction in 2015/6 Data

4.1. Household Wealth

Because the 2015/6 data captured indicators of both longer-term poverty / wealth – such as the ownership of durable assets – and shorter-term deprivation, we constructed two separate indices capturing these different outcomes. To the extent that we are interested in the relationship between early-life characteristics and later-life outcomes, we should expect stable wealth / poverty to have different effects than short-term shocks to household income.

Our household wealth index captures the following components:

- HH has an improved roof
  - 1 = wood, tin, iron, cement, tile, asbestos roof; 0 = otherwise
- HH has an improved floor
  - 1 = wood, tin/iron, cement, tile
- Number of rooms in house
  - Capped at 4 rooms; re-scaled to 0-1 continuous scale using min-max transformation
- HH has its own toilet for sole use
  - Question text: “Is toilet shared or used just for your dwelling?”
  - 1 = toilet is just for this dwelling; 0 = otherwise
- HH has access to electricity (1 = yes; 0 = no)
- HH owns a bed (1 = yes; 0 = no)
- HH owns a radio (1 = yes; 0 = no)
- HH is not engaged significantly in pastoralism[58]

[58] While livestock is a common store of value in Somalia and Somaliland, households engaged primarily in pastoralism face greater degrees of economic marginalization than others.

- Question text: “What is the main occupation of [head of household/primary caregiver]?”
- 1 = neither head of household nor primary caregiver are primarily engaged in pastoralism as their occupation; 0 = otherwise

Re-Scaling of Components: See above (all components either 0/1 binary or 0-1 continuous after re-scaling via min-max transformation)
Aggregation of Components: Mean of components, (0-1 continuous scale)
Direction of Score: Higher scores represent greater household wealth
Cronbach’s α: 0.79

4.2. Short-Term Household Poverty

Shorter-term deprivation is measured using six indicators:

- Head of household has no formal occupation
  - 1 = no occupation or engaged in pastoralism; 0 = any occupation
- Primary caregiver of girl has no formal occupation
  - 1 = no occupation or engaged in pastoralism; 0 = any occupation
- Head of household self-described as needing charity to meet some or all of their basic needs
  - Question text: “Please tell me which of the following phrases best suits your household situation: unable to meet basic needs without charity; able to meet basic needs; able to meet basic needs with some non-essential goods; able to purchase most non-essential goods; plenty of disposable income”
  - 1 = unable to meet basic needs without charity; 0 = otherwise
- Self-reported going to bed hungry many/most days in the past year
  - Question text: “Over the past twelve months, how many days, if ever, have you or anyone in your family experienced the following: Gone to sleep at night feeling hungry?”
  - 1 = Many days (more than 10) or most days/always; 0 = otherwise
- Self-reported lacking clean water for household use many/most days in the past year
  - Question text: “Over the past twelve months, how many days, if ever, have you or anyone in your family experienced the following: Gone without enough clean water for home use?”
  - 1 = Many days (more than 10) or most days/always; 0 = otherwise
- Self-reported lacking a cash income many/most days in the past year.

- Question text: “Over the past twelve months, how many days, if ever, have you or anyone in your family experienced the following: Gone without cash income?”
- 1 = Many days (more than 10) or most days/always; 0 = otherwise

Re-Scaling of Components: None – all components are 0/1 binary scores
Aggregation of Components: Mean of components, (0-1 continuous scale)
Direction of Score: Higher scores represent short-term poverty
Cronbach’s α: 0.43

4.3. Enthusiasm for Education

This measure captures a girl’s relative enthusiasm for schooling and education. It consists of three components:

- Agree a lot: I am eager to go to school in the morning
  - 1 = agree a lot; 0 = otherwise
- Agree a lot: I enjoy reading
  - 1 = agree a lot; 0 = otherwise
- Agree a lot: I enjoy doing math
  - 1 = agree a lot; 0 = otherwise

Re-Scaling of Components: None – all components are 0/1 binary scores
Aggregation of Components: Mean of components, (0-1 continuous scale)
Direction of Score: Higher scores represent greater enthusiasm for education
Cronbach’s α: 0.44

4.4. Perceived Importance of Education

This measure captures the extent to which girls feel that education is important for their future. It consists of four components:

- Is going to school important for what you want to do when you grow up? (1 = yes; 0 = no)
- Is it important for children to go to school? (1 = yes; 0 = no)
- Agree a lot: I think it's important to read to have a better life (1 = agree a lot; 0 = otherwise)
- Agree a lot: I think it's important to do well in math to have a better life (1 = agree a lot; 0 = otherwise)

Re-Scaling of Components: None – all components are 0/1 binary scores
Aggregation of Components: Mean of components, (0-1 continuous scale)
Direction of Score: Higher scores indicate a girl feels education is more important.
Cronbach's α: 0.54

4.5. Difficulty Learning

Rather than relying on learning assessments conducted in 2015/6 – which included a fair amount of missing data – we elected to focus on the extent to which girls self-reported difficulty learning, as this is likely to be correlated with actual performance in school and propensity to drop out. This measure is a simple aggregation of two components:

- Agree or disagree: I find reading difficult
  - 4 = agree a lot; 3 = agree a little; 2 = disagree a little; 1 = disagree a lot
- Agree or disagree: I find math difficult
  - 4 = agree a lot; 3 = agree a little; 2 = disagree a little; 1 = disagree a lot

Re-Scaling of Components: Min-max transformation to a 0/1 continuous scale
Aggregation of Components: Mean of components, (0-1 continuous scale)
Direction of Score: Higher scores indicate greater difficulty in reading/math
Cronbach's α: 0.69

4.6. Girl's Empowerment over Decision-Making

Our measures of girls' empowerment in 2015/6 are limited to decisions related to schooling, specifically:

- Agree/disagree: I cannot choose whether to stay in school. I just have to accept what happens.
  - 4 = disagree a lot; 3 = disagree a little; 2 = agree a little; 1 = agree a lot
- Agree/disagree: I make decisions about school and my future.
  - 4 = agree a lot; 3 = agree a little; 2 = disagree a little; 1 = disagree a lot

Re-Scaling of Components: No transformation (1-4 scale for each)
Aggregation of Components: Mean of components, (1-4 scale)
Direction of Score: Higher scores indicate greater perceived control over education/schooling decisions
Cronbach's α: 0.01

4.7. Difficulty of Reaching School

- How easy/difficult is it to travel to the closest school?
  - 2 = very difficult; 1 = fairly difficult; 0 = very or fairly easy
- How many minutes walk is the closest primary school for girls?
  - 2 = 30 minutes or more; 1 = 20-30 minutes; 0 = less than 20 minutes
- Do you know which is the closest secondary school?[59]
  - 1 = No, does not know which is closest or does not know any local secondary school; 0 = otherwise

Re-Scaling of Components: No transformation
Aggregation of Components: Sum of components (0-5 scale), transformed using min-max method to a 0-1 continuous scale
Direction of Score: Higher scores indicate greater difficulty reaching local primary and secondary schools
Cronbach's α: 0.21

4.8. Parental Support for Education

- What level of schooling would you like [girl] to achieve?
  - 1 = college/university; 0 = any lower level of education[60]
- When [girl] is 18, would it be better if she is married, in education, or working?
  - Question text: "Now, I would like to ask your opinion about the future of your daughter; say when [girl] is aged 18, do you think it would be better if she is in education or married or working (if you had to choose)?"
  - 1 = in education; 0 = otherwise

Re-Scaling of Components: None – all components are 0/1 binary scores

[59] This question captures the proximity of a secondary school in a slightly indirect way. While respondents were also asked the distance to the nearest secondary school, only around half answered this question, as approximately half of respondents could not identify the closest secondary school. The fact that respondents could not identify the closest secondary school is a rough proxy for whether there is a secondary school nearby. While this indicator would not work as well in an urban setting, rural residents who cannot identify the closest secondary school almost certainly live a significant distance from such a school. In practice, if a parent cannot identify the closest secondary school, we can assume that a girl will have more difficulty traveling there for school.

[60] While expecting parents to support a university education for all children is a high bar, this question is about *aspirations* rather than actual expectations. The vast majority (88.0%) of caregivers in 2015/6 aspired to a university education for their daughter. We view lower aspirations as a reasonable proxy indicator for a less supportive attitude toward girls' education.

Aggregation of Components: Mean of components, (0-1 continuous scale)
Direction of Score: Higher scores indicate greater support, by a girl's caregiver in 2015/6, for girls' education
Cronbach's α: 0.51

4.9. Teaching Quality - Pedagogy

This index captures teaching quality, as reported by girls in 2015/6. The focus of this measure is on aspects of pedagogy and interactions with their teacher. Note that teacher absenteeism is captured separately, as is classroom demeanour and the use of corporal punishment (see next section, below).[61] The four components of this index are:

- My teacher speaks in a way that is difficult to understand
  - 1 = Disagree a little or a lot; 0 = otherwise
- My teacher says interesting things
  - 1 = Agree a little or a lot; 0 = otherwise
- My teacher gives me interesting things to do
  - 1 = Agree a little or a lot; 0 = otherwise
- My teacher helps me when I struggle with an exercise
  - 1 = Agree a little or a lot; 0 = otherwise

Re-Scaling of Components: None – all components are 0/1 binary scores
Aggregation of Components: Mean of components, (0-1 continuous scale)
Direction of Score: Higher scores indicate better teaching quality, as reported by girls
Cronbach's α: 0.42

4.10. Teaching Quality – Classroom Demeanor

This measure of teaching quality captures girls' perceptions of their teacher and their classroom demeanour:

- I feel afraid at school
  - 1 = Agree a little or a lot; 0 = otherwise
- My teacher uses corporal punishment ["smacking", "slapping", "spanking"] with the students.
  - 1 = Agree a little or a lot; 0 = otherwise

[61] The 2015/6 data also includes a measure of teaching quality as reported by the girl's caregiver. However, as this is a single question that assesses overall teaching quality, we utilise the measure directly in our analysis, without incorporating it into an index of teaching quality.

- My teacher uses disrespectful language with students.
    - 1 = Agree a little or a lot; 0 = otherwise

Re-Scaling of Components: None – all components are 0/1 binary scores
Aggregation of Components: Mean of components, (0-1 continuous scale)
Direction of Score: Higher scores indicate **worse** demeanour (i.e., use of corporal punishment, use of harsh language, greater fearfulness reported by girl).
Cronbach's α: 0.29

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Annex 6:

Synthesis & Analysis

Annex 6: Synthesis & Analysis

This annex provides a longer overview of our quantitative and qualitative research approach and analysis. It discusses our sequential multi-mixed methods design and analysis.

1. Research Methods Synthesis & Analysis

In line with a mixed method lens, we used the following qualitative and quantitative, methodological, and analytical approaches. The rationale for this is provided simply in **Diagram 1** below.

Diagram 1: Sequential Design / Primary Research Process Rationale

Design	Study Phase 1	Study Phase 2	
...method?	**Quantitative**	**Quantitative**	**Qualitative**
...how?	KIIs with former SOMGEP participants.	SOMGEP participants, through household survey covering household and former participant characteristics and life outcomes, perceptions of empowerment, choice, and reflections on programme participation	In-depth KIIs with SOMGEP participants following emerging quantitative analysis
...why?	**To inform** quantitative focus and tool in Study Phase 2.	**To gather** quantifiable data to respond to research questions and **to generate** longitudinal panel data	**To triangulate** findings of quantitative data collection phase, and unpack the why and how of the findings

Our analytical approach to the two main research questions relied significantly on quantitative methods, supplemented with qualitative data collection discussed below.

Broadly our quantitative analysis looked at the predictors of life outcomes, using the quantitative data and multivariate regression models. In parallel, coded analysis of the qualitative was undertaken, with findings generated through both datasets. Using the quantitative analysis as the lead, synthesis across findings was undertaken with triangulation against broader evidence where possible. More detail is provided below.

2. Quantitative Methods & Analysis

Our analytical approach relies heavily on quantitative methods, supplemented with qualitative data collection. The specifics of our approach vary depending on the specific research question. However, shared across research questions is the use of multivariate

regression models to assess the relationships of interest. Regression models allow us to account for important differences across respondents that would otherwise confound and bias our results. This is especially important, given the age range and geographic dispersion of our sample, as there are strong relationships between – for instance – age, region, and urbanicity, on one hand, and outcomes of interest – such as educational attainment or views on FGM – on the other. Our analysis made extensive use of indices to measure multidimensional outcomes, such as empowerment in household decision-making, which we discuss in more detail in Annex 5.

Beyond this general approach, the specifics of our analysis vary across research questions. We provide significantly more detail on the analysis for each research question in Annex 10, which also provides the full results of each regression model used, for the sake of transparency. The technical details include the precise model specifications and results of additional robustness checks we employed. Below, we briefly describe the *structure* of analysis we perform for each research question but refer readers seeking additional technical details to Annex 10.

2.1. SOMGEP Impact

The first analysis presented in the report attempts to gauge the impact of SOMGEP programming on life outcomes. Unfortunately, the methods SOMGEP employed for measuring impact shifted during its baseline evaluation in 2014. The intended quasi-experimental, difference-in-differences design was replaced with a simple pre-post design that did not include an explicit control group of communities and girls who did not participate in the programme. The consequence for our study is that, without a control group which was not exposed to the programme, it is very difficult to draw firm conclusions regarding programme impact, as we have no way to determine whether the educational levels achieved by SOMGEP girls, for example, are better or worse than they would have achieved without the programme.

To overcome the lack of an explicit, tracked control group, we sought to estimate SOMGEP's impact by constructing a comparison group from the general population of women in Somaliland and Puntland, using publicly available data. We employed data from the *Somalia Health and Demographic Survey* and the *Somaliland Health and Demographic Survey*, both conducted in 2020 (HDS).[62] Data collection took place between August 2018 and December 2019 and included interviews with 16,486 women aged 15 to 49 years. The sampling methodology – stratified by region, with random selection of enumeration areas – makes it the most rigorous nationally representative survey undertaken in Somalia or Somaliland in recent history.

[62] The joint data was provided by the Somali National Bureau of Statistics.

We constructed a comparison group from the HDS sample of women interviewed in the same regions where SOMGEP women live in 2022. The large HDS sample was critical, because it allowed us to restrict the sample to the same regions and age range, while maintaining a large set of women for the comparison group. Our analysis is cross-sample, comparing SOMGEP women we interviewed in 2022 to non-SOMGEP women interviewed in 2018-9 as part of HDS. For example, we analysed the likelihood of completing primary using linear regression, controlling for the age and region of the respondent, where our "treatment" variable was SOMGEP participation. This provides an estimate of SOMGEP's impact on the likelihood of primary completion, under a series of strong assumptions regarding the comparability of the samples. Briefly, we must assume that SOMGEP women would have had similar outcomes to the comparison group if SOMGEP had not been implemented; while we attempt to be as conservative as possible in how we define the comparison group – to minimise the risk that we are selecting a comparison group that paints SOMGEP in an unfairly positive light – we must still assume comparability without the ability to prove it empirically. For a full discussion of assumptions and limitations of this analysis and the specific models employed for each outcome of interest, see Annex 10.

2.2. Early-Life Predictors of Current Outcomes

The second set of results in the report assess the extent to which household- and individual-level childhood characteristics predict eventual life outcomes for women who participated in SOMGEP. Unlike our analysis of SOMGEP's impact, this question makes use of both the new data collected as part of this study and the 2015 / 2016 data collected as part of the SOMGEP evaluation. Specifically, we link girls' responses to our survey – which assesses present-day life outcomes – to data collected from them and their households in 2015 / 2016. Using linear regression models, we study the relationship between household- and individual-level characteristics in 2015 / 2016 and present-day life outcomes.

To illustrate, consider our analysis of the relationship between household wealth and attitudes toward IPV (Section 4.3 of the main report). Our interest is in whether early-life household wealth (as measured in 2015/6) affects a woman's tolerance for IPV.[63] To analyse this relationship, we regress an index of attitudes toward IPV (in 2022) on a measure of household wealth (in 2015/6), combined with controls for age and region. In addition, we control for other early-life factors that might predict attitudes toward IPV, such as living with one's mother, living in a female-headed household, and a measure of the woman's empowerment in 2015/6. We do not control for factors – measured in

[63] The idea behind our analysis of early-life predictors is to understand the persistence of outcomes across time and how childhood characteristics continue to shape life outcomes into adulthood. This is a topic that is relatively well-studied in western settings, but which is less commonly studied in developing settings, due to a lack of long-term longitudinal data collection.

2022 – that might affect tolerance for IPV, because those factors are "post-treatment" – they arise after our measurement of childhood household wealth and may themselves be a function of household wealth. Other analyses under this topic proceed similarly, using factors from 2015/6 as predictors of 2022 outcomes.

2.3. Perception of Programme Impacts

The third set of results in the report focuses on the self-perceived impact of SOMGEP programming, as reported by SOMGEP participants surveyed in 2022. This question utilises the new quantitative data collected in 2022 as part of this study, in addition to extensive qualitative data. The quantitative survey included questions asking women to assess the role of SOMGEP programming in their overall educational attainment, the impartation of useful skills, and their self-confidence, among other outcomes. This analysis is generally cross-sectional, primarily making use of the 2022 data in isolation. For instance, we analysed the share of women who report SOMGEP interventions helped them stay in school longer than they would have otherwise.

In places, we expand on this analysis by studying how perceptions of programme impact are correlated with a woman's demographic characteristics and aspects of her early life. In the first case, we regress an indicator of the programme's impact (e.g., reporting that SOMGEP provided a respondent with useful skills) on a set of demographic characteristics; for example, one characteristic we study is whether a woman has ever been employed, as we expect women who have been in the workforce to have different views of SOMGEP's utility. In the second case, we use a similar approach – linear regression of an indicator of perceived programme impact on factors that might predict that perception – but use early life characteristics (such as household wealth) instead of present characteristics as predictors. The idea of this analysis is to understand if women from different types of households or with different types of childhood experiences perceive SOMGEP's impact differently.

3. Qualitative Methods & Analysis

We undertook multiple qualitative data collection (see **Diagram 1**) pre, during and post the quantitative data collection. During Study Phase 1, we undertook 19 KIIs in Burco and Hargeisa, exploring changes since the programme has ended at a household level for former GEC participants, and some of their reflections on the programme. Training of fieldwork manager and field researchers, and interview scheduling took place over 20-24 March, with data collection between 26-30 March. These were coded, and findings synthesised to surface any additional lines of enquiry.

3.1. Study Phase 2 - In-depth Life Histories

Study Phase 1 qualitative interviews were useful in helping to add and frame some of the questions within the quantitative data collection. During Study Phase 2, following

the quantitative data collection and early analysis, we undertook another round of focused qualitative data collection with 40 SOMGEP participant women. While we tried to ensure that a range of Somali women were interviewed (i.e., older, younger, across locations, disabled etc.), the sample for this was led by those who were interviewed for the quantitative survey being happy to agree to undertake another qualitative interview. For this phase, we used a qualitative life history research approach to gather a deeper look into women's perceptions of their lives and generational change. This approach allowed us to capture a more nuanced narrative of *lived experiences* than could be generated by the quantitative data collection. In conducting analysis, we developed a conceptual framework (**Annex 2**) that drew on and tested dominant theories of empowerment, agency, social and cultural capital, and social norm change models.

3.2. Qualitative Narrative Coding & Analysis

We followed a multi-stepped thematic process to analyse the translated texts from the qualitative narrative scripts, using codes and later themes developed initially deductively. Generating codes for the scripts allows us to analyse and categorise data more efficiently and supports later synthesis with the quantitative data set. Using the process outlined below, we drew out a higher level of codes to support initial aggregation. These codes were either themes that appeared multiple times across a number of the scripts, or codes that mapped to our research questions. In other words, we focused on themes that revealed; *'something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set.'* (Braun & Clark, 2006: 82). This process included:

1. **Initial coding** - Two team members each read English transcripts, coding inductively and independently to reduce biases. Each team member generated their own initial long code list (**Table 1**). While we had the theoretical frame of the initial research questions, we felt it important to take a grounded approach to the data analysis to ensure that we captured unexpected evidence and learning. Saturation on coding was achieved for both reviewers by the tenth to twelfth KII script.

Table 1: Initial Team Member Coding

Team Member #	Inductive Codes
1	Age of marriage, age became a mother, living during war or peace, education – SOMGEP / secular and qur'anic, agency and empowerment, conservative social / gender norms, financial decision making, household decision making, household composition, technology, climate / drought / water-shortage, peer

Team Member #	Inductive Codes
	support, parental support, mother support, community resilience, rural vs urban, shock, importance of having family / being married, future education, employment, migration
2	Age of marriage or desired age (if not married), number of children (or desired number) agency, empowerment, autonomy over decision making, gendered norms, use of technology, household income sources, further education and progression into work, intergenerational change, impact of SOMGEP, who do they turn to for support, impact of climate change, experiences of religious education

2. **Refining and shortlisting** - In addition to various calls to discuss, test and refine coding, on 13 June the two team members brought their individual code sets together to rationalise codes, refine coding groupings, and identify higher level preliminary themes. Note that the same codes sometimes feature across themes.

Table 2 provides an overview of these codes and themes.

Table 2: Themes and codes that guided the qualitative analysis

Theme	Codes
Household characteristics	HH Composition – past and current Migration – where and reasons why Current marriage status - married / divorced / return to parents, single
Education	Currently attending school Attended qur'anic school and impact Perceived impact of education in life Future hopes for children for education SOMGEP impact

Theme	Codes
Intergenerational Differences	Living in war or peace Age of marriage / children Impact of level of and access to education Impact of technology Rural vs urban Differing life – livestock rearing vs education Life expectations
Agency / Empowerment	Household financial management Self-future hopes Current / previous education / employment Employment aspirations Education aspirations Children aspirations Contributions to household Role-model – mother / grandmother Autonomy to get divorced without stigma
Gender / Social Norms	Ideal husband / wife Conservative views Progressive views Want for marriage / children Financial security Cultural / religious views
Resilience	Role of peer networks Role of mother Income
Shock	Impact of drought / water shortage on household finances, education etc Examples of household resilience / adaption to shock Covid impact

3. Theme & code back-mapping – these broadly finalised codes and themes were then back-mapped onto the initial research questions to review coverage and identify any gaps or areas that needed to be verified/clarified by the field team.

4. Text mapping – text was then mapped / coded from each script for analysis.

Table 3 provides an overview of an example high-level theme, related families of codes and supporting narratives taken from the original scripts.

Table 3: Example Theme, Codes & Supporting Narratives

Theme	Code	Supporting Narrative
Intergenerational Differences	Living in war or peace	*"the difference is they were raised in wars while I was raised in peace and prosperity."*
	Age of marriage	*"My grandmother was younger than me when she got married, whereas my mother was older than me when she got married."*
	Impact of level of and access to education	*"I would like to be independent and have my own business, but my mother and grandmother's goal was to get married since they weren't educated"* *"I want to continue my education, graduate and make a name for myself whereas the only thing my mother was taught was to get married and raise a family."*
	Impact of technology	*"We have social media, and we talk to and know the condition of our friends and relatives worldwide, but they do not have that privilege. All they thought of was where they could get the food, they would feed their family this evening"*

4. Synthesis

Following data collection and various internal sessions with the team to reflect on findings, the core team met in person over one week in late July to develop headline

findings, and test areas of enquiry that may have been generated by one side of the data. This was an iterative approach to findings development that continued through to report completion (see Dixon-Woods 2005 for an example of synthesising across data types which we found useful in developing our approach).

The synthesis discussions process focused on:

- Areas where key findings overlap between the quantitative and qualitative data
- Areas of contradiction between the findings
- Areas where findings only appeared in either the quantitative or qualitative data

While there were specific findings where there was no supporting qualitative evidence, this was more to do with the nature and specificity of the finding and the life histories approach that allowed for respondents to speak freely. In fact, there was clear alignment across most high-level key findings areas with the qualitative data adding a richness, nuance, and explanation to quantitative data.

These areas included: decision-making; self-esteem; future aspirations; household wealth; FGM; views on value of SOMGEP; use of technology; experiences and views on marriage; choice over how many children to have; gender norms including around IPV; and impact of religious education.

As findings were generated, where possible, these were tested against the available literature, which is presented in the main report and other supporting annexes.

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Annex 7:

Ethics

Annex 7: Ethics

This annex provides an overview of our ethical approach to this study, and some of the issues encountered in the field during the study.

1. Ethical Overview

Our research adhered to FCDO Ethics Principles for Research and Evaluation (FCDO 2020)[64], the GEC II's Ethical Research and Safeguarding Framework approach, and was also guided by UoP's detailed ethical and safeguarding protocols.[65]

All team members adhered to UoP / Consilient ways of working protocols, including ethical, safeguarding, *do no harm*, anti-fraud / anti-bribery and corruption, and data protection and security policies. The team secured and recorded informed consent at the beginning of all engagement and made participants aware of their right to not provide views at any time, and to withdraw from the process at any time. Permission was sought from each participant to hold their data, and contact them again in the future, should another phase of the research occur.

1.1. UoP Ethical Processes

The section below details the ethical review process and ongoing risk assessment, which were adopted throughout. The project methodology and protocols received a favourable outcome from UoP's ethics committee (February 2022). The application included a risk and mitigation analysis which was redone immediately prior to fieldwork commencing. No additional risks were identified.

UoP's Research Ethics Policy for work in International Development, which was developed by Professor Tamsin Bradley (UoP Lead), is guided by an overarching principle to 'do no harm', and mainstreams gender into all aspects of ethical consideration. This extends to considering the ethical implications for participants in programmes and researchers. The policy itself draws on the World Health Organisation's ethical and safety recommendations for intimate partner violence Research (WHO, 2001 & 2005) deemed the most robust for all research on gender sensitive issues including the education of girls. As such, the research protocol is in line with the general guidance of The UK Research Integrity Office Code of Practice for Research (as has been adopted by the University), the Concordat to Support Research Integrity, and the University's Ethics Policy, as well as adhering to subject and context specific codes. The Ethical Review Process (ERP) for data collection and fieldwork

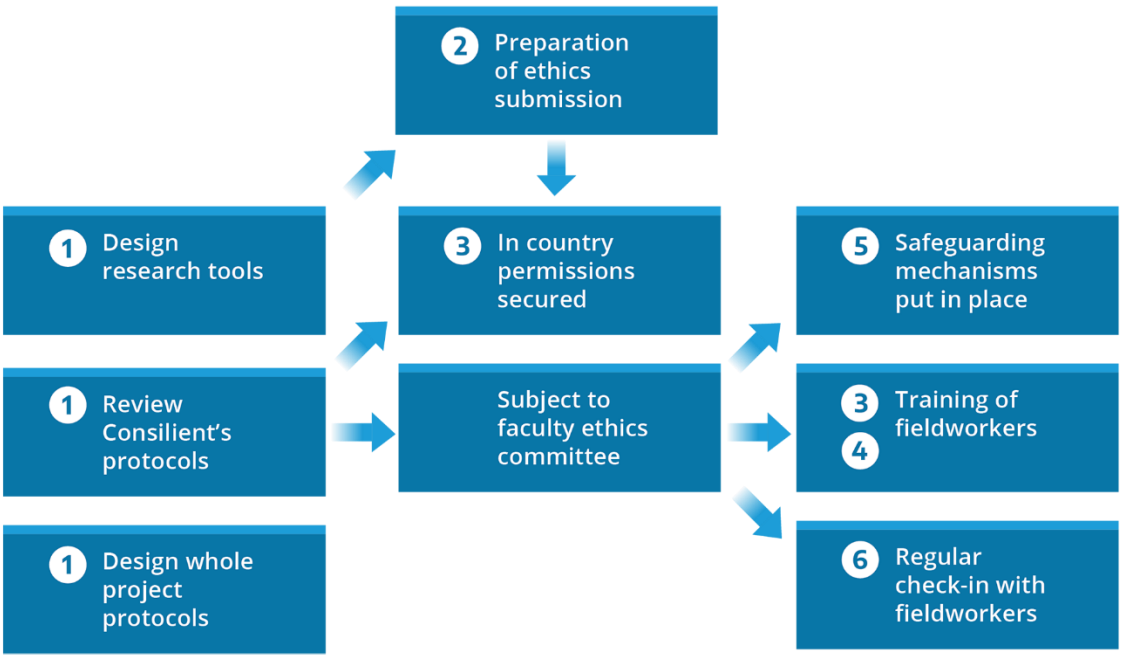
[64] FCDO (2020). FCDO Ethical Guidance for Research, Evaluation and Monitoring Activities.

[65] UoP's Ethics Policy immediately follows this annex.

activities is conducted under the guidance of the UoP. The ERP comprises six stages (Diagram 1). Each of these involved continuous communication between UoP and Consilient:

1. Design of research tools and field protocols (including security) in partnership between the project team.
2. Preparation of an ethics submission to the Faculty of Humanities and Social Science Ethics Committee at UoP.
3. Once clearance was given, training was delivered to the field team and supervisors in accordance with the project ethics and safeguarding manual. Training included data handling, anonymisation, labelling and storage.
4. Roles and responsibilities of each team member were established, and check-ins put in place with the field-team and managers.
5. The enabling referral mechanisms were put in place with the support of local women's organisations to respond to any unintended traumatisation as a result of interviewing (and for both participants and researchers).
6. Research leads for both Consilient and UoP monitored the operationalisation of protocols on an ongoing and daily basis (during data collection) through debriefs with field teams.

Diagram 1: Overview of the ethical process



1.2. Field-level Ethical and Safeguarding Processes

In line with FCDO ethical processes referenced above, Consilient adhered to the highest ethical standards in this research. When conducting the research, Consilient ensured informed consent was secured and maintained the confidentiality, anonymity, and rights of participants, including their right to withdraw from an interview at any time. The Consilient researchers were trained to adhere to the ethical standards of neutrality, participation and informed consent, and privacy (and data anonymisation).

All the researchers who contributed to this project were experienced in discussing issues connected with gender, and gender-based violence more specifically. A training top-up was delivered prior to Study Phase 2 of data collection and included a focus on the aims of the research, consent (from families/carers and research participants themselves), anonymity and right to withdraw. Training also included a specific focus on safeguarding and child protection, tailoring to the ages of participants, which were sometimes below 17 years of age. Researchers were instructed to carry out interviews in areas that were open and visible, but out of earshot of other people. This was to make participants feel safe and at reach of others, whilst ensuring privacy for their own safety, and that of the researchers.

1.2.1. Gender sensitivity

In line with its usual approach, Consilient incorporated a gender dimension and gender sensitive approach for this project's data collection. This was reflected in all aspects of the data collection including the gender make-up of the team. The Team Leaders and Enumerators comprised both male and female staff (although, and as detailed below, recruiting an equal number of female researchers was not possible). All collected data was disaggregated by gender and analysed using gender-sensitive techniques.

1.2.2. Issues in recruiting a gender mix of enumerators

Whilst it is desirable to only use female enumerators to generate datasets from female participants and when asking gender sensitive questions (for example on gender-based violence), this is not always possible. In Somaliland there are significant difficulties in recruiting female enumerators and this was the case in this project. This led to a difficult choice between carrying out a study with predominantly male researchers or not being able to generate the necessary dataset at all. Consilient and UoP worked together to offset risks by carrying out thorough gender-sensitive training and proceeded with more male enumerators than female.

The specific geopolitical context also offered a number of layers of gendered complexity. For example, gender is informed by specific regional dynamics – Consilient researchers came mainly from urban areas but were able to work across a number of languages, including English and local languages. To offset the potential urban bias in

the research team, Consilient only used researchers with whom they have developed long-standing relationships and who are familiar with the rural areas and the villages that were the focus for this study. This means they were accepted by the communities and given the 'seal of approval' that then enabled them to approach the young female research participants. Although there were occasions in this research when a male enumerator conducted an interview with a woman, we believe the training given removed the likelihood that our participants were made to feel uncomfortable as a result. In short, the training provided, and the acceptance gained from years of work with local communities are strong factors that ensured the generation of quality data.

Additionally, and to ensure the research did not risk re-traumatisation, certain questions were removed or rephrased by the Consilient research team. For example, questions asking details in relation to specific forms of violence were rephrased in a more generalised/depersonalised sense. Questions asking participants to share experiences/memories of undergoing FGM/C were rephrased as perception questions. Depersonalising questions was ethically necessary to avoid the risk of probing sensitive areas of potential personal experience which could have triggered unintentional harm.

1.2.3. Ethical research clearance

In addition to the UoP processes, at a country level, Consilient is registered in both Somalia and Somaliland and holds active operating permits in each of FMS, including Puntland and Galmudug. In advance of fieldwork, letters of introduction are produced for field teams to present to relevant government bodies. Upon arriving in our study towns and villages, the team leaders introduced themselves to local authorities, presented permission and/or introductory letters, discussed and described the nature and scope of the research, and proceeded only once permission to carry out activities had been granted. Where relevant, local leaders, such as clan elders, were also conferred with.

1.2.4. Ethical incidents

The thorough ethical process adhered to in this study ensured our researchers followed specific guidelines in case information came to light during an interview, which would necessitate intervention, or reliance on third parties for support. The process in this case was to alert Consilient's Child Protection Officer, while also referring the specific participant to the local SGBV One-Stop Centre – services who would provide our participants with focused psychosocial support. However, data collection progressed smoothly, and the need to initiate this process did not arise.

1.2.5. Data storage

All interviews were audio recorded and stored on Consilient hard drives. Recordings do not contain identifying information, as researchers are instructed to refrain from

mentioning personal or organisational names – as well as any other information that may lead to specific individuals. Interviews were attached to a unique ID which can then be linked to the broader dataset. This is also anonymous and can only be accessed by the core team.

1.3. Challenges Mitigated During the Research Process

A number of challenges arose during the research process.

1. The risk of retraumatising participants resulted in the need to rephrase/depersonalise questions in relation to experiences of violence and abuse (e.g., FGM).
2. The difficulty in recruiting female researchers required additional training to ensure all male researchers were confident in applying a gender sensitive approach.

Annex 8:

Study Reflections

Annex 8: Study Reflections

This annex consolidates the research team's insights and reflections on the process of delivering the research study.

Our team came together on 11 August 2022 to discuss and distil a set of reflections on the research study process. It is anticipated that these reflections will be useful for informing the design of future studies of comparable scope and/or in similar contexts.

1. Adequately resourcing the recontacting process was critical to the study's effectiveness.
2. A sequential design enabled the research team to unpack complex multi-factored influences on study participants.
3. Pre- and post-data collection conversations with the field team contributed significantly to the volume and quality of data collected and findings generated.
4. The identification of a comparative dataset, in the absence of a formal counterfactual, made generation of meaningful findings possible.
5. A clear conceptual framework enabled systematic interrogation of the local context in relation to our research questions.
6. Investing sufficient time in training all team members in our robust ethical protocols ensured they felt confident in applying them.

Adequately resourcing the recontacting process was critical to the study's effectiveness

Our research depended on identifying and contacting SOMGEP women years after the programme had ended. In our teams' collective experience, even in simpler baseline and endline studies with a 'captive audience' of ongoing programme participants, attrition rates can be between 10 and 30%. The time lag between the programme ending and the research study starting effectively removed much of the incentive for participants to engage – meaning we anticipated significant challenges in recontacting the size of sample needed.

To counter this, we invested approximately 180 person days (spread between four and seven researchers over 6.5 weeks) in the recontacting process itself. This time allowed us to repeatedly attempt to recontact women – where necessary using indirect avenues such as community networks and gatekeepers. As a result of this intensive investment, we located nearly 72% of the women (n= 616). This significant achievement was only possible due to the length of time we gave to identify the women and the person days invested coupled with the strong community relationships our local team have established at local level and with key actors on the ground.

A sequential design enabled the research team to unpack complex multi-factored influences on study participants

Our study benefitted significantly from sequential design, allowing us to weave in additional lines of enquiry to later phases of research in response to data collected in earlier phases. This positively impacted both the depth and quality of our overall findings. Critically, it allowed us to probe deeper when unexpected findings emerged (e.g., the highly conservative gender views of some participants which were seemingly at odds with other more positive outcomes). The sequential approach also enabled us to fill gaps in relation to what emerged from the literature review and political economy analysis e.g., the impact of geo-political forces on day-to-day life including the influx of external investment in Madrassas etc. Through this approach, we were able to integrate findings from the literature review as well as new primary data into our analysis.

Pre- and post-data collection conversations with the field team contributed significantly to the volume and quality of data collected and findings generated

At each step of the research process, our local Somali team either generated or contextualised questions, measurements, proxies and findings. This contributed enormously to the questionnaires used, the analysis generated, and the understanding of the findings. The value of experienced researchers who have worked on multiple GEC studies cannot be underestimated. These conversations helped us to identify findings that were unexpected – even among researchers who have worked in the field context for several years. Operating with a 'whole team' approach ensured that all team members felt able to raise questions and observations and felt valued in doing so. All too often, local teams find their knowledge marginalised by the research process; we worked to ensure this did not happen. This whole team approach will continue into the publication stage with a co-authoring protocol implemented.

The identification of a comparative dataset, in the absence of a formal counterfactual, made generation of meaningful findings possible

Evidence access is critical for generating useful and usable results. We were only able to develop credible findings of impact due to an open access database (the SLDHS), which contained data on a comparable group of Somali women. Given we were not able to undertake the study on the Relief International EGEP project, as originally envisaged, as they did not respond to requests for data access, being able to draw on the SLDHS became critical.

This points to two key issues around evidence on FCDO-funded programming:

1. FCDO does not routinely store data from past programmes in a space accessible to its own teams or the teams they commission to undertake research. An accessible repository that aligns with best practice data privacy and protection

guidelines, as well as wider ethical considerations, would have mitigated the issues we had with RI - allowing us to generate the comparator groups required for truly robust findings to emerge.

2. The inclusion of a counterfactual in programme design (including through staggered or rolling baselines rather than strictly non-treatment control groups) does pay dividends in generating evidence on longer term impact. In cases where a counterfactual is not deemed appropriate, as with SOMGEP, a 'next best' alternative comparison group should be identified as early as possible. This may include having to add additional data collection points into the existing monitoring and evaluation framework.

A clear conceptual framework enabled systematic interrogation of the contextual moderators which influence the programme's outcomes

Contrary to neat programme results frameworks and logic models, evidence of change in programme participants is rarely linear. Contextual moderators can influence different outcomes in different ways for different people – even those outcomes we may expect to be correlated or at least closely associated. In this study, for example, decreased tolerance to IPV was not necessarily linked to supporting other women divorce or rejecting FGM. The research team needed a deep understanding of local context to unpack why specific combinations of outcomes seem to occur, and a robust contextual framework to interrogate what this means in relation to our research questions.

Investing sufficient time in training all team members in our robust ethical protocols ensured they felt confident in applying them

Research on sensitive topics carries several risks – not least the potential to trigger unintentional harm in participants. Ethical protocols including stringent safeguarding measures are essential, so too is ensuring sufficient training is given to enumerators. Regular check-ins with field teams are also important as a way of monitoring potential risks. Robust evidence is as much about being confident that no traumatisation has occurred as it is about the quality of the findings. In the case of this research, our greatest risk stemmed from needing to use male researchers to interview some of our female participants which carried the potential of triggering discomfort. Attention and time allocated to training and checking in ensured we mitigated such risks.

Annex 9:

Communications, Learning & Uptake

Annex 9: Communications, Learning & Uptake

In this annex, we provide an overview of our future communication and uptake plans.

1. Identifying the knowledge, learning and evidence gaps

We acknowledged from the start that effective learning, knowledge-brokering, and communication activities are critical to ensure that research is useful, shared and utilised by relevant stakeholders. The desk-based research clearly showed only a limited amount of research, conducted recently, specifically exploring issues of women's rights and gender equality even in a broad sense, from the region and even less that drills into causal links between development interventions (such as education) and improved life outcomes. As such, we know the findings hold significance in moving the academic, policy and practice field forward by providing policy makers and practitioners with new insights and data sets. In particular, we believe our data and analysis could inform policy and practice in the following ways:

- Offer a detailed situational map on the current status of women and girls regionally. Including a historical analysis into the legacy of critical periods of history in Somaliland on the current status of women and girls e.g., lasting impact of conflict, climate change, Madrassa schools and highlight the need to draw on these insights in the planning and design of future programming.
- Identification of micro-outcomes offering a realistic picture into the room for manoeuvre available to Somali women and girls today. This will support the identification of achievable indicators of change mapped along a feasible pathway of change for future programming or research.

1.1. Knowledge products, communication channels and other programme networks

We recognise that due to the short nature of this research study wider communications and learning opportunities will occur after the project has ended. This project has been identified by the University of Portsmouth as a likely Impact Case Study in the next Research Excellence Framework (REF) cycle, as such internal support and resourcing will be provided to ensure that uptake continues, and opportunities are maximised. This funding will include supporting travel and attendance at critical workshops (both in Somaliland and elsewhere), and development of knowledge products beyond the scope of the project budget (e.g., an animation). Additionally, dissemination can utilise platforms created by other relevant ongoing UoP projects including the FCDO's programme supporting an end to FGM/C in four African countries including Somaliland.

A second FCDO programme which has cross over relevance to this research is the recently procured £36m Education Research in Conflict and Protracted Crisis, implemented by the International Rescue Committee. The project team will reach out to those leading this new portfolio at IRC and explore opportunities for shared learning.

A further opportunity for uptake lies in the FCDO programme supporting the African Led Movement to end FGM. This programme supports an education pathway and a component focused on integration. It is highly likely that the ALM programme will use the findings to inform its school-based activities in Somaliland (and other contexts) and in developing its plans for integration and FGM activities into broader educational programming.

1.2. Tailored deliverables

All research, once approved by Tetra Tech, will also be available on UoP's GenderFocus.org online international research portal for practitioners and for wider dissemination. It should be noted that the team is happy to contribute to other workshops, learning or uptake activities, as they emerge opportunistically, or are required by Tetra Tech.

Table 1: Deliverable Overview & Target Audiences

Deliverable	Overview	Targeted Stakeholders
Animation **January 2023 (dependent on additional funding)**	1 x animation. The focus of this short animation will be decided as the evidence emerges. It could take one or two stories of change or key findings for example and bring those to life. This will be undertaken after the final report has been signed off to ensure consistency with accepted findings.	▪ Tetra Tech and GEC consortium members ▪ HMG audiences ▪ Wider INGO stakeholder audience.
Validation / Dissemination Workshops (x2)	2 x validation / dissemination workshops with local stakeholders (if available) and GEC consortium partners (if desirable to them). If these are not viable during this project (i.e., no interest and availability of stakeholders), we will refocus these as dissemination workshops / meetings etc following sign off of findings after September 2022.	▪ Tetra Tech and GEC consortium members ▪ National Stakeholders, including NGOs, and Somaliland, Puntland, and FGS Ministries of Education

Deliverable	Overview	Targeted Stakeholders
Online Course **(Launch November 2022)**	Material from this research has been incorporated into an open access online course hosted by genderfocus.org	▪ Postgraduate students ▪ Gender, Development and Educational Practitioners
Podcast **(By December 2022)**	A podcast giving an overview of the research findings and lessons from the approach and method will be produced using the company Podcast Pioneers.	▪ Policy makers ▪ Applied researchers in development ▪ Students of development
Academic peer reviewed paper	Submission by end of the research study (September 2022) to peer reviewed journal.[66] Journal of International Development Education, Gender and Education, Progress in Development Studies, Development in Practice.	▪ Wider research community ▪ UK HMG stakeholders
Conferences	An abstract has been accepted for presentation at the annual conference 'Comparative International Development Society' (CIES0) 14-22 February 2023, Washington DC.	This conference is very popular with donors such as USAID and FCDO, as well as a range of INGO practitioners and academics.

[66] Please note that some journal submission cycles are not continuously open, and we may be required to wait for the next window for submission, which may not be in line with project end.

Annex 10:

Topline and Regression Tables

Annex 10: Topline and Regression Tables

This annex reports more detailed versions of the quantitative results in the primary report, as well as the results of supplemental analyses meant to test the robustness of our main results. It also includes additional technical detail regarding the analysis of SOMGEP's impact and the relationship between early-life characteristics and present-day life outcomes.

The purpose of this annex is to document the quantitative analysis and results much more extensively than space limitations in the main report would allow. Much of the description here is technical, describing the exact regression specifications chosen, and sample balance statistics. Interested readers should also refer to Annex 5 for information on how we constructed different measures and indices, as well as Annex 3 for details on our sample, sample attrition, and how attrition might affect the results in this annex.

The first section reports the full regression results for our estimates of SOMGEP's impact, building on the more concisely presented results from Section 4.2 of the report. In addition to documenting the full results, we present robustness checks using alternative definitions of the comparison group. The second section is similar but providing the full regression results for our analysis of how early-life characteristics predict adult (current) life outcomes; these results build on Section 4.3 of the report.

1. SOMGEP Impact – Supplemental Results

1.1. Introduction and Description of Models

In this section, we provide more detailed and additional results from our analysis of SOMGEP's impact. As described in the body of the report, we compare SOMGEP beneficiaries – who were interviewed in 2022 as part of this project – to a nationally representative and rigorous sample of women conducted in 2018-2019 as part of the Somali and Somaliland Health and Demographic Survey (hereafter "HDS"). From the large sample of women interviewed as part of the HDS, we identified a comparison group that matched our sample of 408 SOMGEP beneficiaries based on region, age, and having been enrolled in school at least one year during their childhood/adolescence.

To test SOMGEP's impact, we employed cross-sectional OLS regression models that compare treatment (SOMGEP) and comparison (women drawn from the HDS sample) groups on several life outcomes, such as educational attainment and tolerance of IPV. It is important to emphasise that we are unable to employ a difference-in-differences design, and our analysis is strictly cross-sectional; it is not, using common parlance, quasi-experimental.

Our basic model of SOMGEP's impact takes the following form:

$$y_i = B_0 + B_1 T_i + B_2 Rural_i + \gamma + \theta + \epsilon$$

where y_i represents the outcome of interest – such as primary school completion – for individual i; T_i is an indicator variable representing participation in the SOMGEP programme; B_2 represents the effect of living in a rural area; γ is a vector of dummy variables representing the region in which the woman lives; θ is a vector of fixed effects for each age group in the sample, which is restricted to the ages 15-25; and ϵ represents the standard error term. Our interest is in the value B_1, which represents the mean difference in outcome y between the treatment and comparison groups, conditional on region, age, and urbanicity.

This analytical setup requires us to make relatively strong assumptions to draw causal inferences regarding SOMGEP's impact. Specifically, we must assume that SOMGEP and comparison women – in the absence of the SOMGEP intervention – would have the same mean life outcomes today, conditional on region, age, and urbanicity.[67] This is a stronger

[67] This is the standard assumption required to draw causal inferences from cross-sectional regression models and is typically referred to as the assumption of conditional independence between treatment and the outcome of interest.

assumption than that required for making causal claims under, for instance, a difference-in-differences design. Because SOMGEP communities were not randomly selected for participation in the intervention, we cannot be confident that women from SOMGEP communities would be comparable – under the counterfactual condition in which the programme did not occur – to a random sample of women from the same regions.

Our attempts to resolve this problem come in three forms, all of which are oriented around the construction of the comparison group. First, we define several different comparison groups, the most conservative of which includes urban respondents. SOMGEP was implemented in rural communities, though many SOMGEP women have now migrated to urban areas. There is no evidence that SOMGEP was implemented in particularly "high-performing" rural villages; indeed, SOMGEP villages tend to be remote. However, because many SOMGEP women have now migrated to urban areas, assessing them against an exclusively rural comparison may overstate programme impact. Therefore, we employed an alternative comparison group that included both rural and urban HDS respondents. This comparison group includes many women who both live in and *grew up* in urban areas – which represents a degree of advantage that no SOMGEP women can claim; it is for this reason that we treat this comparison group as particularly conservative, because it assesses SOMGEP women against a combined comparison group that is dominated by women from comparatively advantaged circumstances.

Second, we use varied sets of regions to define the comparison groups. SOMGEP women lived in just five regions in 2015/6; in general, these regions are poorer, on average, than their neighbours. To ensure comparability between the SOMGEP and comparison sample, we restricted our main comparison group to women living in the same five regions. However, this ignores the fact that some (13.1%) SOMGEP women have migrated away from their original region and now live outside the 5 SOMGEP regions. Their new locations tend to be slightly more affluent. To guard against the possibility that we would overestimate SOMGEP's impact by assessing the treatment group (including women living in, e.g., Hargeisa) against a comparison group that is drawn exclusively from poorer regions, we defined an alternative comparison group that includes all regions where SOMGEP women now live. As is the case in our other alternative comparison group, this approach now holds SOMGEP to a very high standard: we are comparing SOMGEP women who grew up in largely poor regions to a comparison group that includes many women who grew up and continue to live in more urban, more developed regions.

Third, we use statistical matching methods to ensure balance between the treatment and comparison groups in terms of observable characteristics. Because the original SOMGEP sample was not intended to be representative of the broader population of each region, it

is skewed toward particular regions (e.g., Togdheer and Sanaag) and age groups. As we show in the next section, the treatment and comparison groups are extremely imbalanced in terms of region and age, even after restricting the comparison group to the same age range as the SOMGEP sample. In short, the SOMGEP sample is heavily concentrated among the ages 16-22 and includes few older (23-25) women; because the HDS sample was representative, it includes many more women in the 23–25-year range. To ensure comparability, we match the treatment and comparison groups based on region of origin and age.[68] We discuss the balance that this produces in observable characteristics in the next section.

The result of these attempts to carefully define a suitable comparison group is that we have several alternative comparison groups that appear in our analysis. The figure below places each comparison group on an x-y axis based on two key characteristics: whether they include nomadic and urban respondents and whether they are restricted to the same regions *of origin* as SOMGEP women or include regions where SOMGEP women *now* live.

In general, moving rightward and downward in the chart produces a comparison group that is more conservative; or, put another way, which holds SOMGEP to a higher bar. In the top-left corner is a comparison group comprised of women who currently live in rural areas of SOMGEP's original five regions. This group is arguably too generous to SOMGEP, because it includes only rural women, while many SOMGEP women now live in urban areas. By restricting the comparison group to women who *remain* in rural areas, the comparison group may be biased toward less-educated women, those less likely to pursue employment, or those more likely marry at a young age.

Figure 1: Alternative definitions of the comparison group

	Rural Only	Rural & Nomadic	Rural, Nomadic, and Urban
Original 5 SOMGEP Regions	Full Group, n = 496 Matched Group, n = 393	Full Group, n = 629 Matched Group, n = 477	Full Group, n = 1,260 Matched Group, n = 1,232

[68] In alternative versions, we match based on *current* region.

All regions where SOMGEP women now live (8 in total)	Full Group, n = 746 Matched Group, n = 638	Full Group, n = 905 Matched Group, n = 740	Full Group, n = 2,066 Matched Group, n = 1,958

The bottom-right corner, on the other hand, represents the most conservative possible comparison group. Using it subjects SOMGEP women to a comparison against a mixed sample that is predominantly urban (905 rural/nomadic versus 1,161 urban) and which is drawn from all eight regions where SOMGEP women now live. The former implies that SOMGEP women are being compared to many women who grew up in urban areas; and the latter implies that they are being compared to a sample that includes many women living in better-developed regions, such as Maroodi Jeex.

For each of the six cells in the figure above, we construct both a general and a matched comparison group. The general comparison group includes all HDS respondents who meet the criteria, and we use controls within our regressions to account for differences in region and age that remain between the treatment and comparison group. The matched comparison groups are precisely balanced with the treatment group on region and age using entropy balancing (Hainmueller 2012); we continue to incorporate regional and age controls in regression models using the matched groups, though they have little impact on our results.

The most important takeaway from this discussion of comparison groups is to allow readers to judge the results of different models in an informed manner. Where we report findings that show consistent positive programme impacts across all possible comparison groups, we have greater confidence in the result. The reason is that – in such a case – SOMGEP women are outperforming even comparison groups that we view as unfairly biased *against* finding impact, i.e., the comparison group in the lower-right of Figure 1. Where we report positive findings using a rural or rural & nomadic sample, but these findings dissipate when using a mixed urban-rural comparison group, more judgment is required. In these cases, SOMGEP women outperform rural peers but not when we include urban respondents in the comparison group; where positive effects are directly conditional on the comparison group, we urge caution in drawing conclusions regarding SOMGEP's impact.

To identify the comparison group used in each regression, readers should refer to two locations on each table:

- The headings along the top of the table indicate whether the comparison group is:
  - Rural-only – "Rural Comp."
  - Rural & Nomadic combined – "Rural & Nomad Comp."
  - Rural, Nomadic, and Urban combined – "Full Comp. (incl. Urban)"
- The bottom row of the table, which lists the regional control variables included in the model:
  - Original – the sample is limited to the original 5 SOMGEP regions; the model includes a dummy variable for each original region.
  - Current – the sample covers all eight regions where SOMGEP women now live; the model includes a dummy variable for each of these regions.

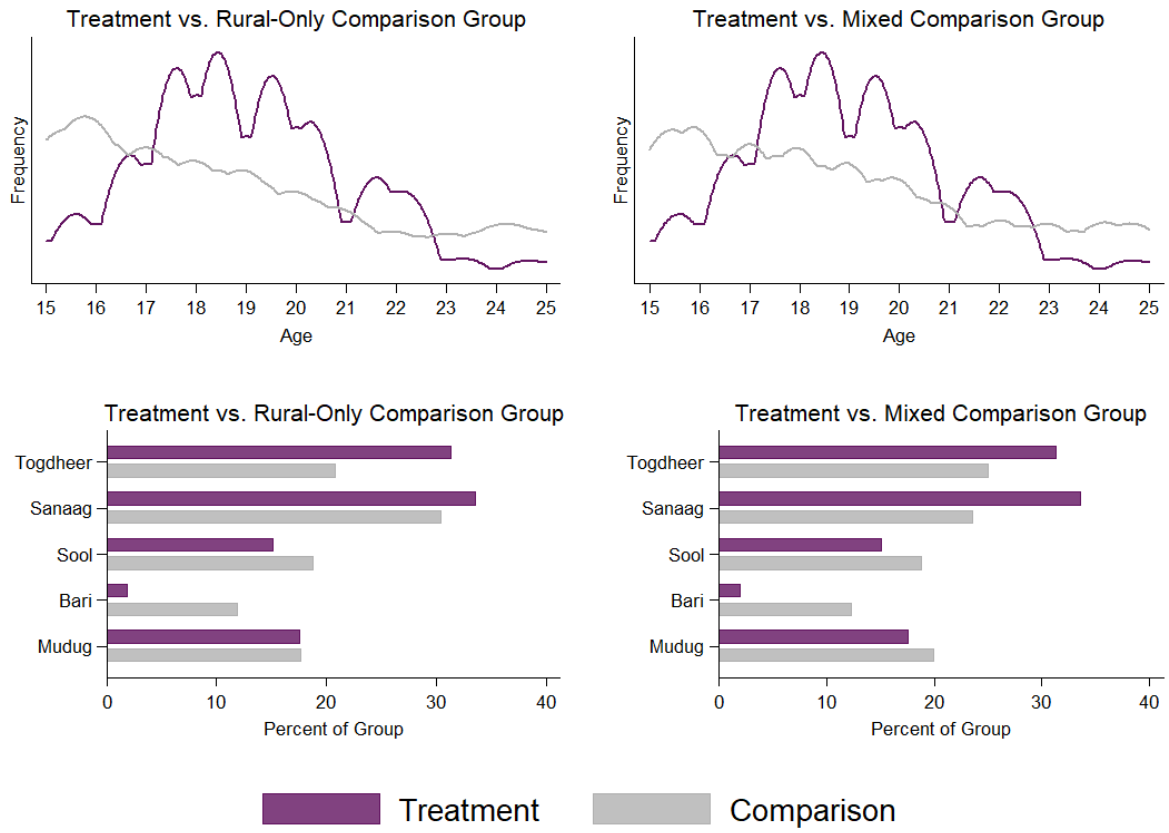
To save space, we do not include results for each of the regions; region-specific coefficients and standard errors are available upon request. Note that the omitted reference category for age groups is always the youngest age included in the sample (typically age 15, though it may be ages 15-16 for analyses of marriage outcomes).

1.2. Treatment-Comparison Balance

Before turning to the full results of our analysis of SOMGEP impact, we briefly describe the treatment and comparison groups used in this analysis. We refer readers to Annex 3 for discussion of how the SOMGEP sample was selected. Details on the sampling methodology employed by the Somali and Somaliland Health and Demographic Survey are available in public reports; for our purposes, it is sufficient to note that the samples were drawn in a way that would produce a representative sample of women at the regional level.

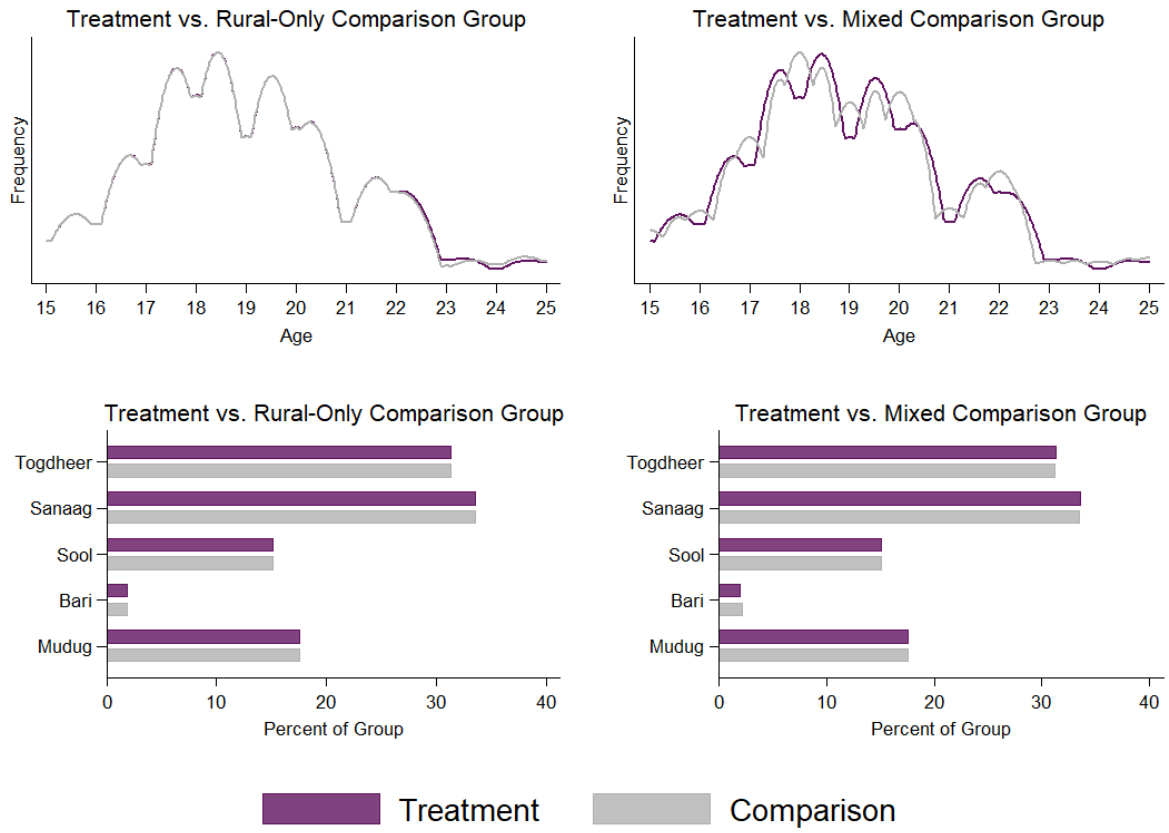
Given that the treatment group is drawn exclusively from SOMGEP villages, while the comparison group is representative of the overall population of the same regions, we would expect demographic and geographic differences between the two groups. As Figure 2 shows, both the rural-only and mixed rural-urban comparison groups we use differ from the treatment group in terms of age and regional representation. Again, this is not a surprising finding, as SOMGEP's original sampling methodology was not intended to be representative of the entire population of the five regions in which it was implemented. Moreover, imbalance in terms of age and region is handled directly via regression-based adjustments in the results below.

Figure 2: Treatment-Comparison group imbalance on age and region, pre-matching



However, we also constructed matched treatment and comparison groups using entropy balancing to test the robustness of our main findings. As Figure 3 shows, pre-processing the data via matching in this way produces treatment and comparison groups that are precisely balanced in terms of the few characteristics we can observe about each respondent – their age and region. Throughout the results presented in the following sections, we report regressions using both our main (unmatched) and matched samples in separate tables.

Figure 3: Treatment-Comparison group balance on age and region, after entropy balancing



1.3. Educational Attainment

In this section, we analyse the likelihood of primary and secondary school completion as a function of region, age, urbanicity, and SOMGEP exposure. Tables 1 and 2 report our preferred models of primary and secondary school completion, respectively; Tables 3 and 4 repeat these analyses using the matched sample that ensures balance on region and age between the treatment and comparison groups; Tables 5 and 6 use urban- and rural-only subsamples to test whether our results are driven entirely by SOMGEP's impact in either urban or rural areas.

Table 1: Main models of primary school completion

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	34.8***	40.6***	25.7***	34.9***	40***	23.5***
	(3.2)	(2.9)	(2.7)	(3)	(2.7)	(2.6)
Age - 16	7.9	8.4	11.6***	7	7.5	8.6**
	(6.4)	(5.7)	(4.5)	(5.4)	(4.9)	(3.7)
Age - 17	13.9**	11.3**	15***	9.7*	8.6*	14.2***
	(6.3)	(5.5)	(4.5)	(5.3)	(4.8)	(3.7)
Age - 18	17.1***	15.2***	15.4***	18.2***	16.6***	17.4***
	(5.9)	(5.2)	(4.3)	(5.1)	(4.6)	(3.6)
Age - 19	17.3***	15.7***	15.7***	17.5***	15.9***	16.5***
	(6.2)	(5.6)	(4.6)	(5.5)	(5)	(4)
Age - 20	11.2*	8.8*	11.8***	13.5***	11.1**	15.5***
	(5.9)	(5.2)	(4.3)	(5.2)	(4.6)	(3.6)
Age - 21	0	-1	6.4	5.5	4.6	13.3***
	(8)	(7.1)	(5.8)	(6.6)	(5.9)	(4.7)
Age - 22	7.3	6.2	7.3	11.3*	9.8*	14.7***
	(7.2)	(6.4)	(5.4)	(6.2)	(5.6)	(4.5)
Age - 23-25	7.3	6.2	11.6***	6.7	5.9	12.4***
	(6.2)	(5.4)	(4.2)	(5.3)	(4.6)	(3.5)
Rural or Nomad			-22.6***			-24.9***
			(2.3)			(1.9)
Observations	891	1022	1646	1139	1292	2443
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 2: Main models of secondary school completion

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	15.9***	17.7***	12.2***	16.7***	18.1***	10.5***
	(2.3)	(2.1)	(1.9)	(2.1)	(1.9)	(2)
Age - 16	-.6	-.7	2.6	-.7	-.7	-.1
	(4.6)	(4.1)	(3.2)	(3.8)	(3.4)	(2.8)
Age - 17	-2.8	-2.9	-.5	-2.7	-2.6	-1.1
	(4.6)	(3.9)	(3.1)	(3.7)	(3.3)	(2.7)
Age - 18	6.5	5.1	5.2*	6.4*	5.3*	8***
	(4.3)	(3.7)	(3)	(3.6)	(3.2)	(2.7)
Age - 19	14.3***	12.6***	9.8***	12.2***	10.8***	10.8***
	(4.5)	(4)	(3.3)	(3.9)	(3.4)	(3)
Age - 20	12.3***	10.1***	11.6***	12.3***	10.3***	15.3***
	(4.3)	(3.7)	(3)	(3.6)	(3.2)	(2.7)
Age - 21	9.7*	7.7	9.4**	9.1**	7.7*	14***
	(5.8)	(5)	(4.1)	(4.6)	(4.1)	(3.5)
Age - 22	17.8***	15.5***	13.5***	17.5***	15.3***	17***
	(5.2)	(4.6)	(3.8)	(4.4)	(3.8)	(3.3)
Age - 23-25	9.3**	7.8**	9.7***	7.3**	6.3**	12.8***
	(4.5)	(3.8)	(3)	(3.7)	(3.2)	(2.6)
Rural or Nomad			-11.2***			-13.4***
			(1.6)			(1.4)
Observations	891	1022	1646	1139	1292	2443
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 3: Matched models of primary school completion, using entropy balancing

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	36.9***	42.2***	26.1***	36.6***	41.4***	24.9***
	(3)	(2.7)	(2.3)	(2.6)	(2.4)	(1.9)
Age - 16	13.2	13.7	16.4**	12.9	13.4*	16.2***
	(9.3)	(8.4)	(7.1)	(8.3)	(7.5)	(5.9)
Age - 17	20.7**	17.4**	20.9***	19.7***	17.1**	21***
	(8.3)	(7.5)	(6.3)	(7.4)	(6.7)	(5.2)
Age - 18	23.8***	21.9***	21.5***	24***	22.2***	22.5***
	(8)	(7.2)	(6)	(7)	(6.4)	(5)
Age - 19	19.9**	19.1***	20.2***	20.5***	19.6***	20.2***
	(8.1)	(7.3)	(6.2)	(7.2)	(6.5)	(5.1)
Age - 20	17.4**	15.9**	19.7***	17**	15.6**	19.7***
	(8.1)	(7.3)	(6.1)	(7.1)	(6.5)	(5)
Age - 21	4.8	4.1	12*	5.7	5.1	12.3**
	(9.3)	(8.4)	(7.1)	(8.3)	(7.5)	(5.8)
Age - 22	13.4	13.5*	11.9*	13.6*	13.6*	13.5**
	(8.6)	(7.8)	(6.6)	(7.6)	(7)	(5.4)
Age - 23-25	15.2	14.4	21.5***	14.5*	14*	21.5***
	(10)	(9)	(7.6)	(8.8)	(8)	(6.2)
Rural or Nomad			-19.9***			-20.5***
			(2.4)			(2.1)
Observations	891	1022	1646	1139	1292	2443
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 4: Matched models of secondary school completion, using entropy balancing

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	18.8***	19.7***	13.2***	18.3***	19.2***	12.1***
	(2.2)	(2)	(1.8)	(2)	(1.8)	(1.5)
Age - 16	-.6	-.4	.5	-.3	-.2	.2
	(7)	(6.4)	(5.5)	(6.2)	(5.7)	(4.6)
Age - 17	1.4	1.1	1.1	.9	.8	.7
	(6.2)	(5.7)	(4.9)	(5.5)	(5.1)	(4.1)
Age - 18	10.3*	9.4*	8.8*	10.2*	9.4*	8.8**
	(5.9)	(5.4)	(4.7)	(5.3)	(4.8)	(3.9)
Age - 19	17.2***	16.9***	16***	16.8***	16.5***	15.5***
	(6)	(5.5)	(4.8)	(5.4)	(4.9)	(4)
Age - 20	16.7***	16.2***	19.9***	16.9***	16.4***	20***
	(6)	(5.5)	(4.8)	(5.4)	(4.9)	(3.9)
Age - 21	12.3*	12.2*	14.2**	12.8**	12.7**	15.5***
	(7)	(6.3)	(5.5)	(6.2)	(5.7)	(4.6)
Age - 22	20***	19.2***	19***	18.6***	17.9***	18.4***
	(6.4)	(5.9)	(5.1)	(5.7)	(5.3)	(4.2)
Age - 23-25	12.8*	11.6*	13.7**	12.3*	11.3*	14.9***
	(7.4)	(6.8)	(5.9)	(6.6)	(6.1)	(4.9)
Rural or Nomad			-13.2***			-13.4***
			(1.9)			(1.6)
Observations	891	1022	1646	1139	1292	2443
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 5: Models of primary school completion among urban/rural subsamples

	Full Sample	Rural Only	Urban Only
Treat (SOMGEP)	23.5***	28.2***	20.1***
	(2.6)	(3.9)	(3.6)
Age - 16	8.6**	8.8*	9.2*
	(3.7)	(5)	(5.4)
Age - 17	14.2***	6.1	20.7***
	(3.7)	(5)	(5.3)
Age - 18	17.4***	16.3***	19.4***
	(3.6)	(4.9)	(5.2)
Age - 19	16.5***	12.1**	20.5***
	(4)	(5.5)	(5.7)
Age - 20	15.5***	13.4***	17.4***
	(3.6)	(4.8)	(5.3)
Age - 21	13.3***	5.9	19.6***
	(4.7)	(6.5)	(6.6)
Age - 22	14.7***	11.2*	18.3***
	(4.5)	(6.1)	(6.4)
Age - 23-25	12.4***	5.3	18.4***
	(3.5)	(4.6)	(5.1)
Rural or Nomad	-24.9***		
	(1.9)		
Observations	2443	1034	1409
Region Controls	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 6: Models of secondary school completion among urban/rural subsamples

	Full Sample	Rural Only	Urban Only
Treat (SOMGEP)	10.5***	7.2***	11.8***
	(2)	(2.2)	(2.9)
Age - 16	-.1	.9	0
	(2.8)	(2.8)	(4.4)
Age - 17	-1.1	-1	0
	(2.7)	(2.8)	(4.3)
Age - 18	8***	5.6**	10.1**
	(2.7)	(2.7)	(4.2)
Age - 19	10.8***	5.4*	14.9***
	(3)	(3.1)	(4.6)
Age - 20	15.3***	6.7**	22.4***
	(2.7)	(2.7)	(4.3)
Age - 21	14***	4.3	22.2***
	(3.5)	(3.7)	(5.4)
Age - 22	17***	10.7***	22.2***
	(3.3)	(3.4)	(5.2)
Age - 23-25	12.8***	4	19.9***
	(2.6)	(2.6)	(4.2)
Rural or Nomad	-13.4***		
	(1.4)		
Observations	2443	1034	1409
Region Controls	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

1.4. Marriage and Age at Marriage

This section includes results related to marriage outcomes. **Table 7** analyses the probability that a woman will have been married – whether she remains married, is divorced, or is widowed; **Table 8** repeats this analysis using a matched sample. **Table 9** reports the relationship between SOMGEP participation and age at first marriage among those respondents who have been or are married. The sample size for this analysis is necessarily smaller, as it excludes women who have never married.

Table 7: Main models of the likelihood of having married (ever married)

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	-8.4***	-9.7***	1.7	-9.4***	-10.4***	1.8
	(3.1)	(2.9)	(2.2)	(2.8)	(2.7)	(2.1)
Age - 16	5.1	8.6	5.9*	3.5	5.9	4.4
	(5.9)	(5.4)	(3.4)	(4.8)	(4.5)	(2.9)
Age - 17	14.8**	15.9***	11***	15***	16.2***	11***
	(5.8)	(5.4)	(3.5)	(4.9)	(4.6)	(3)
Age - 18	24.2***	24.3***	16.8***	22.4***	22.4***	16***
	(5.2)	(4.9)	(3.3)	(4.4)	(4.2)	(2.8)
Age - 19	29.9***	32.4***	23.7***	32.6***	34.3***	26.3***
	(5.7)	(5.4)	(3.6)	(5)	(4.8)	(3.1)
Age - 20	44.5***	47***	31.4***	49.8***	51.1***	33.9***
	(5.5)	(5.2)	(3.5)	(4.7)	(4.4)	(3)
Age - 21	58***	51.4***	42***	54.8***	50.8***	40.1***
	(7.6)	(7.1)	(4.7)	(6.1)	(5.8)	(3.9)
Age - 22	67.1***	68.8***	61.3***	66.7***	68.8***	56.9***
	(6.5)	(6.3)	(4.4)	(5.8)	(5.6)	(3.7)
Age - 23-25	70.9***	72.8***	69.1***	72.5***	74.1***	68.2***
	(5.8)	(5.4)	(3.4)	(4.8)	(4.6)	(2.9)
Rural or Nomad			14.5***			14.5***
			(1.9)			(1.6)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 8: Matched models of the likelihood of having married (ever married), using entropy balancing

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	-10.6***	-12***	1.9	-11.7***	-12.8***	1.8
	(3)	(2.8)	(1.9)	(2.6)	(2.5)	(1.6)
Age - 16	5.3	8.9	8.7	4.7	7.8	8
	(9.3)	(8.9)	(6)	(8.2)	(7.9)	(5.1)
Age - 17	9.9	12.2	12.5**	10.6	12.2*	12.6***
	(8.3)	(7.8)	(5.3)	(7.2)	(7)	(4.5)
Age - 18	23.3***	23.2***	18.7***	22.3***	22.1***	18.3***
	(7.9)	(7.5)	(5.1)	(6.9)	(6.6)	(4.3)
Age - 19	27.6***	29.2***	23.6***	29.4***	30.6***	24.6***
	(8.1)	(7.7)	(5.2)	(7.1)	(6.8)	(4.4)
Age - 20	42.4***	44.4***	33.9***	44***	45.3***	34***
	(8.1)	(7.6)	(5.2)	(7.1)	(6.8)	(4.4)
Age - 21	55.7***	49.5***	47.1***	55.5***	51.2***	47.5***
	(9.3)	(8.9)	(6)	(8.2)	(7.9)	(5.1)
Age - 22	70.9***	71.6***	61.5***	69.8***	70.7***	59.4***
	(8.6)	(8.1)	(5.6)	(7.5)	(7.2)	(4.7)
Age - 23-25	69.6***	70.4***	68.4***	69.1***	69.9***	67.5***
	(9.9)	(9.4)	(6.4)	(8.7)	(8.4)	(5.4)
Rural or Nomad			19***			20.1***
			(2.1)			(1.8)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 9: Main models of age at first marriage (in years)

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	1.03***	1.27***	1.35***	1.17***	1.35***	1.39***
	(.34)	(.33)	(.31)	(.32)	(.31)	(.29)
Age - 16				2.13	2.08	2.58
				(2.82)	(2.61)	(2.66)
Age - 17	.83	.99	.81	2.89	2.97	3.12
	(1.56)	(1.14)	(1.04)	(2.52)	(2.51)	(2.59)
Age - 18	1.23	1.31	.98	3.31	3.29	3.43
	(1.45)	(1.01)	(.93)	(2.47)	(2.48)	(2.56)
Age - 19	2.26	2.3**	2.12**	4.4*	4.34*	4.53*
	(1.46)	(1.02)	(.93)	(2.46)	(2.47)	(2.56)
Age - 20	2.57*	2.55***	2.4***	4.59*	4.48*	4.86*
	(1.42)	(.96)	(.9)	(2.44)	(2.45)	(2.55)
Age - 21	3.95***	4.08***	3.81***	5.61**	5.59**	6.13**
	(1.47)	(1.05)	(.96)	(2.46)	(2.47)	(2.56)
Age - 22	2.73*	2.62***	2.65***	5.03**	4.8*	5.45**
	(1.43)	(.99)	(.9)	(2.46)	(2.46)	(2.55)
Age - 23-25	3.67**	3.9***	3.73***	6.22**	6.34**	6.7***
	(1.41)	(.95)	(.87)	(2.44)	(2.45)	(2.54)
Rural or Nomad			-.02			-.01
			(.26)			(.22)
Observations	224	252	390	299	332	579
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 10: Matched models of age at first marriage (in years), using entropy balancing

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	.96***	1.24***	1.3***	1.09***	1.31***	1.29***
	(.27)	(.27)	(.2)	(.23)	(.23)	(.16)
Age - 16				1.6	1.77	2.08
				(14.78)	(14.73)	(10.52)
Age - 17	.82	.83	.65	2.47	2.57	2.77
	(1.13)	(1.15)	(.86)	(14.76)	(14.71)	(10.51)
Age - 18	1.28	1.09	.85	2.91	2.9	2.98
	(1.06)	(1.07)	(.8)	(14.76)	(14.71)	(10.51)
Age - 19	2.31**	2.05*	1.96**	4.07	3.98	4.18
	(1.06)	(1.07)	(.81)	(14.76)	(14.71)	(10.5)
Age - 20	2.69***	2.28**	2.25***	4.3	4.14	4.39
	(1.02)	(1.03)	(.77)	(14.75)	(14.7)	(10.5)
Age - 21	4.43***	4.27***	3.71***	5.87	5.8	5.67
	(1.06)	(1.07)	(.8)	(14.76)	(14.7)	(10.5)
Age - 22	3.02***	2.46**	2.65***	4.64	4.32	4.82
	(1.03)	(1.04)	(.78)	(14.76)	(14.7)	(10.5)
Age - 23-25	3.8***	3.65***	3.43***	5.47	5.5	5.64
	(1.06)	(1.07)	(.8)	(14.76)	(14.71)	(10.51)
Rural or Nomad			-.14			-.21
			(.21)			(.18)
Observations	224	252	390	299	332	579
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 11: Main models of the likelihood of early marriage (under age 15), among all women

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	-7.3***	-9.3***	-5.9***	-7.6***	-9.1***	-5.8***
	(1.5)	(1.6)	(1.3)	(1.5)	(1.5)	(1.3)
Age - 16	2.9	6.7**	3.7*	1.1	3.9	2.6
	(3)	(3)	(2.1)	(2.5)	(2.5)	(1.7)
Age - 17	7**	8.1***	5.1**	5.5**	6**	4.4**
	(2.9)	(3)	(2.1)	(2.6)	(2.6)	(1.8)
Age - 18	8.6***	9.6***	7.9***	6.5***	7.4***	6.5***
	(2.6)	(2.7)	(2)	(2.4)	(2.4)	(1.7)
Age - 19	5.3*	6.9**	5.2**	5.2*	6.4**	6.1***
	(2.9)	(3)	(2.2)	(2.6)	(2.7)	(1.9)
Age - 20	7.5***	9.3***	6.5***	7.2***	8.4***	6.2***
	(2.8)	(2.9)	(2.1)	(2.5)	(2.5)	(1.8)
Age - 21	4.4	4.5	3.8	5	5	3.7
	(3.8)	(3.9)	(2.9)	(3.2)	(3.3)	(2.3)
Age - 22	14.2***	17.9***	14.9***	11.7***	14.8***	11.3***
	(3.3)	(3.5)	(2.6)	(3.1)	(3.2)	(2.2)
Age - 23-25	15.8***	15.3***	17.2***	12.7***	12.5***	13.6***
	(2.9)	(3)	(2.1)	(2.6)	(2.6)	(1.7)
Rural or Nomad			3.2***			2.8***
			(1.1)			(.9)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 12: Matched models of the likelihood of early marriage (under age 15), among all women

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	-8.2***	-10.5***	-6.1***	-8.8***	-10.6***	-5.9***
	(1.5)	(1.6)	(1)	(1.4)	(1.4)	(.8)
Age - 16	1.2	4.6	2.7	.6	3.6	2.2
	(4.7)	(4.9)	(3)	(4.3)	(4.4)	(2.5)
Age - 17	3.4	4.8	3.4	3.7	4.7	3.1
	(4.2)	(4.3)	(2.7)	(3.8)	(3.9)	(2.2)
Age - 18	5.8	6.5	5.9**	4.9	5.4	5.3**
	(4)	(4.1)	(2.5)	(3.6)	(3.7)	(2.1)
Age - 19	2.5	3.7	2.9	2.8	4	2.9
	(4.1)	(4.2)	(2.6)	(3.7)	(3.8)	(2.2)
Age - 20	4.7	6	4.3*	4.8	5.6	3.8*
	(4.1)	(4.2)	(2.6)	(3.7)	(3.8)	(2.1)
Age - 21	-.2	.2	2.1	.8	1.1	1.9
	(4.8)	(4.9)	(3)	(4.3)	(4.4)	(2.5)
Age - 22	17.1***	21.3***	10.6***	16.9***	20.4***	9.9***
	(4.4)	(4.5)	(2.8)	(3.9)	(4)	(2.3)
Age - 23-25	10.9**	10.5**	11.6***	9.9**	9.5**	10.6***
	(5.1)	(5.2)	(3.2)	(4.5)	(4.6)	(2.6)
Rural or Nomad			4***			4.1***
			(1)			(.9)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

1.5. Motherhood

In this section, we analyse the probability that a woman has had at least one child. Tables 13 and 14 assess the relationship between motherhood and SOMGEP exposure among the subset of women who have ever been married. The HDS survey did not ask single women whether they had ever given birth, limiting the available sample for this analysis to women who have been or are married; in practice, among SOMGEP women in our sample, no single women reported giving birth either. Table 15 expands the sample to single women by assuming that no single women are mothers. The purpose of this analysis is to understand the combined effect of SOMGEP on marriage and birth outcomes. While the results in Tables 13 and 14 show the effect of SOMGEP on motherhood, *conditional* on having been married, Table 15 shows the effect of SOMGEP on motherhood, including any effect that is transmitted *through* the programme's effect on marriage rates.

Table 13: Main models of likelihood of motherhood, among ever-married women

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	3.2	5.3	9.4**	1.3	3.5	8.6*
	(5.3)	(5.1)	(4.5)	(5)	(4.9)	(4.5)
Age - 17	12.2	43.5**	35.1**	52.2	48.2	37.4
	(24)	(17.8)	(15.3)	(39.8)	(40.1)	(39.9)
Age - 18	15	49.2***	55***	70.8*	68.7*	65.2*
	(22.2)	(15.8)	(13.8)	(39)	(39.5)	(39.5)
Age - 19	7.9	43.6***	49.6***	57.8	57.4	59.8
	(22.4)	(15.9)	(13.8)	(38.9)	(39.4)	(39.5)
Age - 20	17.1	53.9***	55.6***	70*	70.6*	65.9*
	(21.8)	(15)	(13.3)	(38.7)	(39.1)	(39.3)
Age - 21	7.8	43.8***	51.6***	74.4*	74.6*	68.1*
	(22.6)	(16.4)	(14.2)	(38.9)	(39.4)	(39.5)
Age - 22	19.2	56***	66.5***	75.1*	76.3*	77.9**
	(21.9)	(15.4)	(13.4)	(38.9)	(39.4)	(39.4)
Age - 23-25	28.2	62.8***	73.6***	78.6**	76.7*	81.5**
	(21.7)	(14.9)	(12.8)	(38.6)	(39.1)	(39.2)
Rural or Nomad			10.6***			6.9**
			(3.8)			(3.4)
Observations	225	253	391	301	334	581
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 14: Matched models of likelihood of motherhood, among ever-married women, using entropy balancing

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	7.2	4.8	9.3**	5.8	5.1	10.3***
	(5.2)	(4.9)	(3.9)	(4.4)	(4.2)	(3.2)
Age - 17	3	18.2	12.8	42.5	49.1	44.6
	(22.2)	(20.6)	(16.6)	(283.1)	(266.9)	(206.1)
Age - 18	30	26.4	25.2	61.5	59	57.8
	(20.8)	(19.2)	(15.5)	(283)	(266.8)	(206.1)
Age - 19	29.6	31	29.8*	57.7	58.1	57.9
	(20.9)	(19.3)	(15.6)	(283)	(266.8)	(206)
Age - 20	32.8	35.3*	32.5**	64.9	66.6	63.4
	(20.2)	(18.5)	(15)	(283)	(266.7)	(206)
Age - 21	27.4	27.2	28.6*	60.3	61.7	61.2
	(20.8)	(19.2)	(15.6)	(283)	(266.7)	(206)
Age - 22	33.9*	35*	37.1**	65.9	67.2	68.3
	(20.4)	(18.8)	(15.1)	(283)	(266.7)	(206)
Age - 23-25	43.4**	42.1**	43.9***	72.2	70.9	73.2
	(20.8)	(19.2)	(15.5)	(283)	(266.8)	(206.1)
Rural or Nomad			14.1***			12.4***
			(4.1)			(3.5)
Observations	225	253	391	301	334	581
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 15: Main models of likelihood of motherhood, among all women

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	-6.1**	-6.2**	3.5*	-6.9***	-6.8***	3.6*
	(2.9)	(2.8)	(2)	(2.7)	(2.5)	(2)
Age - 16	3.5	3	2.1	3.4	2.9	2
	(5.7)	(5.1)	(3.2)	(4.6)	(4.2)	(2.7)
Age - 17	11.7**	11.6**	6.6**	10.4**	10.3**	6.1**
	(5.6)	(5.1)	(3.3)	(4.7)	(4.3)	(2.8)
Age - 18	19.9***	19.1***	12.5***	18.6***	17.9***	12.1***
	(5)	(4.7)	(3.1)	(4.3)	(4)	(2.6)
Age - 19	22.6***	23.8***	16.8***	23.1***	24***	18.2***
	(5.5)	(5.1)	(3.3)	(4.8)	(4.5)	(2.9)
Age - 20	37.2***	39.1***	24.5***	39.8***	41.1***	25.7***
	(5.3)	(4.9)	(3.2)	(4.5)	(4.2)	(2.8)
Age - 21	43.9***	38.8***	30***	46.9***	43.2***	30.6***
	(7.3)	(6.7)	(4.4)	(5.9)	(5.5)	(3.6)
Age - 22	57.9***	59.2***	53.3***	58.2***	60.2***	49.2***
	(6.2)	(5.9)	(4)	(5.6)	(5.3)	(3.4)
Age - 23-25	67.2***	67.2***	63.3***	64.2***	64.2***	59.9***
	(5.6)	(5.2)	(3.2)	(4.6)	(4.3)	(2.6)
Rural or Nomad			13.4***			12.4***
			(1.7)			(1.5)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

1.6. Employment

This section assesses current employment as a function of SOMGEP using our standard sample (Table 16) and matched sample (Table 17).

Table 16: Main models of current employment

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	7.5***	7.4***	8***	5.1**	5.6**	6.7***
	(2.9)	(2.5)	(2.1)	(2.5)	(2.3)	(2)
Age - 16	8.4	8.4	8.5	6.6	6.4	7
	(7.4)	(7.1)	(6.6)	(7.5)	(7.1)	(6.9)
Age - 17	4.6	4.8	5.2	4.4	4.5	5
	(6.6)	(6.4)	(6)	(6.6)	(6.4)	(6.2)
Age - 18	6.8	6.8	7.2	4.8	5	6.1
	(6.3)	(6.1)	(5.8)	(6.3)	(6.1)	(5.9)
Age - 19	5.4	5.5	6.3	3.7	3.9	4.7
	(6.4)	(6.2)	(5.8)	(6.4)	(6.2)	(6)
Age - 20	6.8	6.9	6.9	6.6	6.7	7.5
	(6.4)	(6.2)	(5.8)	(6.3)	(6.1)	(5.9)
Age - 21	11.4	11.4	11.1*	8	8.3	7.8
	(7.2)	(7)	(6.4)	(7)	(6.8)	(6.4)
Age - 22	14.8**	14.6**	13.3**	13.6**	13.3**	10.8*
	(6.6)	(6.4)	(6)	(6.6)	(6.4)	(6.1)
Age - 23-25	13.7**	13.2**	14**	10	9.8	12.6**
	(6.8)	(6.5)	(5.9)	(6.6)	(6.4)	(6)
Rural or Nomad			2.7			2.2
			(1.8)			(1.7)
Observations	519	547	684	595	628	874
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 17: Matched models of current employment, using entropy balancing

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	6.3***	6.3***	7.4***	5.6***	5.7***	6.8***
	(1.7)	(1.7)	(1.5)	(1.6)	(1.6)	(1.3)
Age - 16	7.8	8.2	7.8	3.1	3	3.8
	(6.9)	(6.7)	(5.6)	(5.4)	(5.2)	(4.3)
Age - 17	6	6	6.1	2.2	2	2.7
	(6.3)	(6.1)	(5.4)	(4.8)	(4.6)	(3.8)
Age - 18	7	7	7.1	2.3	2.3	3.2
	(6.2)	(6)	(5.3)	(4.6)	(4.4)	(3.7)
Age - 19	5.7	5.7	6.4	1.4	1.4	2.7
	(6.3)	(6.1)	(5.3)	(4.6)	(4.5)	(3.7)
Age - 20	7	7	6.8	2.5	2.5	3.1
	(6.3)	(6.1)	(5.3)	(4.7)	(4.5)	(3.7)
Age - 21	13.3*	13.3**	10.5*	7.8	7.6	6.3
	(6.8)	(6.6)	(5.8)	(5.3)	(5.1)	(4.2)
Age - 22	12.3*	12.4**	12.9**	8.1*	8.1*	9.2**
	(6.5)	(6.3)	(5.5)	(4.9)	(4.7)	(3.9)
Age - 23-25	14.4**	14**	14.7**	9.6*	9*	10.5**
	(7.1)	(6.9)	(6)	(5.7)	(5.5)	(4.5)
Rural or Nomad			2.6*			2.9**
			(1.5)			(1.4)
Observations	519	547	684	595	628	874
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

1.7. Tolerance of IPV

Tables 18 and 19 report our main and matched models of tolerance for IPV, where tolerance for IPV is measured on the same 4-point scale used in the main report. This scale is straightforward to interpret, it represents the number of scenarios (out of three total) in which a woman states that a husband would be justified in hitting or beating his wife. Higher scores represent greater tolerance for IPV. Table 20 reports regression models in which the outcome is tolerance of IPV in each of the three specific scenarios; as the results show, SOMGEP appears to have reduced tolerance of IPV across all three scenarios.

Table 18: Main models of tolerance of IPV (0-3 scale, number of scenarios IPV is justified)

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	-.76***	-.73***	-.58***	-.79***	-.76***	-.62***
	(.09)	(.09)	(.08)	(.09)	(.08)	(.08)
Age - 16	.05	.1	.01	.18	.19	.06
	(.17)	(.16)	(.13)	(.16)	(.15)	(.12)
Age - 17	-.08	-.11	-.06	-.02	-.06	-.01
	(.17)	(.16)	(.13)	(.16)	(.15)	(.12)
Age - 18	-.11	-.04	-.11	-.04	0	-.06
	(.16)	(.15)	(.12)	(.15)	(.14)	(.11)
Age - 19	-.11	-.07	-.15	-.06	-.02	-.07
	(.17)	(.16)	(.13)	(.16)	(.16)	(.12)
Age - 20	-.25	-.2	-.1	-.18	-.15	-.07
	(.17)	(.16)	(.13)	(.16)	(.15)	(.12)
Age - 21	-.52**	-.44**	-.27	-.35	-.31	-.16
	(.24)	(.22)	(.18)	(.21)	(.2)	(.16)
Age - 22	-.54***	-.53***	-.47***	-.5**	-.52***	-.45***
	(.21)	(.2)	(.17)	(.2)	(.19)	(.15)
Age - 23-25	-.25	-.14	-.22	-.16	-.07	-.14
	(.19)	(.19)	(.14)	(.18)	(.17)	(.13)
Rural or Nomad			.23***			.19***
			(.07)			(.06)
Observations	723	802	1335	833	928	1636
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 19: Matched models of tolerance of IPV (0-3 scale, number of scenarios IPV is justified), using entropy balancing

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	-.72***	-.7***	-.59***	-.72***	-.71***	-.6***
	(.08)	(.08)	(.06)	(.08)	(.07)	(.05)
Age - 16	-.03	.01	-.02	0	.02	-.02
	(.26)	(.24)	(.18)	(.24)	(.22)	(.16)
Age - 17	-.19	-.26	-.14	-.2	-.27	-.16
	(.23)	(.21)	(.16)	(.21)	(.2)	(.14)
Age - 18	-.16	-.09	-.18	-.15	-.09	-.18
	(.22)	(.21)	(.15)	(.2)	(.19)	(.14)
Age - 19	-.17	-.16	-.16	-.19	-.16	-.15
	(.22)	(.21)	(.16)	(.21)	(.2)	(.14)
Age - 20	-.34	-.3	-.18	-.31	-.27	-.2
	(.23)	(.21)	(.16)	(.21)	(.2)	(.14)
Age - 21	-.68**	-.55**	-.31	-.56**	-.49**	-.33*
	(.27)	(.25)	(.19)	(.25)	(.23)	(.17)
Age - 22	-.51**	-.55**	-.48***	-.54**	-.58***	-.51***
	(.25)	(.23)	(.17)	(.23)	(.21)	(.15)
Age - 23-25	-.27	-.22	-.3	-.28	-.24	-.32*
	(.29)	(.27)	(.2)	(.26)	(.25)	(.18)
Rural or Nomad			.26***			.24***
			(.06)			(.06)
Observations	723	802	1335	833	928	1636
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 20: Models of tolerance of IPV under specific scenarios

	If she goes out without telling him?		If she argues with him?		If she neglects HH duties, including cooking?	
	Rural Comp.	Full Comp. (incl. urban)	Rural Comp.	Full Comp. (incl. urban)	Rural Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	-23.7***	-20.1***	-30.6***	-24.8***	-24.3***	-17.1***
	(3.5)	(2.9)	(3.3)	(2.9)	(3.5)	(2.9)
Age - 17	-4.7	-3.5	6.5	2.2	-4	.8
	(6.3)	(4.6)	(6.1)	(4.5)	(6.4)	(4.6)
Age - 18	-7.1	-6.2	2.4	-1	.8	1.4
	(5.8)	(4.3)	(5.6)	(4.2)	(5.8)	(4.3)
Age - 19	-5.1	-2.9	3.3	1.1	-4.3	-4.9
	(6.3)	(4.7)	(6.1)	(4.6)	(6.4)	(4.7)
Age - 20	-11.3*	-3.5	-4	-3	-2.9	-.3
	(6.3)	(4.6)	(6.1)	(4.5)	(6.4)	(4.6)
Age - 21	-18.5**	-5.5	-5.5	-5.6	-10.6	-5.4
	(8.4)	(6.4)	(8.1)	(6.2)	(8.4)	(6.3)
Age - 22	-20.6***	-15.5***	-12.9*	-15.2***	-16.3**	-14.3**
	(7.8)	(5.9)	(7.5)	(5.8)	(7.9)	(5.9)
Age - 23-25	-11.1	-5.7	3.3	-4	-8.5	-4
	(7.1)	(4.9)	(6.9)	(4.8)	(7.2)	(4.9)
Rural or Nomad		5.5**		7.1***		6.3***
		(2.4)		(2.4)		(2.4)
Observations	833	1636	833	1636	833	1636
Region Controls	Current	Current	Current	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

1.8. Intra-Household Decision-Making

This section reports results related to female control or influence over two household decisions. The first concerns control over major household purchases and the second concerns control over the decision for a woman to seek healthcare when she feels it is needed. Tables 21 and 22 study the relationship between sole control (women who report that they would make the decision without the input of their husband) over these two decisions and SOMGEP exposure. Tables 23 and 24 repeat this analysis for the matched sample. Tables 25 and 26 use sole *or* joint control as their outcome – a woman is coded as "1" if she would control the decision or would make the decision jointly with her husband.

Table 21: Main models of female (sole) control over decision-making around major household purchases

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	16.5**	18.6***	14.8***	16***	18.8***	15.3***
	(6.7)	(6.5)	(5.7)	(6.1)	(6)	(5.4)
Age - 17	-20	4.6	-11.1	72.3	75.3	57.4
	(30.3)	(22.5)	(19.3)	(48.3)	(48.9)	(48.1)
Age - 18	-36.2	-7.8	-12.4	62.1	64.4	58.9
	(28.1)	(20)	(17.4)	(47.4)	(48.3)	(47.7)
Age - 19	-43.7	-16.1	-23.9	59.1	60.8	54.9
	(28.3)	(20.1)	(17.4)	(47.2)	(48.1)	(47.6)
Age - 20	-38.7	-13	-13.9	63.5	62.6	65.2
	(27.5)	(19)	(16.7)	(46.9)	(47.8)	(47.4)
Age - 21	-27.3	-1.2	-12.9	76.3	76.9	65.8
	(28.5)	(20.7)	(17.9)	(47.2)	(48.1)	(47.6)
Age - 22	-25.3	-2.1	-5.5	76.3	72.6	67.3
	(27.7)	(19.4)	(16.8)	(47.2)	(48)	(47.5)
Age - 23-25	-19	4.6	-2.1	81*	79.1*	72.7
	(27.4)	(18.8)	(16.2)	(46.8)	(47.7)	(47.3)
Rural or Nomad			-10.3**			-6.3
			(4.8)			(4.1)
Observations	225	253	388	301	334	578
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 22: Main models of female (sole) control over decision-making around women's healthcare

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	8.5	11	9.9*	8.2	11*	9.2*
	(7)	(6.7)	(5.9)	(6.3)	(6.1)	(5.5)
Age - 17	3	-3.7	-17.2	62.3	67.3	56.2
	(31.7)	(23.3)	(20)	(49.5)	(49.9)	(48.6)
Age - 18	-1.3	-5.5	-4.9	66.9	69.7	71.7
	(29.4)	(20.7)	(18)	(48.6)	(49.2)	(48.1)
Age - 19	8.3	-1.2	-15.5	70.4	70.2	68.8
	(29.6)	(20.8)	(18)	(48.5)	(49)	(48)
Age - 20	.8	-6.9	-15.9	73.6	72.2	71.1
	(28.8)	(19.7)	(17.3)	(48.1)	(48.7)	(47.8)
Age - 21	3.4	-3.1	-13.7	79.2	80.3	74.7
	(29.9)	(21.5)	(18.5)	(48.4)	(49)	(48.1)
Age - 22	-3.6	-11.9	-12.9	68.3	68.4	69.8
	(29)	(20.1)	(17.4)	(48.4)	(49)	(48)
Age - 23-25	6.1	-3.3	-8.2	78.9	76.5	76.8
	(28.7)	(19.5)	(16.8)	(48.1)	(48.7)	(47.7)
Rural or Nomad			-5.6			-3.4
			(5)			(4.1)
Observations	225	253	388	301	334	578
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 23: Matched models of female (sole) control over decision-making around major household purchases, using entropy balancing

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	18.7***	18.5***	15.6***	16.9***	18.6***	16.2***
	(6.1)	(5.8)	(4.6)	(5.2)	(5)	(3.8)
Age - 17	-41.7	-10.9	-25.2	70.4	73.5	57.8
	(25.8)	(24.5)	(19.2)	(334.4)	(320.9)	(239.2)
Age - 18	-41.7*	-19	-25.7	62.8	64.5	54.6
	(24.1)	(22.8)	(17.9)	(334.3)	(320.8)	(239.1)
Age - 19	-40.1*	-18.4	-29.3	60.7	61.5	49.7
	(24.2)	(22.9)	(18)	(334.3)	(320.8)	(239.1)
Age - 20	-42.2*	-20.7	-20.6	60.9	61.4	59.2
	(23.4)	(22)	(17.3)	(334.2)	(320.7)	(239.1)
Age - 21	-20.3	-1.8	-12.8	81.4	80.4	67.4
	(24.1)	(22.8)	(18)	(334.2)	(320.7)	(239.1)
Age - 22	-20.1	-6.4	-8.5	81.7	76.2	70.7
	(23.6)	(22.3)	(17.5)	(334.2)	(320.7)	(239.1)
Age - 23-25	-24	-7.1	-11.7	79.9	76.7	68
	(24.1)	(22.8)	(17.9)	(334.3)	(320.8)	(239.1)
Rural or Nomad			-11.6**			-10.8***
			(4.8)			(4)
Observations	225	253	388	301	334	578
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 24: Matched models of female (sole) control over decision-making around women's healthcare, using entropy balancing

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	8	9.6	10.2**	6.5	9.6*	9.4**
	(6.3)	(6)	(4.8)	(5.4)	(5.2)	(3.9)
Age - 17	-27.1	-4.5	-8.5	57.3	62.1	60.8
	(26.7)	(25.3)	(20.3)	(345.2)	(329.9)	(249.3)
Age - 18	-15.6	-1.1	-2.6	62.7	65.8	69.3
	(24.9)	(23.5)	(18.9)	(345)	(329.8)	(249.2)
Age - 19	1.1	11.4	1.7	76.6	75.7	72.9
	(25.1)	(23.7)	(19)	(345)	(329.8)	(249.2)
Age - 20	-12.6	-1.7	-8.6	64.3	63.6	62.9
	(24.2)	(22.7)	(18.3)	(345)	(329.8)	(249.1)
Age - 21	1.7	12.2	4.5	76.1	76.2	72.9
	(25)	(23.5)	(19)	(345)	(329.8)	(249.2)
Age - 22	-5.8	-.1	2.8	68.7	64.5	71.5
	(24.4)	(23)	(18.5)	(345)	(329.8)	(249.1)
Age - 23-25	0	8.8	8.1	76.7	75.1	78.5
	(24.9)	(23.5)	(18.9)	(345)	(329.8)	(249.2)
Rural or Nomad			.4			.9
			(5)			(4.2)
Observations	225	253	388	301	334	578
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 25: Models of female sole/joint control over decision-making around major HH purchases

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	17.6***	16.8***	12.6**	18.1***	17.6***	14.5***
	(6.7)	(6.2)	(5.6)	(6.1)	(5.7)	(5.2)
Age - 17	10	21.9	10.1	43.3	45.5	33.2
	(30.3)	(21.6)	(18.9)	(47.9)	(46.8)	(45.8)
Age - 18	-4.1	12.8	4.7	41.2	40.3	31.4
	(28.1)	(19.2)	(17)	(47)	(46.1)	(45.3)
Age - 19	-2.5	16.7	5.5	39.8	41.5	28.6
	(28.3)	(19.3)	(17)	(46.9)	(46)	(45.2)
Age - 20	-14	8.5	9.2	34.8	37.7	33.8
	(27.6)	(18.2)	(16.4)	(46.5)	(45.7)	(45.1)
Age - 21	-6.4	11.1	-3	40.9	40.9	28.4
	(28.5)	(19.9)	(17.5)	(46.8)	(46)	(45.3)
Age - 22	5.1	20.9	9	50.8	48.6	32.1
	(27.7)	(18.6)	(16.5)	(46.8)	(45.9)	(45.2)
Age - 23-25	8	22.5	16.4	50.9	47.9	42.5
	(27.5)	(18)	(15.8)	(46.5)	(45.6)	(45)
Rural or Nomad			-13.9***			-6.2
			(4.7)			(3.9)
Observations	225	253	388	301	334	578
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 26: Models of female sole/joint control over decision-making around women's healthcare

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	8.9	10.1*	7.3	7.6	8.4	7.3
	(6.5)	(5.9)	(5.5)	(6)	(5.6)	(5.1)
Age - 17	30.6	9.3	1.2	30.5	33.5	24.9
	(29.2)	(20.6)	(18.5)	(47.4)	(46.1)	(45.5)
Age - 18	24.5	7.7	5.5	33.2	33.6	31.2
	(27.1)	(18.3)	(16.7)	(46.5)	(45.5)	(45.1)
Age - 19	41.4	24.7	11	41.3	43	35.4
	(27.3)	(18.4)	(16.7)	(46.4)	(45.4)	(45)
Age - 20	29.1	11.5	5.7	41.9	40.7	33.2
	(26.6)	(17.4)	(16.1)	(46)	(45.1)	(44.8)
Age - 21	32.8	16.1	2.3	40.8	41.5	28.9
	(27.5)	(19)	(17.2)	(46.3)	(45.3)	(45.1)
Age - 22	15.3	-1.3	-2.3	23.5	25.8	21.9
	(26.7)	(17.8)	(16.2)	(46.3)	(45.3)	(44.9)
Age - 23-25	24.6	6.7	4.8	35.4	33.4	33.4
	(26.5)	(17.2)	(15.6)	(46)	(45)	(44.7)
Rural or Nomad			-4.6			.9
			(4.7)			(3.8)
Observations	225	253	388	301	334	578
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

1.9. Phone Ownership and Use of Mobile Money

This section investigates whether SOMGEP is associated with increase mobile phone ownership (Tables 27 and 28) and use of mobile money services (Tables 29 and 30) among women.

Table 27: Main models of phone ownership

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	16.2***	16.9***	12.6***	14.1***	14.8***	11***
	(2.8)	(2.7)	(2.3)	(2.6)	(2.6)	(2.1)
Age - 16	11.9**	10**	9.5***	6.6	6.6	8.5***
	(5.4)	(5)	(3.6)	(4.6)	(4.3)	(3)
Age - 17	11.1**	13.1***	22.9***	19.8***	21.1***	26.7***
	(5.3)	(5)	(3.7)	(4.6)	(4.4)	(3)
Age - 18	28.7***	31.2***	33.8***	32.4***	33.8***	37.6***
	(4.7)	(4.6)	(3.5)	(4.2)	(4.1)	(2.9)
Age - 19	33.7***	36.4***	42.1***	36.2***	38.5***	44***
	(5.2)	(5)	(3.7)	(4.7)	(4.6)	(3.2)
Age - 20	35.9***	37.2***	43.9***	37.6***	38.9***	44.9***
	(5)	(4.8)	(3.6)	(4.5)	(4.3)	(3)
Age - 21	36.3***	38.3***	46***	40.9***	42.3***	48.9***
	(6.9)	(6.6)	(4.9)	(5.8)	(5.6)	(3.9)
Age - 22	35.5***	38.2***	43.6***	39.1***	41.5***	47***
	(5.9)	(5.8)	(4.6)	(5.5)	(5.4)	(3.7)
Age - 23-25	44.2***	47.7***	50.2***	44.7***	47.5***	50.2***
	(5.3)	(5.1)	(3.6)	(4.6)	(4.4)	(2.9)
Rural or Nomad			-3.8**			-3.3**
			(1.9)			(1.6)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 28: Matched models of phone ownership

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	15.9***	16***	12.1***	15.2***	15.1***	11.3***
	(2.5)	(2.3)	(1.6)	(2.1)	(2)	(1.3)
Age - 16	6.3	3.5	1.5	3.3	.9	.2
	(7.7)	(7.3)	(5.1)	(6.7)	(6.4)	(4.2)
Age - 17	4.3	6.3	10.1**	5	6.1	9.2**
	(6.9)	(6.4)	(4.5)	(5.9)	(5.6)	(3.7)
Age - 18	23.1***	25***	23.5***	23.2***	24.4***	23.8***
	(6.6)	(6.1)	(4.3)	(5.7)	(5.4)	(3.5)
Age - 19	26.5***	27.9***	29.9***	26.2***	27.3***	29.1***
	(6.7)	(6.3)	(4.4)	(5.8)	(5.5)	(3.6)
Age - 20	33.2***	32.2***	32.6***	31.7***	31.1***	31.6***
	(6.7)	(6.3)	(4.4)	(5.8)	(5.5)	(3.6)
Age - 21	28.6***	31.4***	34***	28.6***	30.1***	32.9***
	(7.8)	(7.3)	(5.1)	(6.7)	(6.4)	(4.2)
Age - 22	28.2***	30.5***	30.7***	27.6***	29.4***	30.5***
	(7.1)	(6.7)	(4.7)	(6.2)	(5.9)	(3.9)
Age - 23-25	33.4***	34.8***	34.7***	32.7***	33.4***	33.5***
	(8.2)	(7.7)	(5.4)	(7.1)	(6.8)	(4.5)
Rural or Nomad			-3.4*			-2.9**
			(1.7)			(1.5)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 29: Main models of access to and use of mobile money service

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	17.6***	18.6***	16***	18.5***	19.4***	15.4***
	(3)	(2.9)	(2.4)	(2.9)	(2.8)	(2.3)
Age - 16	6.9	4.3	7.8**	-2.8	-3.4	5.7*
	(5.8)	(5.4)	(3.9)	(5)	(4.7)	(3.2)
Age - 17	21.4***	20.7***	24.8***	25.6***	24.6***	26.3***
	(5.7)	(5.4)	(4)	(5.1)	(4.8)	(3.4)
Age - 18	26.6***	28***	31.1***	27.4***	28.2***	35.3***
	(5.1)	(4.9)	(3.7)	(4.6)	(4.4)	(3.1)
Age - 19	31.1***	32.1***	39***	33***	34.2***	41.9***
	(5.6)	(5.4)	(4)	(5.2)	(5)	(3.5)
Age - 20	40.4***	39.4***	45.6***	40.1***	39.3***	47.9***
	(5.4)	(5.2)	(3.9)	(4.9)	(4.7)	(3.3)
Age - 21	39.2***	40.3***	49.1***	40.4***	41.2***	51***
	(7.5)	(7.1)	(5.3)	(6.3)	(6.1)	(4.3)
Age - 22	41.5***	42.9***	50.1***	44.8***	46.4***	56.9***
	(6.4)	(6.3)	(4.9)	(6.1)	(5.9)	(4.1)
Age - 23-25	45.2***	47.1***	51.5***	45.5***	47.1***	54.1***
	(5.7)	(5.4)	(3.9)	(5)	(4.8)	(3.2)
Rural or Nomad			-3.3			-4.8***
			(2.1)			(1.8)
Observations	784	866	1613	1025	1125	2328
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 30: Matched models of access to and use of mobile money service

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	16.2***	17***	15.1***	17.8***	18.5***	15.4***
	(2.7)	(2.5)	(1.8)	(2.3)	(2.2)	(1.5)
Age - 16	2.5	-.3	.5	-.5	-2.7	-.7
	(8.3)	(7.8)	(5.7)	(7.3)	(7)	(4.8)
Age - 17	12.1*	13.1*	17.3***	13**	13.2**	16.7***
	(7.4)	(6.9)	(5)	(6.5)	(6.2)	(4.2)
Age - 18	21.7***	23.3***	22.3***	21.9***	22.8***	22.7***
	(7)	(6.6)	(4.8)	(6.2)	(5.9)	(4)
Age - 19	25***	25.1***	27.3***	24.7***	24.7***	26.4***
	(7.2)	(6.8)	(4.9)	(6.4)	(6.1)	(4.1)
Age - 20	35***	34***	36.5***	34.3***	32.9***	35.6***
	(7.2)	(6.7)	(4.9)	(6.3)	(6.1)	(4.1)
Age - 21	34.1***	36***	37.4***	33.3***	34.2***	35.9***
	(8.4)	(7.9)	(5.7)	(7.4)	(7.1)	(4.8)
Age - 22	37.5***	38.8***	39.1***	38***	38.9***	39.2***
	(7.7)	(7.3)	(5.3)	(6.8)	(6.5)	(4.4)
Age - 23-25	35.9***	37.2***	37.9***	35.9***	36.8***	37.6***
	(8.8)	(8.3)	(6)	(7.8)	(7.5)	(5.1)
Rural or Nomad			-1.8			-3*
			(2)			(1.7)
Observations	784	866	1613	1025	1125	2328
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

1.10. Media Access and Consumption

We analyse three forms of media and information consumption in this section. The first is internet usage: in Table 31, we study the frequency of internet usage on a 4-point scale ranging from 0 (never) to 3 (daily usage). Tables 32 and 33 analyse internet usage as a binary variable: the former uses a binary variable for weekly internet usage, while the latter uses a binary variable for daily internet usage. Tables 34 and 35 repeat these analyses, respectively, using matched models. Table 36 turns to radio listenership, measured on a 0-2 scale (0 = never, 2 = at least once per week). Table 37 defines a binary variable indicating whether a respondent listens at least weekly.

Table 31: Main models of internet usage (0-3 scale, 3 = daily usage)

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	1.31***	1.4***	.82***	1.35***	1.42***	.78***
	(.09)	(.08)	(.07)	(.08)	(.08)	(.07)
Age - 16	.24	.18	.21*	.13	.1	.21**
	(.17)	(.15)	(.12)	(.14)	(.13)	(.1)
Age - 17	.52***	.45***	.47***	.41***	.35***	.41***
	(.16)	(.15)	(.12)	(.15)	(.13)	(.1)
Age - 18	.53***	.5***	.67***	.46***	.45***	.74***
	(.15)	(.14)	(.11)	(.13)	(.12)	(.1)
Age - 19	.55***	.48***	.7***	.43***	.41***	.74***
	(.16)	(.15)	(.12)	(.15)	(.14)	(.11)
Age - 20	.6***	.54***	.75***	.45***	.43***	.74***
	(.16)	(.14)	(.12)	(.14)	(.13)	(.1)
Age - 21	.8***	.71***	.93***	.64***	.6***	.91***
	(.22)	(.2)	(.16)	(.18)	(.17)	(.13)
Age - 22	.68***	.64***	.62***	.64***	.6***	.79***
	(.18)	(.17)	(.15)	(.17)	(.16)	(.13)
Age - 23-25	.45***	.44***	.48***	.42***	.41***	.59***
	(.17)	(.15)	(.12)	(.14)	(.13)	(.1)
Rural or Nomad			-.71***			-.79***
			(.06)			(.05)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 32: Main models of at-least weekly internet usage

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	42.2***	45.2***	24.3***	43.5***	45.7***	22.9***
	(3.4)	(3.2)	(2.8)	(3.2)	(3)	(2.6)
Age - 16	10.4	8.1	8*	6.4	5.3	8.2**
	(6.6)	(5.8)	(4.4)	(5.5)	(4.9)	(3.7)
Age - 17	17.9***	15.6***	17.1***	14.8***	12.7**	15.6***
	(6.5)	(5.9)	(4.5)	(5.6)	(5.1)	(3.8)
Age - 18	19.7***	19***	25***	17.5***	17.3***	27.1***
	(5.8)	(5.4)	(4.2)	(5.1)	(4.7)	(3.5)
Age - 19	19.7***	17.4***	23.7***	15.6***	14.9***	24.9***
	(6.4)	(5.9)	(4.6)	(5.7)	(5.3)	(3.9)
Age - 20	23.3***	21.4***	27.2***	18.4***	17.6***	26.4***
	(6.2)	(5.6)	(4.4)	(5.4)	(4.9)	(3.7)
Age - 21	22.5***	20.8***	31.2***	19.9***	19.1***	31.2***
	(8.5)	(7.7)	(6)	(7)	(6.4)	(4.9)
Age - 22	24.5***	23.1***	22.4***	23.6***	22.2***	28.5***
	(7.3)	(6.8)	(5.6)	(6.6)	(6.2)	(4.6)
Age - 23-25	18***	17.4***	16.4***	16.5***	15.8***	19.2***
	(6.5)	(5.9)	(4.4)	(5.5)	(5.1)	(3.6)
Rural or Nomad			-25.6***			-28.1***
			(2.4)			(2)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 33: Main models of daily internet usage

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	29.9***	32.7***	17.6***	31.3***	33.2***	16***
	(3.4)	(3.1)	(2.7)	(3.1)	(2.9)	(2.6)
Age - 16	2.7	1.9	4.7	.8	.6	5.4
	(6.6)	(5.8)	(4.3)	(5.4)	(4.8)	(3.6)
Age - 17	13.5**	11.4*	12***	9.2*	7.5	9.1**
	(6.5)	(5.8)	(4.4)	(5.5)	(5)	(3.7)
Age - 18	17.6***	16***	18.9***	14.4***	13.5***	20.7***
	(5.9)	(5.3)	(4.1)	(5)	(4.6)	(3.5)
Age - 19	16**	13.7**	18.6***	12.1**	11.5**	21.5***
	(6.4)	(5.8)	(4.5)	(5.6)	(5.1)	(3.9)
Age - 20	16.7***	14.3**	19.4***	11.6**	10.7**	21***
	(6.2)	(5.6)	(4.3)	(5.3)	(4.8)	(3.7)
Age - 21	28.7***	23.8***	28.1***	21.7***	19.2***	27.5***
	(8.5)	(7.6)	(5.9)	(6.9)	(6.3)	(4.8)
Age - 22	27.3***	25.5***	20.9***	24.1***	22.7***	25.3***
	(7.3)	(6.7)	(5.5)	(6.5)	(6.1)	(4.5)
Age - 23-25	13.7**	13.3**	16.5***	13.5**	13***	20.8***
	(6.5)	(5.8)	(4.3)	(5.4)	(4.9)	(3.5)
Rural or Nomad			-18.9***			-21.8***
			(2.3)			(2)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 34: Matched models of at-least weekly internet usage

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	44.1***	47.2***	24.4***	44.5***	47***	23.1***
	(3.1)	(2.9)	(2.3)	(2.7)	(2.6)	(1.9)
Age - 16	17.3*	15.1*	14.3**	16.5*	15.2*	14.5**
	(9.9)	(9.1)	(7.2)	(8.6)	(8.1)	(6)
Age - 17	25.4***	22.8***	21.5***	24.5***	22.2***	21.5***
	(8.8)	(8.1)	(6.4)	(7.6)	(7.2)	(5.3)
Age - 18	23.8***	23.7***	28.4***	23.8***	23.9***	29***
	(8.4)	(7.7)	(6.1)	(7.3)	(6.8)	(5.1)
Age - 19	20.8**	20.5***	28.1***	19.8***	19.8***	27.2***
	(8.6)	(7.9)	(6.2)	(7.5)	(7)	(5.2)
Age - 20	31***	29***	32.9***	28.6***	27.6***	31.9***
	(8.6)	(7.9)	(6.2)	(7.4)	(7)	(5.2)
Age - 21	30.9***	30.7***	34.7***	29***	29.3***	34***
	(9.9)	(9.2)	(7.2)	(8.6)	(8.1)	(6)
Age - 22	27.8***	27***	26.7***	28.8***	28.1***	28.9***
	(9.1)	(8.4)	(6.6)	(7.9)	(7.4)	(5.5)
Age - 23-25	24.4**	24.9**	25.3***	25.5***	25.8***	26.3***
	(10.5)	(9.7)	(7.6)	(9.1)	(8.6)	(6.4)
Rural or Nomad			-22.2***			-22***
			(2.5)			(2.1)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 35: Matched models of daily internet usage

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	33.4***	36.3***	18.8***	32.9***	35.3***	17***
	(3.1)	(2.9)	(2.3)	(2.7)	(2.5)	(1.9)
Age - 16	3.1	.8	-.7	1.8	.5	-.3
	(9.8)	(9)	(7.3)	(8.5)	(7.9)	(6.1)
Age - 17	18.5**	16.9**	16.5**	17.8**	16.5**	16.3***
	(8.7)	(8)	(6.5)	(7.5)	(7)	(5.4)
Age - 18	20.4**	20.4***	23***	20.2***	20.2***	23.3***
	(8.3)	(7.6)	(6.2)	(7.2)	(6.7)	(5.1)
Age - 19	15.5*	15.6**	22.5***	14.4*	14.7**	22.1***
	(8.5)	(7.8)	(6.3)	(7.4)	(6.9)	(5.3)
Age - 20	22.8***	20.4***	23.6***	20.6***	19***	23.3***
	(8.5)	(7.8)	(6.3)	(7.4)	(6.9)	(5.2)
Age - 21	35***	30.8***	34.6***	30.7***	28.2***	33.2***
	(9.8)	(9)	(7.3)	(8.5)	(8)	(6.1)
Age - 22	26.9***	26.5***	25.5***	27.2***	26.8***	26.8***
	(9)	(8.3)	(6.7)	(7.8)	(7.3)	(5.6)
Age - 23-25	20.3*	20.9**	23.9***	21.5**	22.1***	25.4***
	(10.5)	(9.6)	(7.7)	(9.1)	(8.5)	(6.5)
Rural or Nomad			-16.6***			-15.9***
			(2.5)			(2.1)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 36: Main models of frequency of radio listening (0-2 scale, 2 = weekly)

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	.44***	.46***	.38***	.44***	.46***	.37***
	(.05)	(.05)	(.04)	(.04)	(.04)	(.04)
Age - 16	.01	.01	.08	.01	.01	.07
	(.1)	(.09)	(.06)	(.08)	(.07)	(.05)
Age - 17	.18*	.16*	.18***	.17**	.15**	.14***
	(.1)	(.09)	(.06)	(.08)	(.07)	(.05)
Age - 18	.07	.06	.11*	.07	.07	.12**
	(.09)	(.08)	(.06)	(.07)	(.07)	(.05)
Age - 19	.11	.08	.17***	.09	.07	.18***
	(.1)	(.09)	(.07)	(.08)	(.07)	(.05)
Age - 20	.03	.01	.08	.04	.03	.11**
	(.09)	(.09)	(.06)	(.07)	(.07)	(.05)
Age - 21	.08	.04	.14	.04	.02	.11
	(.13)	(.12)	(.09)	(.1)	(.09)	(.07)
Age - 22	0	.02	.08	.02	.05	.11*
	(.11)	(.1)	(.08)	(.09)	(.09)	(.06)
Age - 23-25	.17*	.15*	.2***	.1	.09	.18***
	(.1)	(.09)	(.06)	(.08)	(.07)	(.05)
Rural or Nomad			-.07**			-.12***
			(.03)			(.03)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 37: Main models of likelihood of listening to radio at least weekly

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	10***	10.9***	7.5***	9.5***	10.6***	6.3***
	(2.6)	(2.4)	(1.9)	(2.1)	(2)	(1.8)
Age - 16	-.9	-.8	4.1	-1.1	-1.1	3.4
	(4.9)	(4.3)	(3.1)	(3.7)	(3.3)	(2.5)
Age - 17	7.2	6.5	6.8**	6.6*	6*	5.6**
	(4.9)	(4.4)	(3.2)	(3.7)	(3.4)	(2.6)
Age - 18	2.9	2.9	5.2*	1.9	2.1	5.6**
	(4.4)	(4)	(2.9)	(3.4)	(3.1)	(2.4)
Age - 19	2.4	2	6.4**	2.2	2	7.4***
	(4.8)	(4.4)	(3.2)	(3.8)	(3.5)	(2.7)
Age - 20	-3.4	-3.1	1.2	-1.8	-1.6	3.6
	(4.6)	(4.2)	(3.1)	(3.6)	(3.3)	(2.5)
Age - 21	5.9	4.3	7.3*	3.8	3	5.9*
	(6.4)	(5.7)	(4.2)	(4.7)	(4.3)	(3.3)
Age - 22	-2.6	-.7	1.5	-1	.6	3.3
	(5.5)	(5)	(3.9)	(4.5)	(4.2)	(3.1)
Age - 23-25	7	6.1	9.4***	4.2	3.9	8.7***
	(4.9)	(4.4)	(3.1)	(3.7)	(3.4)	(2.4)
Rural or Nomad			-2.5			-5.3***
			(1.7)			(1.3)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 38: Matched models of likelihood of listening to radio at least weekly

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	10.2***	11***	7.6***	10.8***	11.5***	7.1***
	(2.2)	(2.1)	(1.7)	(1.9)	(1.8)	(1.4)
Age - 16	3.1	3	5.3	3.4	3.3	5.5
	(7.1)	(6.5)	(5.2)	(6.1)	(5.7)	(4.3)
Age - 17	9.7	8.5	9.9**	9.9*	9*	9.5**
	(6.3)	(5.8)	(4.6)	(5.4)	(5)	(3.9)
Age - 18	4.3	4.4	6.3	5	5.3	7.5**
	(6)	(5.5)	(4.4)	(5.1)	(4.8)	(3.7)
Age - 19	6	5.6	8.1*	7	6.9	9.5**
	(6.1)	(5.7)	(4.5)	(5.3)	(4.9)	(3.8)
Age - 20	-.5	-.3	3.4	.4	.7	4
	(6.1)	(5.6)	(4.5)	(5.2)	(4.9)	(3.8)
Age - 21	10.4	8.5	9*	10.1*	9	9.3**
	(7.1)	(6.6)	(5.2)	(6.1)	(5.7)	(4.4)
Age - 22	.5	3.1	4.5	1.3	3.6	5.2
	(6.5)	(6)	(4.8)	(5.6)	(5.2)	(4)
Age - 23-25	11.2	11.1	13.1**	10.6*	10.7*	12.7***
	(7.5)	(7)	(5.5)	(6.5)	(6.1)	(4.6)
Rural or Nomad			.8			-1
			(1.8)			(1.5)
Observations	794	878	1633	1039	1141	2359
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

1.11. Views of FGM

Our final regression results related to SOMGEP impact focus on views of FGM and its link to Islamic theology or doctrine. The outcome we study is whether a respondent *does not* believe FGM is required by Islam. Therefore, a positive coefficient indicates that SOMGEP reduces the belief that FGM is justified by religion. Table 39 reports results from our main model, while Table 40 repeats the analysis using the matched sample.

Table 39: Main models of likelihood respondent does not believe FGM is required by Islam

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	16**	16.2**	10.8*	11.8*	12.1**	6.1
	(6.9)	(6.4)	(5.8)	(6.2)	(5.9)	(5.5)
Age - 16	-44.9***	-44.1***	-42.2***	-47.6***	-47.7***	-45.7***
	(14.8)	(14.3)	(14.3)	(14.6)	(14.1)	(14)
Age - 17	-19.7	-19.8	-20	-20.2	-21.4*	-19.6
	(13.2)	(13)	(13)	(12.8)	(12.7)	(12.7)
Age - 18	-19.7	-19.4	-20.8*	-22.6*	-22.5*	-23.4*
	(12.6)	(12.5)	(12.5)	(12.2)	(12.2)	(12.1)
Age - 19	-25.2**	-22.9*	-23.4*	-29.3**	-27.2**	-28.2**
	(12.8)	(12.6)	(12.6)	(12.4)	(12.3)	(12.3)
Age - 20	-13.1	-14.4	-17.4	-20.3	-20.6*	-21.7*
	(12.9)	(12.7)	(12.7)	(12.5)	(12.3)	(12.2)
Age - 21	1.3	1.6	-6.9	-5.3	-4.6	-12.8
	(14.7)	(14.5)	(14.1)	(13.9)	(13.8)	(13.3)
Age - 22	-8.7	-9.4	-9.4	-16.1	-16	-13.7
	(13.5)	(13.3)	(13.1)	(13.1)	(12.9)	(12.6)
Age - 23-25	-10.6	-9.4	-11.2	-10.3	-8.5	-13.6
	(13.9)	(13.5)	(13)	(13.1)	(12.9)	(12.4)
Ever Married	-.1*	-.1*	-.1	-.1	-.1	-.1
	(.1)	(.1)	(.1)	(.1)	(.1)	(.1)
Rural or Nomad			-7.5*			-6.6*
			(3.9)			(3.5)
Observations	509	537	662	578	610	834
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 40: Matched models of likelihood respondent does not believe FGM is required by Islam

	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)	Rural Comp.	Rural & Nomad Comp.	Full Comp. (incl. urban)
Treat (SOMGEP)	10.6*	13.3**	8.8	8	10.2*	5.7
	(6)	(5.9)	(5.6)	(5.8)	(5.7)	(5)
Age - 16	-41***	-47.1***	-38.9***	-63.4***	-71.4***	-63.7***
	(15.1)	(14.8)	(14)	(12.1)	(11.9)	(10.5)
Age - 17	-28.9**	-27*	-23.5*	-45.3***	-47.6***	-43.4***
	(14.3)	(14.1)	(13.3)	(10.7)	(10.5)	(9.4)
Age - 18	-16.7	-15.6	-20.2	-38.3***	-38.9***	-41.8***
	(14)	(13.7)	(13)	(10.2)	(10)	(9)
Age - 19	-35.5**	-25.5*	-25.4*	-57***	-50.4***	-48.2***
	(14.2)	(13.9)	(13.2)	(10.4)	(10.2)	(9.1)
Age - 20	-12.1	-16.9	-23*	-36.2***	-41.2***	-44.1***
	(14.3)	(14)	(13.2)	(10.6)	(10.3)	(9.2)
Age - 21	.6	-.2	-10.3	-23.9**	-25**	-32.2***
	(15.6)	(15.2)	(14.4)	(12)	(11.7)	(10.5)
Age - 22	-13.6	-14.5	-11.8	-36.3***	-38.7***	-34***
	(14.8)	(14.5)	(13.7)	(11.1)	(10.9)	(9.8)
Age - 23-25	-17.9	-12.9	-12.2	-39.5***	-36.9***	-34.3***
	(16.2)	(15.9)	(15.1)	(12.9)	(12.6)	(11.3)
Ever Married	-.1	-.1	-.1	-.1	-.1	-.1
	(.1)	(.1)	(.1)	(.1)	(.1)	(.1)
Rural or Nomad			-9.2**			-7.7**
			(3.8)			(3.5)
Observations	509	537	662	578	610	834
Region Controls	Original	Original	Original	Current	Current	Current

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

2. Early-Life Determinants of Current Outcomes

2.1. Introduction and Description of Models

This section provides the full results of regression analyses conducted to answer Research Question 1, which assesses whether early-life individual- and household-level characteristics predict current life outcomes among SOMGEP women. The analysis makes use of SOMGEP evaluation data from 2015/6 and the survey data collected in 2022 as part of this project, linking the same women's responses across time (n = 408).

The structure of this analysis may be unfamiliar to some readers, as analysis of the links between childhood and later-life outcomes is not particularly common in development evaluations. To test the connection, we use a regression model of the following general form:

$$y_{it2} = B_0 + B_1 X_{it1} + \gamma_{it1} + \epsilon$$

where y_{it2} represents the outcome of interest for individual *i* measured at time (*t*) 2; this indicates that the outcome is measured in 2022, the second period of data for our analysis. An illustrative outcome is the number of years of schooling completed at the time of data collection in 2022. All independent or right-hand side variables are measured in 2015/6, denoted by the subscript *t1*. Our interest is in the generic variable *X*, whose impact on the outcome is given by B_1, conditional on a vector of other variables, including region and age group fixed effects. Additional controls, such as household wealth, are all measured in 2015/6.

This approach allows us to study the relationship between early-life characteristics and later-life outcomes by linking data from the same women across time. In the subsections that follow, we report results for several outcomes, including present-day household economic status, willingness to invest in early childhood development, and tolerance for IPV.

Note that, throughout the regression tables below, we exclude results pertaining to region and age group, to save space.

2.2. Educational Attainment

Table 41 provides the full results for regressions testing the relationship between educational attainment (years of schooling completed) in 2022 and a woman's characteristics in 2015/6.

Table 41: Early-life predictors of years of completed schooling in 2022

	(1)	(2)	(3)	(4)
Enrolled 2015/6	-2.58	-2.33	3.18***	
	(3.42)	(3.35)	(.76)	
Previously dropped out	-1.06**	-1.23**	-.76**	-.79**
	(.53)	(.54)	(.34)	(.34)
Repeated a year	-1.71**	-1.79**	-1.09***	-1.53**
	(.77)	(.79)	(.39)	(.6)
Behind grade-for-age	-1.46**	-1.49**	-1.85***	-1.9***
	(.7)	(.69)	(.39)	(.39)
School unsafe	-.6	-.49	.47	.25
	(1)	(1)	(.44)	(.52)
Difficult to reach school	1.93	1.5	-.92	-2.07*
	(3.69)	(3.71)	(1)	(1.16)
HH wealth index	4.97**	4.92**	2.18***	1.98**
	(1.96)	(2.04)	(.63)	(.77)
HH short-term poverty	-3.25	-3.16	-.12	-1.17
	(2.3)	(2.18)	(.7)	(1.61)
Enthusiasm for school	2.63	2.95	.76	1.48
	(2.23)	(2.35)	(.78)	(1.01)
Perceived importance of educ.	1.77	2.55	.46	-.41
	(2.01)	(2.22)	(1.09)	(1.3)
Difficulty reading/maths	.38	.57	-.78*	-.36
	(1.6)	(1.65)	(.45)	(.61)
~Few hours of chores	-2.12	-2.16	1.36*	2.45**
	(3.81)	(3.85)	(.75)	(1.21)
>Few hours of chores	-2	-1.87	1.58**	2.27**
	(3.66)	(3.61)	(.69)	(.86)
HH owns books	.15	.12	.3	.97
	(.94)	(.98)	(.29)	(.89)
Parental support for educ.	4.32*	4.1*	.51	1.6*
	(2.33)	(2.24)	(.69)	(.89)
Girl's empowerment		-.24	.12	.21
		(.38)	(.15)	(.19)
Girl decides re: school		-1.33*	-.5**	-.54*
		(.69)	(.22)	(.27)
Mother not alive			-.77	-1.21
			(.62)	(.84)

Father not alive			.68**	.43
			(.32)	(.62)
Female-headed HH			-.29	.04
			(.28)	(.54)
Teacher absenteeism				-.41
				(.55)
Pedagogy index				.11
				(.7)
Classroom demeanor index				.85
				(.82)
Teaching quality - parent				-.48
				(.59)
School fees				1.13***
				(.38)
Difficult to afford school				.18
				(.4)
Girl's attendance				0
				(.02)
Observations	408	405	402	344
R-squared	.13	.14	.48	.22
Age FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

2.3. Marital Status and Motherhood

Table 42 reports the relationship between early-life characteristics and the probability that a woman is married in 2022 or has previously been married. Table 43 conducts a similar analysis in which the outcome is a binary variable indicating whether a woman has ever given birth.

Table 42: Early-life predictors of being or having been married in 2022

	(1)	(2)
School unsafe	-3.3	-3.1
	(7.3)	(7.3)
Difficult to reach school	6.1	4.2
	(10.4)	(10.1)
HH wealth index	-19.8**	-13.5
	(9)	(8.7)
HH short-term poverty	1.8	5.1
	(10.9)	(11.1)
Parental support for educ.	-23.6**	-18.1*
	(8.9)	(9.4)
~Few hours of chores	-2.6	
	(6.7)	
>Few hours of chores	-.2	-1.3
	(6.1)	(6.8)
Girl's empowerment	-1.9	-2
	(2.4)	(2.6)
Girl decides re: school	-2.9	-2
	(4.1)	(4.3)
Mother not alive	2.9	5.4
	(7.3)	(7.4)
Father not alive	4.1	4.1
	(6.4)	(6.3)
Female-headed HH	-3.1	-2.6
	(3.9)	(4)
Total children in HH	-2.6**	-2.6**
	(1.1)	(1.1)
Enrolled 2015/6		-13.5
		(8.3)
Behind grade-for-age		13.1***
		(4.7)
Observations	405	405
R-squared	.2	.2
Age FE	Yes	Yes

Region FE	Yes	Yes

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 43: Early-life predictors of having given birth in or prior to 2022

	(1) All Women	(2) Ever-Married Women
Enrolled 2015/6	-12.5	-13
	(8.9)	(12.4)
Behind grade-for-age	14.4***	18.2*
	(4)	(10.2)
HH wealth index	-11.2	9.1
	(8.3)	(19.6)
HH short-term poverty	9.4	24.1
	(11)	(21.3)
Parental support for educ.	-14.8	8.3
	(10.1)	(13.2)
~Few hours of chores	-2.1	4.5
	(7.6)	(14)
>Few hours of chores	0	2.5
	(7.5)	(16.5)
Girl's empowerment	-.4	3.7
	(2.3)	(4.4)
Girl decides re: school	-.1	4.3
	(3.4)	(8.2)
Mother not alive	4	-1.5
	(7.3)	(17.8)
Father not alive	2.2	-7.4
	(5.9)	(12.8)
Female-headed HH	0	8
	(4.2)	(7.4)
Observations	405	106
R-squared	.2	.2
Age FE	Yes	Yes
Region FE	Yes	Yes

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

2.4. Intra-Household Decision-Making

This section reports the link between early-life characteristics and empowerment in household decision-making. Our outcome is an index that captures the frequency with which a woman reports that she would exercise sole or joint (with her husband or parents) control over specific decisions. The scale ranges from 0 to 1, capturing four such decisions for single women and six for married or formerly married women. In **Table 44**, the first model uses a measure of empowerment that scores sole control as a more positive outcome than joint control, with both sole and joint control scored higher than when a woman reports that her husband or parents would make the decision. The second model uses an adjusted measure that gives equal weight to cases in which a woman exercises either sole or joint control. That is, joint control is viewed – in the second model – as a positive outcome equivalent to sole control.

Table 44: Early-life predictors of women's empowerment in household decision-making

	(1) Empowerment Index – Main	(2) Empowerment Index - Alternative
HH wealth index	.1*	.291
	(.056)	(.288)
HH short-term poverty	.082*	.535*
	(.046)	(.284)
Parental support for educ.	.015	.03
	(.062)	(.301)
Girl's empowerment (alt.)	-.005	-.107
	(.014)	(.071)
Mother in HH	.027	.041
	(.046)	(.236)
Mother not alive	.01	.288
	(.061)	(.263)
Father in HH	0	-.068
	(.03)	(.128)
Father not alive	-.013	-.136
	(.021)	(.127)
Female-headed HH	-.001	-.114
	(.026)	(.138)
Ever married	.002***	
	(0)	
Employed	-.056	-.252
	(.043)	(.288)
What is your current marital status?		1.597***
		(.117)

Observations	407	407
R-squared	.221	.51
Age FE	Yes	Yes
Region FE	Yes	Yes

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 45: Early-life predictors of women's empowerment, across subsamples by marital status

	(1) Main Index – Single Women	(2) Main Index – Ever-Married Women	(3) Alternative Index – Single Women	(4) Alternative Index – Ever-Married Women
HH wealth index	.172***	-.001	.666**	.101
	(.058)	(.096)	(.313)	(.637)
HH short-term poverty	.123*	-.024	.847**	-.145
	(.065)	(.084)	(.33)	(.681)
Parental support for educ.	-.022	.046	.075	.283
	(.076)	(.078)	(.381)	(.501)
Girl's empowerment (alt.)	0	-.003	-.028	-.064
	(.018)	(.026)	(.081)	(.146)
Mother in HH	.035	.028	.045	.028
	(.054)	(.055)	(.287)	(.5)
Mother not alive	.016	.02	.159	.167
	(.075)	(.072)	(.314)	(.519)
Father in HH	.024	-.068	.059	-.306
	(.033)	(.053)	(.155)	(.277)
Father not alive	-.02	.001	-.165	-.071
	(.03)	(.058)	(.155)	(.312)
Female-headed HH	-.005	-.01	-.059	-.175
	(.036)	(.051)	(.163)	(.361)
Observations	299	108	299	108
R-squared	.161	.156	.189	.16
Age FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

2.5. Tolerance of IPV

Table 46 analyses tolerance of IPV, measured on a 0-3 scale. This scale can be interpreted as the number of scenarios (out of three possible) in which the respondent feels a husband would be justified in hitting or beating his wife.

Table 46: Early-life predictors of tolerance for IPV (0-3 scale, 3 = most tolerance of IPV)

	(1)	(2)	(3)
HH wealth index	-.37**	-.42**	-.41**
	(.17)	(.16)	(.16)
HH short-term poverty	-.06	-.04	-.05
	(.21)	(.21)	(.21)
Parental support for educ.	.15	.07	.07
	(.18)	(.19)	(.19)
~Few hours of chores	-.09		
	(.19)		
>Few hours of chores	.11		
	(.17)		
Girl's empowerment	-.1*	-.09	
	(.06)	(.06)	
Girl decides re: school	-.08		
	(.08)		
Mother not alive	-.19	.04	.04
	(.13)	(.15)	(.15)
Father not alive	0	-.01	-.01
	(.11)	(.12)	(.12)
Female-headed HH	-.07	-.04	-.03
	(.09)	(.09)	(.09)
Mother in HH		.32**	.32**
		(.13)	(.13)
Father in HH		-.02	-.02
		(.09)	(.09)
Girl's empowerment (alt.)			-.09
			(.06)
Observations	405	405	407
R-squared	.08	.08	.08
Age FE	Yes	Yes	Yes
Region FE	Yes	Yes	Yes

Standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

2.6. Support for Education

This section analyses the extent to which SOMGEP women support girls' education and investing in early childhood development with their own (current or future) children. **Table 47** tests the relationship between early-life household and educational characteristics, on one hand, and support for education today, on the other.

Table 47: Early-life predictors of support for education and early childhood development among adult SOMGEP women

	(1) Index – Support for Early Childhood Development	(2) Index – Support for Girls' Education
Ever married	.002	0
	(.002)	(.002)
Has girl ever given birth?	-.003	0
	(.003)	(.002)
HH wealth index	.154	.465***
	(.335)	(.164)
HH short-term poverty	.302	.135
	(.341)	(.178)
HH owns books	-.048	-.044
	(.133)	(.09)
Parental support for educ.	.072	-.048
	(.323)	(.137)
~Few hours of chores	-.297	-.023
	(.282)	(.119)
>Few hours of chores	-.247	.083
	(.283)	(.122)
Girl's empowerment	.068	-.016
	(.066)	(.04)
Enthusiasm for school	.251	.042
	(.346)	(.18)
Perceived importance of educ.	.502	-.03
	(.516)	(.256)
Observations	405	405
R-squared	.039	.054
Age FE	Yes	Yes
Region FE	Yes	Yes

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

2.7. Household Economic Status

This section considers household economic status in 2022, as a function of household wealth, and short-term experiences of poverty, as measured in 2015/6. Models 1 and 3 use the full sample, including women who continue to live with their parents or other adult relatives; models 2 and 4 restrict the sample to women who do not live with either parent, older male relatives (i.e., an uncle), or older female relatives (i.e., an aunt or grandmother), allowing us to study the persistence of wealth across time when a woman has established her own household.

Table 48: Household economic status across time

	(1)	(2)	(3)	(4)
HH wealth index	.03	-.015		
	(.026)	(.06)		
HH short-term poverty	.005	.068		
	(.031)	(.086)		
Alternative HH wealth index			.027	-.021
			(.025)	(.063)
Alternative HH short-term poverty index			-.018	.037
			(.025)	(.06)
Observations	408	64	408	64
R-squared	.045	.068	.047	.063
Age FE	No	No	No	No
Region FE	Yes	Yes	Yes	Yes

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*